



Kot Bhalwal, Jammu



Model Institute of Engineering  
& Technology (Autonomous)  
Dr. Arun K. Gupta Teaching-Learning Centre

## Department of BBA

### Details of Lesson Plan

| S.No. | Particulars            | Details         |
|-------|------------------------|-----------------|
| 1.    | Course Name            | Cloud Computing |
| 2.    | Course Code            | BBAMI-305(D)    |
| 3.    | Academic Year          | 2023-2024       |
| 4.    | Semester               | 3 <sup>rd</sup> |
| 5.    | Number of Lesson plans | 47              |
| 6.    | Faculty Assigned       | Jagriti Sharma  |

Faculty Signature



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| <b>Lesson Plan<br/>No. 1.1</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Introduction to Cloud Computing</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Define cloud computing.</li><li>- Understand the basic concepts and importance of cloud computing.</li><li>- Identify common uses of cloud computing.</li></ul>   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Blackboard</li><li>4. YouTube Videos</li></ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Provide a brief definition of cloud computing.</li><li>- Explain the significance of cloud computing in the modern IT landscape.</li><li>- Share an example of a cloud computing application in daily life.</li><li>-What is an example of Software as a Service?</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Definition and Concept:<ul style="list-style-type: none"><li>- What is cloud computing?</li><li>- Key characteristics of cloud computing.</li><li>- Examples of cloud computing services (e.g., Google Drive, Dropbox).</li></ul></li><li>- Importance:<ul style="list-style-type: none"><li>- Scalability and flexibility benefits.</li><li>- Cost-efficiency.</li><li>- Accessibility from anywhere with internet connectivity.</li></ul></li><li>- Common Uses:<ul style="list-style-type: none"><li>- Storage solutions.</li><li>- Software as a Service (SaaS).</li><li>- Platform as a Service (PaaS).</li></ul></li></ul> |



Version 1.1



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|                   | <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"><li>- Briefly explain that the students will involve answering a few rapid-fire questions about cloud computing concepts to test their knowledge.</li><li>- 3 to 5 multiple-choice or true/false questions.</li><li>- Quickly review the answers to the questions, providing brief explanations if needed. This helps reinforce the correct answers and clears up any confusion.</li></ul>   |
| <b>Closure</b>    | <ol style="list-style-type: none"><li>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</li><li>2. Suggested Reading:<br/><a href="https://www.comp.nus.edu.sg/~seer/book/2e/Ch01.%20Cloud%20Computing.pdf">https://www.comp.nus.edu.sg/~seer/book/2e/Ch01.%20Cloud%20Computing.pdf</a></li><li>3. Original Paper on Cloud computing:<br/><a href="https://www.researchgate.net/publication/366320853_A_RESEARCH_ON_CLOUD_COMPUTING">https://www.researchgate.net/publication/366320853_A_RESEARCH_ON_CLOUD_COMPUTING</a></li><li>4. Homework<br/>Search news articles or reports related to cloud computing</li><li>5. Spend 5 minutes to wrap up and consolidate the learning's</li></ol> <p><b>References:</b></p> <ul style="list-style-type: none"><li>- [Cloud Computing Explained](<a href="https://aws.amazon.com/what-is-cloud-computing/">https://aws.amazon.com/what-is-cloud-computing/</a>)</li><li>- [Introduction to Cloud Computing](<a href="https://azure.microsoft.com/en-us/overview/what-is-cloud-computing/">https://azure.microsoft.com/en-us/overview/what-is-cloud-computing/</a>)</li></ul> <p>YouTube Video:</p> <ul style="list-style-type: none"><li>- [Introduction to Cloud Computing](<a href="https://www.youtube.com/watch?v=2LaAJq1IB0I">https://www.youtube.com/watch?v=2LaAJq1IB0I</a>)</li></ul> |
| <b>Evaluation</b> | <ol style="list-style-type: none"><li>1. Reflective Questions (What, why, Who?). Allow students to answer.</li></ol> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What is cloud computing?</li><li>2. Name one benefit of cloud computing.</li><li>3. Give an example of a cloud computing service you use.</li></ol>  |



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| <b>Lesson Plan<br/>No. 1.2</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: History and Evolution of Cloud Computing</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Understand the historical background of cloud computing.</li><li>- Learn about key milestones in the evolution of cloud computing.</li><li>- Recognize the impact of these developments on modern computing.</li></ul>   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Blackboard</li><li>4. YouTube Videos</li></ol>  |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce the historical context of computing.</li><li>- Highlight the transition from traditional to cloud-based computing.</li><li>- Mention key pioneers in the development of cloud computing.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Early Concepts:<ul style="list-style-type: none"><li>- Mainframe computing.</li><li>- Time-sharing systems in the 1960s.</li></ul></li><li>- Milestones:<ul style="list-style-type: none"><li>- Development of the internet in the 1990s.</li><li>- Introduction of web-based services.</li><li>- Emergence of major cloud providers (e.g., AWS in 2006).</li></ul></li><li>- Impact:<ul style="list-style-type: none"><li>- Shift from physical servers to virtual environments.</li><li>- Evolution of business models and service delivery.</li></ul></li></ul> <p><b>3. Exercise (5 minutes) –</b></p> |



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|                   | <ul style="list-style-type: none"><li>- The exercise will involve placing significant events in the evolution of cloud computing in the correct chronological order. Emphasize the importance of these milestones in shaping the cloud computing landscape.</li><li>- Ask students to arrange these milestones in chronological order. They can drag and drop items into the correct order on a shared document or digital tool.</li></ul>   |
| <b>Closure</b>    | <ol style="list-style-type: none"><li>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</li><li>2. Suggested Reading: <a href="https://www.geeksforgeeks.org/history-of-cloud-computing/">https://www.geeksforgeeks.org/history-of-cloud-computing/</a></li><li>3. Original Paper on Cloud computing:<br/><a href="https://www.researchgate.net/publication/367090586_The_Evolution_of_Cloud_Computing">https://www.researchgate.net/publication/367090586_The_Evolution_of_Cloud_Computing</a></li><li>4. Homework<br/>Search news articles or reports related to history &amp; evolution of cloud computing</li><li>5. Spend 5 minutes to wrap up and consolidate the learning's</li></ol> <p><b>References:</b></p> <ul style="list-style-type: none"><li>- [A Brief History of Cloud Computing](<a href="https://www.cloudflare.com/en-gb/learning/cloud/what-is-the-cloud/">https://www.cloudflare.com/en-gb/learning/cloud/what-is-the-cloud/</a>)</li><li>- [The History and Evolution of Cloud Computing](<a href="https://www.digitalocean.com/community/tutorials/a-history-and-evolution-of-cloud-computing">https://www.digitalocean.com/community/tutorials/a-history-and-evolution-of-cloud-computing</a>)</li></ul> <p>YouTube Video:</p> <ul style="list-style-type: none"><li>- [History and Evolution of Cloud Computing](<a href="https://www.youtube.com/watch?v=KkMPXT8SREE">https://www.youtube.com/watch?v=KkMPXT8SREE</a>)</li></ul> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What decade did the concept of time-sharing systems emerge?</li><li>2. When did AWS launch its first cloud services?</li><li>3. Name one key impact of cloud computing on modern IT.</li></ol>   |



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| <b>Lesson Plan<br/>No. 1.3</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Grid Computing vs. Cloud Computing</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Differentiate between grid computing and cloud computing.</li><li>- Understand the unique characteristics of each.</li><li>- Identify scenarios where each is applicable.</li></ul>  |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Blackboard</li><li>4. YouTube Videos</li></ol>  |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Define grid computing and cloud computing.</li><li>- Highlight their similarities and differences.</li><li>- Provide a real-world example of each.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Definitions:<ul style="list-style-type: none"><li>- Grid computing: Distributed computing model.</li><li>- Cloud computing: On-demand resource availability over the internet.</li></ul></li><li>- Key Characteristics:<ul style="list-style-type: none"><li>- Grid computing: Resource sharing, collaboration across networks.</li><li>- Cloud computing: Scalability, flexibility, and service models.</li></ul></li><li>- Applications:<ul style="list-style-type: none"><li>- Grid computing: Scientific research, large-scale computations.</li><li>- Cloud computing: Business applications, data storage, and web services.</li></ul></li></ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"><li>- To compare and contrast Grid Computing and Cloud Computing.</li></ul> |



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|                   | <p>- Divide students into pairs or small groups and assign each group one of the scenarios. Ask them to briefly discuss and role-play how their assigned computing model would address the scenario. They should focus on explaining how the characteristics of Grid or Cloud Computing are suitable for their given situation.</p>   |
| <b>Closure</b>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</p> <p>2. Suggested Reading:</p> <p><a href="https://data-flair.training/blogs/grid-computing-vs-cloud-computing/#google_vignette">https://data-flair.training/blogs/grid-computing-vs-cloud-computing/#google_vignette</a></p> <p>3. Original Paper on Cloud computing:</p> <p><a href="https://www.researchgate.net/publication/279847729_Comparison_Between_Cloud_and_Grid_Computing_Review_Paper">https://www.researchgate.net/publication/279847729_Comparison_Between_Cloud_and_Grid_Computing_Review_Paper</a></p> <p>4. Homework</p> <p>Search news articles or reports related to comparing grid computing &amp; cloud computing</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p>- [Grid Computing vs. Cloud Computing](<a href="https://www.ibm.com/cloud/learn/grid-computing">https://www.ibm.com/cloud/learn/grid-computing</a>)</p> <p>- [Differences Between Grid and Cloud Computing](<a href="https://www.geeksforgeeks.org/difference-between-grid-computing-and-cloud-computing/">https://www.geeksforgeeks.org/difference-between-grid-computing-and-cloud-computing/</a>)</p> <p>YouTube Video:</p> <p>- [Grid Computing vs. Cloud Computing](<a href="https://www.youtube.com/watch?v=SGW_q-a4LjI">https://www.youtube.com/watch?v=SGW_q-a4LjI</a>)</p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What is grid computing?</li><li>2. Name one key characteristic of cloud computing.</li><li>3. Give an example of a scenario where grid computing is used.</li></ol>   |



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| <b>Lesson Plan<br/>No. 1.4</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Cloud Components</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Identify the main components of cloud computing.</li><li>- Understand the role of each component.</li><li>- Learn how these components interact in a cloud environment.</li></ul>   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Blackboard</li><li>4. You tube Videos</li></ol>  |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce the concept of cloud architecture.</li><li>- Mention the key components involved.</li><li>- Explain the importance of understanding these components.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Main Components:<ul style="list-style-type: none"><li>- Infrastructure as a Service (IaaS): Virtual machines, storage.</li><li>- Platform as a Service (PaaS): Development platforms.</li><li>- Software as a Service (SaaS): Applications delivered over the web.</li></ul></li><li>- Roles:<ul style="list-style-type: none"><li>- IaaS: Provides basic infrastructure.</li><li>- PaaS: Supports application development.</li><li>- SaaS: Delivers software to end-users.</li></ul></li><li>- Interaction:<ul style="list-style-type: none"><li>- How these components work together.</li><li>- Examples of popular services (AWS, Azure, Google Cloud).</li></ul></li></ul> <p><b>3. Exercise (5 minutes) –</b></p> |



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|                   | <p>- Ask students to match each cloud component with the correct description. Students can drag and drop or pair items in a shared document.</p> <p>-Think pair and share</p>  |
| <b>Closure</b>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</p> <p>2. Suggested Reading: <a href="https://www.synopsys.com/blogs/chip-design/essential-cloud-computing-characteristics.html">https://www.synopsys.com/blogs/chip-design/essential-cloud-computing-characteristics.html</a></p> <p>3. Original Paper on Cloud computing:<br/><a href="https://www.researchgate.net/publication/375874185_Exploring_the_Core_Components_of_Cloud_Computing_and_Its_Architecture">https://www.researchgate.net/publication/375874185_Exploring_the_Core_Components_of_Cloud_Computing_and_Its_Architecture</a></p> <p>4. Homework</p> <p>Search news articles or reports related to cloud components</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p>- [Cloud Computing Components](<a href="https://azure.microsoft.com/en-us/overview/what-is-cloud-computing/">https://azure.microsoft.com/en-us/overview/what-is-cloud-computing/</a>)</p> <p>- [Introduction to Cloud Architecture](<a href="https://www.redhat.com/en/topics/cloud-computing/what-is-cloud-architecture">https://www.redhat.com/en/topics/cloud-computing/what-is-cloud-architecture</a>)</p> <p>YouTube Video:</p> <p>- [Cloud Computing Explained](<a href="https://www.youtube.com/watch?v=f1gF2MgKL20">https://www.youtube.com/watch?v=f1gF2MgKL20</a>)</p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What does IaaS stand for?</li><li>2. Name one example of a PaaS.</li><li>3. What is the primary function of SaaS?</li></ol>  |



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| <b>Lesson Plan<br/>No. 1.5</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Essential Characteristics of Cloud Computing</b> | <b>Course No.:<br/>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Identify essential characteristics of cloud computing.</li><li>- Understand the importance of each characteristic.</li><li>- Learn how these characteristics differentiate cloud computing from traditional IT models.</li></ul>  |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Blackboard</li><li>4. YouTube Videos</li></ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce the essential characteristics of cloud computing.</li><li>- Explain why these characteristics are important.</li><li>- Provide a brief overview of each characteristic.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Characteristics:<ul style="list-style-type: none"><li>- On-demand self-service: Users can provision resources as needed.</li><li>- Broad network access: Accessible over the internet from any device.</li><li>- Resource pooling: Shared resources dynamically allocated.</li></ul></li><li>- Importance:<ul style="list-style-type: none"><li>- Flexibility and scalability.</li><li>- Cost savings.</li><li>- Improved accessibility and collaboration.</li></ul></li><li>- Differentiation:<ul style="list-style-type: none"><li>- Compared to traditional IT models.</li><li>- Benefits and efficiencies introduced by cloud computing.</li></ul></li></ul> |



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|                   | <p><b>3. Exercise (5 minutes) –</b></p> <p>- <b>Quick Quiz:</b> Prepare a set of 5 multiple-choice questions or true/false statements based on the essential characteristics of cloud computing. Each question should focus on one of the key characteristics: On-Demand Self-Service, Broad Network Access, Resource Pooling, Rapid Elasticity, and Measured Service.</p>   |
| <b>Closure</b>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</p> <p>2. Suggested Reading:</p> <p><a href="https://www.synopsys.com/blogs/chip-design/essential-cloud-computing-characteristics.html">https://www.synopsys.com/blogs/chip-design/essential-cloud-computing-characteristics.html</a></p> <p>3. Original Paper on Cloud computing:</p> <p><a href="https://ieeexplore.ieee.org/abstract/document/5599083">https://ieeexplore.ieee.org/abstract/document/5599083</a></p> <p>4. Homework</p> <p>Search news articles or reports related to essential characteristics of cloud computing</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p>- [Essential Characteristics of Cloud Computing](<a href="https://www.nist.gov/publications/nist-definition-cloud-computing">https://www.nist.gov/publications/nist-definition-cloud-computing</a>)</p> <p>- [Cloud Computing Characteristics](<a href="https://www.ibm.com/cloud/learn/cloud-computing">https://www.ibm.com/cloud/learn/cloud-computing</a>)</p> <p>YouTube Video:</p> <p>- [Essential Characteristics of Cloud Computing](<a href="https://www.youtube.com/watch?v=sqMEzuGJ_0A">https://www.youtube.com/watch?v=sqMEzuGJ_0A</a>)</p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What is on-demand self-service?</li><li>2. Name one advantage of broad network access.</li><li>3. What does resource pooling mean in the context of cloud computing?</li></ol>   |



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| <b>Lesson Plan No. 1.6</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: On-demand Self-service</b> | <b>Course No.: BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to:<br><ul style="list-style-type: none"> <li>- Define on-demand self-service in cloud computing.</li> <li>- Understand its significance and benefits.</li> <li>- Learn how to utilize on-demand self-service effectively.</li> </ul>  |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"> <li>1. Power Point Presentation</li> <li>2. Online contents</li> <li>3. Blackboard</li> <li>4. YouTube Videos</li> </ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"> <li>- Define on-demand self-service.</li> <li>- Highlight its role in cloud computing.</li> <li>- Provide an example of on-demand self-service in action.</li> </ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"> <li>- Definition: <ul style="list-style-type: none"> <li>- What on-demand self-service means.</li> <li>- Examples in cloud services (e.g., provisioning virtual machines).</li> </ul> </li> <li>- Significance: <ul style="list-style-type: none"> <li>- Reduces the need for manual intervention.</li> <li>- Increases efficiency and agility.</li> <li>- Empowers users to control their resources.</li> </ul> </li> <li>- Utilization: <ul style="list-style-type: none"> <li>- How to use on-demand self-service features.</li> <li>- Best practices for effective use.</li> <li>- Tools and platforms that support on-demand self-service.</li> </ul> </li> </ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"> <li>- <b>Real world Analysis:</b> Ask students to discuss or write down how On-</li> </ul> |



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|                   | <p>Demand Self-Service applies to real world scenario. They should identify how the characteristic allows users to provision resources without needing human intervention and how it benefits the process.</p>   |
| <b>Closure</b>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</p> <p>2. Suggested Reading:<br/><a href="https://www.synopsys.com/blogs/chip-design/essential-cloud-computing-characteristics.html">https://www.synopsys.com/blogs/chip-design/essential-cloud-computing-characteristics.html</a></p> <p>3. Original Paper on Cloud computing:<br/><a href="https://ieeexplore.ieee.org/abstract/document/5599083">https://ieeexplore.ieee.org/abstract/document/5599083</a></p> <p>4. Homework<br/>Search news articles or reports related to on demand self service of cloud computing</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p>- [On-demand Self-service Explained](<a href="https://azure.microsoft.com/en-us/overview/what-is-cloud-computing/">https://azure.microsoft.com/en-us/overview/what-is-cloud-computing/</a>)</p> <p>- [Understanding On-demand Self-service](<a href="https://www.ibm.com/cloud/learn/cloud-computing">https://www.ibm.com/cloud/learn/cloud-computing</a>)</p> <p>YouTube Video:</p> <p>- [On-demand Self-service in Cloud Computing](<a href="https://www.youtube.com/watch?v=wZNkfo71gB8">https://www.youtube.com/watch?v=wZNkfo71gB8</a>)</p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What is on-demand self-service in cloud computing?</li><li>2. Name one benefit of on-demand self-service.</li><li>3. How does on-demand self-service increase efficiency?</li></ol>  |



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| <b>Lesson Plan<br/>No. 1.7</b> | <b>Course Name: Cloud Computing<br/>Topic: Comparing Cloud Providers</b> | <b>Course No.:<br/>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Compare major cloud service providers.</li><li>- Understand the unique features of each provider.</li><li>- Learn how to choose the right provider based on specific needs.</li></ul>   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Blackboard</li><li>4. YouTube Videos</li></ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce major cloud service providers (AWS, Azure, Google Cloud).</li><li>- Explain the importance of comparing providers.</li><li>- Provide a brief overview of each provider.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Major Providers:<ul style="list-style-type: none"><li>- AWS: Wide range of services, global presence.</li><li>- Azure: Integration with Microsoft products, enterprise solutions.</li><li>- Google Cloud: Strong data analytics, AI capabilities.</li></ul></li><li>- Unique Features:<ul style="list-style-type: none"><li>- AWS: Comprehensive service portfolio.</li><li>- Azure: Seamless integration with Windows Server, SQL Server.</li><li>- Google Cloud: Advanced AI and machine learning tools.</li></ul></li><li>- Choosing the Right Provider:<ul style="list-style-type: none"><li>- Considerations: Cost, specific requirements, existing infrastructure.</li><li>- Use case scenarios for each provider.</li><li>- Decision-making tips.</li></ul></li></ul> <p><b>3. Exercise (5 minutes) –</b></p> |



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|                   | <p>- <b>Provider Comparison:</b> Divide students into small groups or pairs and ask them to compare the features of AWS, Azure, and Google Cloud based on the given scenario. They should determine which cloud provider offers the best solutions for each criterion and make a recommendation.</p>  |
| <b>Closure</b>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</p> <p>2. Suggested Reading:</p> <p><a href="https://www.javatpoint.com/cloud-service-provider-companies">https://www.javatpoint.com/cloud-service-provider-companies</a></p> <p>3. Original Paper on Cloud computing:</p> <p><a href="https://www.researchgate.net/publication/368854133_Comparative_Study_of_Various_Cloud_Service_Providers_A_Review">https://www.researchgate.net/publication/368854133 Comparative Study of Various Cloud Service Providers A Review</a></p> <p>4. Homework</p> <p>Search news articles or reports related to comparing cloud providers</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p>- [Comparing Cloud Providers](<a href="https://aws.amazon.com/what-is-aws/">https://aws.amazon.com/what-is-aws/</a>)</p> <p>- [Cloud Providers Comparison](<a href="https://azure.microsoft.com/en-us/overview/what-is-azure/">https://azure.microsoft.com/en-us/overview/what-is-azure/</a>)</p> <p>YouTube Video:</p> <p>- [AWS vs. Azure vs. Google Cloud](<a href="https://www.youtube.com/watch?v=nKIu9yen5nc">https://www.youtube.com/watch?v=nKIu9yen5nc</a>)</p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. Name the three major cloud service providers.</li><li>2. What is a key feature of Google Cloud?</li><li>3. Which provider offers strong integration with Microsoft products?</li></ol>  |



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| <b>Lesson Plan<br/>No. 1.8</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Pros and Cons of Cloud Computing</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Identify the pros and cons of cloud computing.</li><li>- Understand the potential challenges and benefits.</li><li>- Learn how to evaluate the suitability of cloud computing for specific needs.</li></ul>  |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Blackboard</li><li>4. YouTube Videos</li></ol>  |
| <b>Teaching Development</b>   | <p><b>1. Introduction</b> (5 minutes)</p> <ul style="list-style-type: none"><li>- Introduce the concept of pros and cons in cloud computing.</li><li>- Highlight the importance of evaluating both aspects.</li><li>- Provide a brief overview of common pros and cons.</li></ul> <p><b>2. Development</b> (30 minutes)</p> <ul style="list-style-type: none"><li>- Pros:<ul style="list-style-type: none"><li>- Scalability: Easily scale resources up or down.</li><li>- Cost Efficiency: Pay-as-you-go model reduces upfront costs.</li><li>- Accessibility: Access from anywhere with internet connectivity.</li></ul></li><li>- Cons:<ul style="list-style-type: none"><li>- Security Concerns: Data breaches and privacy issues.</li><li>- Downtime: Dependence on internet connectivity.</li><li>- Limited Control: Less control over the infrastructure.</li></ul></li><li>- Evaluation:<ul style="list-style-type: none"><li>- How to weigh the pros and cons.</li><li>- Case studies of successful and challenging implementations.</li><li>- Factors to consider in decision-making.</li></ul></li></ul> |



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|                   | <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"><li>- <b>Mini-Debate:</b> Each team will have 1 minute to present their arguments. They should focus on a few key points and be ready to respond to the opposing team's arguments.</li><li>- Summarize the key points made by both teams. Highlight some of the main arguments for and against cloud computing.</li></ul>   |
| <b>Closure</b>    | <ol style="list-style-type: none"><li>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</li><li>2. Suggested Reading:<br/><a href="https://morefield.com/blog/pros-and-cons-of-cloud-computing/">https://morefield.com/blog/pros-and-cons-of-cloud-computing/</a></li><li>3. Original Paper on Cloud computing:<br/><a href="http://ijrar.com/upload_issue/ijrar_issue_20544039.pdf">http://ijrar.com/upload_issue/ijrar_issue_20544039.pdf</a></li><li>4. Homework<br/>Search news articles or reports related to pros and cons of cloud computing</li><li>5. Spend 5 minutes to wrap up and consolidate the learning's</li></ol> <p><b>References:</b></p> <ul style="list-style-type: none"><li>- [Pros and Cons of Cloud Computing](<a href="https://www.ibm.com/cloud/learn/cloud-computing">https://www.ibm.com/cloud/learn/cloud-computing</a>)</li><li>- [Cloud Computing Benefits and Risks](<a href="https://azure.microsoft.com/en-us/overview/what-is-cloud-computing/">https://azure.microsoft.com/en-us/overview/what-is-cloud-computing/</a>)</li></ul> <p>YouTube Video:</p> <ul style="list-style-type: none"><li>- [Cloud Computing Pros and Cons](<a href="https://www.youtube.com/watch?v=CDxJcbyY2XM">https://www.youtube.com/watch?v=CDxJcbyY2XM</a>)</li></ul> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. Name one advantage of cloud computing.</li><li>2. What is a potential security concern with cloud computing?</li><li>3. Why might downtime be an issue with cloud computing?</li></ol>  |



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| <b>Lesson Plan<br/>No. 1.9</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Cloud Applications</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to:<br><ul style="list-style-type: none"><li>- Identify various applications of cloud computing.</li><li>- Understand how cloud computing is used in different industries.</li><li>- Learn about innovative uses of cloud technology.</li></ul>  |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Blackboard</li><li>4. YouTube Videos</li></ol>  |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce the concept of cloud applications.</li><li>- Explain the relevance of cloud applications in today's world.</li><li>- Provide an example of a cloud application in use.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Applications in Different Industries:<ul style="list-style-type: none"><li>- Healthcare: Telemedicine, electronic health records.</li><li>- Finance: Online banking, fraud detection.</li><li>- Education: E-learning platforms, virtual classrooms.</li></ul></li><li>- Innovative Uses:<ul style="list-style-type: none"><li>- AI and machine learning.</li><li>- Big data analytics.</li><li>- IoT (Internet of Things).</li></ul></li><li>- Case Studies:<ul style="list-style-type: none"><li>- Successful implementation examples.</li><li>- Benefits realized through cloud applications.</li><li>- Challenges faced and solutions.</li></ul></li></ul> <p><b>3. Exercise (5 minutes) –</b></p> |



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|                   | <p>- <b>Categorize Cloud Applications:</b> Ask students to categorize each cloud application into one of the following categories: SaaS (Software as a Service), PaaS (Platform as a Service), IaaS (Infrastructure as a Service), Specialized Applications (e.g., tools for specific tasks or industries)</p>   |
| <b>Closure</b>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</p> <p>2. Suggested Reading:</p> <p><a href="https://morefield.com/blog/pros-and-cons-of-cloud-computing/">https://morefield.com/blog/pros-and-cons-of-cloud-computing/</a></p> <p>3. Original Paper on Cloud computing:</p> <p><a href="https://www.researchgate.net/publication/366320853_A_RESEARCH_ON_CLOUD_COMPUTING">https://www.researchgate.net/publication/366320853_A_RESEARCH_ON_CLOUD_COMPUTING</a></p> <p>4. Homework</p> <p>Search news articles or reports related to cloud applications</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p>- [Cloud Applications](<a href="https://aws.amazon.com/solutions/case-studies/">https://aws.amazon.com/solutions/case-studies/</a>)</p> <p>- [Cloud Computing in Various Industries](<a href="https://www.ibm.com/cloud/learn/cloud-computing">https://www.ibm.com/cloud/learn/cloud-computing</a>)</p> <p>YouTube Video:</p> <p>- [Cloud Applications](<a href="https://www.youtube.com/watch?v=RwC6j4ZIVVQ">https://www.youtube.com/watch?v=RwC6j4ZIVVQ</a>)</p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. Name one cloud application in healthcare.</li><li>2. How is cloud computing used in the finance industry?</li><li>3. Give an example of an innovative use of cloud technology.</li></ol>   |



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| <b>Lesson Plan<br/>No. 1.10</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Cloud Challenges</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Identify common challenges in cloud computing.</li><li>- Understand how to address these challenges.</li><li>- Learn best practices for overcoming cloud computing challenges.</li></ul>   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Blackboard</li><li>4. YouTube Videos</li></ol>  |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce the concept of challenges in cloud computing.</li><li>- Highlight the importance of addressing these challenges.</li><li>- Provide a brief overview of common challenges.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Common Challenges:<ul style="list-style-type: none"><li>- Security and Privacy: Protecting data and ensuring compliance.</li><li>- Downtime and Reliability: Ensuring high availability.</li><li>- Cost Management: Controlling and optimizing expenses.</li></ul></li><li>- Addressing Challenges:<ul style="list-style-type: none"><li>- Security measures and best practices.</li><li>- Strategies for improving reliability and uptime.</li><li>- Tools for cost monitoring and management.</li></ul></li><li>- Best Practices:<ul style="list-style-type: none"><li>- Regular security audits.</li><li>- Using redundancy and failover solutions.</li><li>- Implementing cost-saving strategies.</li></ul></li></ul> |



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|                   | <p><b>3. Exercise (5 minutes) –</b></p> <p>- <b>Challenge Brainstorm:</b> Divide students into small groups or pairs and assign each group a challenge from the list. Ask them to quickly brainstorm one or two potential solutions or strategies for addressing their assigned challenge.</p>   |
| <b>Closure</b>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</p> <p>2. Suggested Reading:</p> <p><a href="https://www.knowledgehut.com/blog/cloud-computing/cloud-computing-challenge">https://www.knowledgehut.com/blog/cloud-computing/cloud-computing-challenge</a></p> <p>3. Original Paper on Cloud computing:</p> <p><a href="https://www.researchgate.net/publication/349074276_Challenges_and_Opportunities_with_Cloud_Computing">https://www.researchgate.net/publication/349074276_Challenges_and_Opportunities_with_Cloud_Computing</a></p> <p>4. Homework</p> <p>Search news articles or reports related to cloud challenges</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p>- [Cloud Computing Challenges](<a href="https://www.cio.com/article/2438965/cloud-computing/cloud-computing-10-top-challenges-for-it-managers.html">https://www.cio.com/article/2438965/cloud-computing/cloud-computing-10-top-challenges-for-it-managers.html</a>)</p> <p>- [Overcoming Cloud Challenges](<a href="https://www.ibm.com/cloud/learn/cloud-computing">https://www.ibm.com/cloud/learn/cloud-computing</a>)</p> <p>YouTube Video:</p> <p>- [Cloud Computing Challenges](<a href="https://www.youtube.com/watch?v=sr5EocMv5i0">https://www.youtube.com/watch?v=sr5EocMv5i0</a>)</p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. Name one common challenge in cloud computing.</li><li>2. How can downtime be minimized in cloud computing?</li><li>3. What is a best practice for managing cloud computing costs?</li></ol>  |



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| <b>Lesson Plan No. 2.1</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Introduction to Cloud Computing Architecture</b> | <b>Course No.: BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to:<br><ul style="list-style-type: none"><li>- Define cloud computing and its architecture.</li><li>- Understand the significance of cloud architecture in modern IT.</li><li>- Identify the basic components of cloud computing architecture.</li></ul>   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Whiteboard</li><li>4. YouTube Videos</li></ol>  |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>• Briefly define cloud computing and its purpose.</li><li>• Explain why cloud architecture is critical for IT infrastructure.</li><li>• Mention a real-world example of a company leveraging cloud architecture.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>• Definition and Components of Cloud Computing</li><li>• Define cloud computing and its layers.</li><li>• Highlight essential components such as virtualization, servers, storage.</li><li>• Discuss cloud services like SaaS, PaaS, and IaaS.</li><li>• Historical Evolution of Cloud Computing:<ul style="list-style-type: none"><li>• Trace the history from mainframes to modern cloud solutions.</li><li>• Discuss the role of virtualization in cloud evolution.</li><li>• Explain the impact of internet growth on cloud computing.</li></ul></li><li>• Importance in Modern IT:<ul style="list-style-type: none"><li>• Discuss cost-efficiency and scalability benefits.</li><li>• Highlight examples of cloud adoption in various industries.</li><li>• Explain how cloud computing supports remote work and collaboration.</li></ul></li></ul> |



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|                   | <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"><li>• <b>Cloud Services Match-Up.</b></li><li>• Objective: Identify and match various cloud services with their appropriate use cases.<ul style="list-style-type: none"><li>□ Each group receives a set of cloud services and use cases. They need to match each cloud service with the most appropriate use case and provide a brief explanation for their choice.</li></ul></li></ul>  |
| <b>Closure</b>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</p> <p>2. Suggested Reading:<br/><a href="https://www.geeksforgeeks.org/architecture-of-cloud-computing/">https://www.geeksforgeeks.org/architecture-of-cloud-computing/</a></p> <p>3. Original Paper on Cloud computing architecture:<br/><a href="https://www.researchgate.net/publication/327125094_Cloud_Computing_Architecture_A_Critical_Analysis">https://www.researchgate.net/publication/327125094_Cloud_Computing_Architecture_A_Critical_Analysis</a></p> <p>4. Homework<br/>Search news articles or reports related to cloud computing architecture</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p>- [Introduction to Cloud Computing](<a href="https://www.ibm.com/cloud/learn/cloud-computing">https://www.ibm.com/cloud/learn/cloud-computing</a>)<br/><a href="https://www.javatpoint.com/cloud-computing-architecture">https://www.javatpoint.com/cloud-computing-architecture</a></p> <p>- [Cloud Computing Basics](<a href="https://azure.microsoft.com/en-us/overview/what-is-cloud-computing/">https://azure.microsoft.com/en-us/overview/what-is-cloud-computing/</a>)<br/><a href="https://www.simplilearn.com/tutorials/cloud-computing-tutorial/cloud-computing-architecture">https://www.simplilearn.com/tutorials/cloud-computing-tutorial/cloud-computing-architecture</a></p> <p>YouTube Video Reference:</p> <p>- [What is Cloud Computing? - YouTube](<a href="https://www.youtube.com/watch?v=2LaAJq1IB1Q">https://www.youtube.com/watch?v=2LaAJq1IB1Q</a>)</p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <p>1. What is cloud computing?</p>  |



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|  | <p>2. Name one key component of cloud computing architecture.</p> <p>3. How does cloud computing benefit modern IT infrastructure?</p> |
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| <b>Lesson Plan<br/>No. 2.2</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Layers in Cloud Architecture</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objective<br/>s</b>                | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Identify the various layers in cloud computing architecture.</li><li>- Understand the function of each layer.</li><li>- Explain the interaction between layers.</li></ul>  |
| <b>Teaching<br/>Aids (if<br/>any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Whiteboard</li><li>4. YouTube Videos</li></ol>  |
| <b>Teaching<br/>Develop<br/>ment</b>  | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce the concept of layered architecture in cloud computing.</li><li>- Explain why layered architecture is important.</li><li>- Provide a high-level overview of each layer.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Physical Layer:<ul style="list-style-type: none"><li>- Define the physical layer.</li><li>- Discuss components like servers, storage devices, and networking.</li><li>- Explain the role of data centers.</li></ul></li><li>- Virtual Layer:<ul style="list-style-type: none"><li>- Define the virtual layer.</li><li>- Discuss virtualization technologies and hypervisors.</li><li>- Explain how virtualization abstracts physical resources.</li></ul></li><li>- Service Layer:<ul style="list-style-type: none"><li>- Define the service layer.</li><li>- Discuss services like SaaS, PaaS, and IaaS.</li><li>- Explain how these services interact with the underlying layers.</li></ul></li></ul> <p><b>3. Exercise (5 minutes) –</b></p> |



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|                          | <p><b>- Role Play Preparation</b></p> <ul style="list-style-type: none"> <li>• Each group prepares a short presentation or skit to illustrate their layer's role, its components, and how it interacts with the other layers.</li> <li>• Summarize the interactions between layers and their collective contribution to the cloud architecture.</li> </ul>  |
| <p><b>Closure</b></p>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</p> <p>2. Suggested Reading:</p> <p><a href="https://www.simplilearn.com/layers-of-cloud-computing-article">https://www.simplilearn.com/layers-of-cloud-computing-article</a></p> <p>3. Original Paper on Cloud computing architecture:</p> <p><a href="https://www.researchgate.net/publication/327125094_Cloud_Computing_Architecture_A_Critical_Analysis">https://www.researchgate.net/publication/327125094_Cloud_Computing_Architecture_A_Critical_Analysis</a></p> <p>4. Homework</p> <p>Search news articles or reports related to cloud computing architecture</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p>- [Cloud Architecture Layers](<a href="https://aws.amazon.com/architecture/">https://aws.amazon.com/architecture/</a>)</p> <p>- [Understanding Cloud Layers](<a href="https://www.redhat.com/en/topics/cloud-computing/what-is-cloud-architecture">https://www.redhat.com/en/topics/cloud-computing/what-is-cloud-architecture</a>)</p> <p><a href="https://cyfuture.cloud/kb/general/what-are-the-different-layers-of-cloud-architecture">https://cyfuture.cloud/kb/general/what-are-the-different-layers-of-cloud-architecture</a></p> <p><a href="https://cloud.google.com/learn/what-is-cloud-architecture">https://cloud.google.com/learn/what-is-cloud-architecture</a></p> <p>YouTube Video Reference:</p> <p>- [Cloud Computing Architecture - YouTube](<a href="https://www.youtube.com/watch?v=WzSM8sTQ6Io">https://www.youtube.com/watch?v=WzSM8sTQ6Io</a>)</p> |
| <p><b>Evaluation</b></p> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"> <li>1. What is the physical layer in cloud architecture?</li> <li>2. Name a technology used in the virtual layer.</li> <li>3. What services are provided by the service layer?</li> </ol>   |



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| <b>Lesson Plan<br/>No. 2.3</b> | <b>Course Name: Cloud Computing<br/>Topic: Cloud Delivery Models</b> | <b>Course No.:<br/>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Define different cloud delivery models.</li><li>- Understand the pros and cons of each model.</li><li>- Identify real-world applications of each model.</li></ul>   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Whiteboard</li><li>4. YouTube Videos</li></ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce cloud delivery models.</li><li>- Explain the significance of delivery models in cloud computing.</li><li>- Provide examples of companies using different delivery models.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Infrastructure as a Service (IaaS):<ul style="list-style-type: none"><li>- Define IaaS.</li><li>- Discuss its benefits and challenges.</li><li>- Provide examples of IaaS providers.</li></ul></li><li>- Platform as a Service (PaaS):<ul style="list-style-type: none"><li>- Define PaaS.</li><li>- Discuss its benefits and challenges.</li><li>- Provide examples of PaaS providers.</li></ul></li><li>- Software as a Service (SaaS):<ul style="list-style-type: none"><li>- Define SaaS.</li><li>- Discuss its benefits and challenges.</li><li>- Provide examples of SaaS providers.</li></ul></li></ul> <p><b>3. Exercise (5 minutes) –</b></p> |



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|                   | <p>- Cloud Delivery Models Case Study and Strategy:</p> <p><b>Objective:</b> Analyze and determine the most suitable cloud delivery model for different business scenarios.</p> <p><b>Analyze:</b> Each group analyzes their assigned scenario and decides which cloud delivery model (IaaS, PaaS, or SaaS) best fits the scenario's requirements.</p>  |
| <b>Closure</b>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</p> <p>2. Suggested Reading:</p> <p><a href="https://www.javatpoint.com/cloud-service-models">https://www.javatpoint.com/cloud-service-models</a></p> <p>3. Original Paper on Cloud <b>Delivery Models</b>:</p> <p><a href="https://www.researchgate.net/publication/324686110_Cloud_Computing_Delivery_and_Delivery_Models_Opportunity_and_Challenges">https://www.researchgate.net/publication/324686110_Cloud_Computing_Delivery_and_Delivery_Models_Opportunity_and_Challenges</a></p> <p>4. Homework</p> <p>Search news articles or reports related to cloud <b>Delivery Models</b></p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p>- [Cloud Delivery Models](<a href="https://azure.microsoft.com/en-us/overview/what-are-iaas-paas-saas/">https://azure.microsoft.com/en-us/overview/what-are-iaas-paas-saas/</a>)</p> <p>- [Understanding Cloud Services](<a href="https://www.ibm.com/cloud/learn/iaas-paas-saas">https://www.ibm.com/cloud/learn/iaas-paas-saas</a>)</p> <p>- YouTube Video Reference:</p> <p>- [Cloud Service Models - YouTube](<a href="https://www.youtube.com/watch?v=7a9nOwFpYxI">https://www.youtube.com/watch?v=7a9nOwFpYxI</a>)</p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What is IaaS?</li><li>2. Name a benefit of using PaaS.</li><li>3. Give an example of a SaaS provider.</li></ol>   |



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| <b>Lesson Plan<br/>No. 2.4</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: The SPI Framework</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objective<br/>s</b>                | At the end of the lesson the student shall be able to:<br><ul style="list-style-type: none"><li>- Define the SPI framework in cloud computing.</li><li>- Understand the components of the SPI framework.</li><li>- Explain the significance of the SPI framework in cloud services.</li></ul>   |
| <b>Teaching<br/>Aids (if<br/>any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Whiteboard</li><li>4. YouTube Videos</li></ol>  |
| <b>Teaching<br/>Developm<br/>ent</b>  | <p><b>1. Introduction</b> (5 minutes)</p> <ul style="list-style-type: none"><li>- Introduce the SPI framework.</li><li>- Explain why the SPI framework is important.</li><li>- Provide a high-level overview of the components.</li></ul> <p><b>2. Development</b> (30 minutes)</p> <ul style="list-style-type: none"><li>- Service:<ul style="list-style-type: none"><li>- Define service in the SPI framework.</li><li>- Discuss different types of services.</li><li>- Explain the importance of service-level agreements (SLAs).</li></ul></li><li>- Platform:<ul style="list-style-type: none"><li>- Define platform in the SPI framework.</li><li>- Discuss platform components like middleware and runtime environments.</li><li>- Explain the role of platforms in application development.</li></ul></li><li>- Infrastructure:<ul style="list-style-type: none"><li>- Define infrastructure in the SPI framework.</li><li>- Discuss infrastructure components like servers, storage, and networking.</li><li>- Explain how infrastructure supports cloud services.</li></ul></li></ul> <p><b>3. Exercise (5 minutes) –</b></p> |



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|                   | <p>- <b>Research and Analysis</b></p> <ul style="list-style-type: none"><li>• <b>Group Work:</b> Each group evaluates their assigned scenario and decides which SPI model (IaaS, PaaS, or SaaS) is best suited to meet the needs of the company. They should:<ul style="list-style-type: none"><li>○ Identify the advantages of the chosen model for the scenario.</li><li>○ Discuss any potential drawbacks or limitations.</li><li>○ Justify their choice based on the specific needs of the company.</li></ul></li></ul>   |
| <b>Closure</b>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</p> <p>2. Suggested Reading:<br/><a href="https://www.techtarget.com/searchcloudcomputing/definition/SPI-model">https://www.techtarget.com/searchcloudcomputing/definition/SPI-model</a></p> <p>3. Original Paper on the SPI framework:<br/><a href="https://www.researchgate.net/publication/256473913_A_conceptual_framework_for_SPI_evaluation">https://www.researchgate.net/publication/256473913_A_conceptual_framework_for_SPI_evaluation</a></p> <p>4. Homework<br/>Search news articles or reports related to the SPI framework</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <ul style="list-style-type: none"><li>- [The SPI Framework](<a href="https://www.techopedia.com/definition/29454/spi-service-platform-infrastructure">https://www.techopedia.com/definition/29454/spi-service-platform-infrastructure</a>)</li><li>- [Understanding SPI in Cloud](<a href="https://www.cloudopedia.com/spi-model/">https://www.cloudopedia.com/spi-model/</a>)</li><li>- YouTube Video Reference:<br/>- [SPI Framework in Cloud Computing - YouTube](<a href="https://www.youtube.com/watch?v=sIkr6dA7W9Y">https://www.youtube.com/watch?v=sIkr6dA7W9Y</a>)</li></ul> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What does SPI stand for?</li><li>2. Name a component of the platform layer.</li><li>3. Why are SLAs important in cloud services?</li></ol>  |



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| <b>Lesson Plan<br/>No. 2.5</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Cloud Software as a Service (SaaS)</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Define SaaS.</li><li>- Understand the advantages and disadvantages of SaaS.</li><li>- Identify examples of SaaS applications.</li></ul>   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Whiteboard</li><li>4. YouTube Videos</li></ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce SaaS and its importance.</li><li>- Explain the basic concept of SaaS.</li><li>- Mention a few popular SaaS applications.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Definition and Characteristics:<ul style="list-style-type: none"><li>- Define SaaS.</li><li>- Discuss the key characteristics of SaaS.</li><li>- Explain the multi-tenant architecture.</li></ul></li><li>- Advantages and Disadvantages:<ul style="list-style-type: none"><li>- Discuss the benefits of SaaS like cost savings and scalability.</li><li>- Highlight the potential drawbacks like data security concerns.</li><li>- Provide examples of scenarios where SaaS is beneficial.</li></ul></li><li>- Examples of SaaS Applications:<ul style="list-style-type: none"><li>- List popular SaaS applications like Google Workspace, Salesforce.</li><li>- Discuss the features of these applications.</li><li>- Explain how these applications improve business operations.</li></ul></li></ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"><li>- <b>Scenario:</b> Your company is considering adopting several SaaS applications</li></ul> |



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|                   | <p>to improve various aspects of its operations. You need to evaluate different SaaS solutions based on their functionality, benefits, and potential challenges.</p> <p>-Highlight how different SaaS solutions address specific business needs and any best practices for their adoption.</p>   |
| <b>Closure</b>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</p> <p>2. Suggested Reading:<br/><a href="https://www.cloudflare.com/learning/cloud/what-is-saas/">https://www.cloudflare.com/learning/cloud/what-is-saas/</a></p> <p>3. Original Paper on Cloud types:<br/><a href="https://www.researchgate.net/publication/351401872_Software_as_a_Service_SaaS_Cloud_Computing_An_Empirical_Investigation_on_University_Students'_Perception">https://www.researchgate.net/publication/351401872_Software_as_a_Service_SaaS_Cloud_Computing_An_Empirical_Investigation_on_University_Students'_Perception</a></p> <p>4. Homework<br/>Search news articles or reports related to cloud computing architecture</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <ul style="list-style-type: none"><li>- [What is SaaS?](<a href="https://www.salesforce.com/saas/">https://www.salesforce.com/saas/</a>)</li><li>- [SaaS Explained](<a href="https://www.ibm.com/cloud/learn/saas">https://www.ibm.com/cloud/learn/saas</a>)</li><li>- YouTube Video Reference:<br/>- [What is SaaS? - YouTube](<a href="https://www.youtube.com/watch?v=ro2Lp-YmZrI">https://www.youtube.com/watch?v=ro2Lp-YmZrI</a>)</li></ul> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What is SaaS?</li><li>2. Name one advantage of SaaS.</li><li>3. Give an example of a SaaS application.</li></ol>   |



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| <b>Lesson Plan<br/>No. 2.6</b> | <b>Course Name: Cloud Computing<br/>Topic: Cloud Platform as a Service (PaaS)</b> | <b>Course No.:<br/>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to:<br>- Define PaaS.<br>- Understand the advantages and disadvantages of PaaS.<br>- Identify examples of PaaS platforms.   |
| <b>Teaching Aids (if any)</b> | 1. Power Point Presentation<br>2. Online contents<br>3. Whiteboard<br>4. YouTube Videos  |
| <b>Teaching Development</b>   | <p><b>1. Introduction</b> (5 minutes)</p> <ul style="list-style-type: none"> <li>- Introduce PaaS and its significance.</li> <li>- Explain the basic concept of PaaS.</li> <li>- Mention a few popular PaaS platforms.</li> <li>- Key feature of PaaS.</li> </ul> <p><b>2. Development</b> (30 minutes)</p> <ul style="list-style-type: none"> <li>- Definition and Characteristics: <ul style="list-style-type: none"> <li>- Define PaaS.</li> <li>- Discuss the key characteristics of PaaS.</li> <li>- Explain the development environment provided by PaaS.</li> </ul> </li> <li>- Advantages and Disadvantages: <ul style="list-style-type: none"> <li>- Discuss the benefits of PaaS like streamlined development and scalability.</li> <li>- Highlight the potential drawbacks like vendor lock-in.</li> <li>- Provide examples of scenarios where PaaS is beneficial.</li> </ul> </li> <li>- How does PaaS differ from SaaS?</li> <li>- Examples of PaaS Platforms: <ul style="list-style-type: none"> <li>- List popular PaaS platforms like Microsoft Azure, Google App Engine.</li> <li>- Discuss the features of these platforms.</li> <li>- Explain how these platforms support application development.</li> </ul> </li> </ul> |





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|                   | <p><b>3. Exercise (5 minutes) –</b></p> <p>- PaaS Benefits Brainstorm</p> <ul style="list-style-type: none"><li>• In this activity, you will quickly brainstorm the benefits of PaaS for three different types of projects. You will have 1 minute per project to think about how PaaS could be beneficial.</li><li>• E-commerce Website</li><li>• <b>Task:</b> List three benefits of using PaaS for developing and managing an e-commerce website.</li></ul>  |
| <b>Closure</b>    | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these.</p> <p>2.Suggested Reading:</p> <p><a href="https://www.javatpoint.com/platform-as-a-service">https://www.javatpoint.com/platform-as-a-service</a></p> <p>3. Original Paper on the Platform as a Service:</p> <p><a href="https://www.researchgate.net/publication/354683300_OVERVIEW_OF_CLOUD_COMPUTING_AND_ITS_TYPES">https://www.researchgate.net/publication/354683300_OVERVIEW_OF_CLOUD_COMPUTING_AND_ITS_TYPES</a></p> <p>4.Homework</p> <p>Search news articles or reports related to the Platform as a Service</p> <p>5.Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p><a href="https://azure.microsoft.com/en-in/resources/cloud-computing-dictionary/what-is-paas">https://azure.microsoft.com/en-in/resources/cloud-computing-dictionary/what-is-paas</a></p> <p><a href="https://www.techtarget.com/searchcloudcomputing/definition/Platform-as-a-Service-PaaS">https://www.techtarget.com/searchcloudcomputing/definition/Platform-as-a-Service-PaaS</a></p> <p><a href="https://cloud.google.com/learn/what-is-paas">https://cloud.google.com/learn/what-is-paas</a></p> <p>YouTube Video Reference:</p> <p>- [What is PaaS? - YouTube](<a href="https://www.youtube.com/watch?v=wbVgILLwOiE">https://www.youtube.com/watch?v=wbVgILLwOiE</a>)</p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What is PaaS?</li><li>2. Name one advantage of PaaS.</li><li>3. Give an example of a PaaS platform.</li></ol>   |



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| <b>Lesson Plan No. 2.7</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Cloud Infrastructure as a Service (IaaS)</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Define IaaS.</li><li>- Understand the advantages and disadvantages of IaaS.</li><li>- Identify examples of IaaS providers.</li></ul>   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Whiteboard</li><li>4. YouTube Videos</li></ol>  |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce IaaS and its importance.</li><li>- Explain the basic concept of IaaS.</li><li>- Mention a few popular IaaS providers.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Definition and Characteristics:<ul style="list-style-type: none"><li>- Define IaaS.</li><li>- Discuss the key characteristics of IaaS.</li><li>- Explain the infrastructure provided by IaaS.</li></ul></li><li>- Advantages and Disadvantages:<ul style="list-style-type: none"><li>- Discuss the benefits of IaaS like cost savings and scalability.</li><li>- Highlight the potential drawbacks like managing security.</li><li>- Provide examples of scenarios where IaaS is beneficial.</li></ul></li><li>- Examples of IaaS Providers:<ul style="list-style-type: none"><li>- List popular IaaS providers like AWS, Google Cloud, Microsoft Azure.</li><li>- Discuss the features of these providers.</li><li>- Explain how these providers support infrastructure needs.</li></ul></li></ul> <p><b>3. Exercise (5 minutes) –</b></p> |



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|                   | <ul style="list-style-type: none"><li>IaaS Quiz Exercise</li></ul> <p><b>Objective:</b> To assess students' understanding of IaaS through a quick quiz format.</p>  |
| <b>Closure</b>    | <ol style="list-style-type: none"><li>Summarize the Lesson Learning Outcomes and get affirmation from Students on these</li><li>Suggested Reading:<br/><a href="https://cloud.google.com/learn/what-is-iaas">https://cloud.google.com/learn/what-is-iaas</a></li><li>Original Paper on the Cloud Infrastructure as a Service<br/><a href="https://www.researchgate.net/publication/354683300_OVERVIEW_OF_CLOUD_COMPUTING_AND_ITS_TYPES">https://www.researchgate.net/publication/354683300_OVERVIEW_OF_CLOUD_COMPUTING_AND_ITS_TYPES</a></li><li>Homework<br/>Search news articles or reports related to the Cloud Infrastructure as a Service</li><li>Spend 5 minutes to wrap up and consolidate the learning's</li></ol> <p><b>References:</b></p> <p>[What is IaaS?]( <a href="https://www.javatpoint.com/infrastructure-as-a-service">https://www.javatpoint.com/infrastructure-as-a-service</a>)</p> <p><a href="https://azure.microsoft.com/en-in/resources/cloud-computing-dictionary/what-is-iaas">https://azure.microsoft.com/en-in/resources/cloud-computing-dictionary/what-is-iaas</a></p> <p>- [IaaS Explained]( <a href="https://aws.amazon.com/what-is/iaas/">https://aws.amazon.com/what-is/iaas/</a>)</p> <p>- YouTube Video Reference:</p> <p>- [What is IaaS? - YouTube](<br/><a href="https://www.google.com/search?sca_esv=83d4d981e1094711&amp;q=Cloud+Infra+structure+as+a+Service+(IaaS)&amp;tbm=vid&amp;source=lnms&amp;fbs=AEQNm0CvspUPonaF8UH5s_LBD3JPsLt3iVi1ADG6L3_aaxkBVONud3B_END6F_s_jMhjE18ytQ3vG5kaeCxZodl93jTgZRqy0s_oh17xTaegiIX5fggsFNb7GWISwnQDEhmWtgJPi3SPyWr_zu_mH114Upk18scOv7-Ur-haPVjw915FqIgvHumnUZKvjGb90nCNXQyVuUSP8hLO5vw7wfRmoLjC2c_qg&amp;sa=X&amp;ved=2ahUKEwjaoIqEyvGHAXbV2wGHdpdMIMQ0pQJegQICxAB&amp;biw=1093&amp;bih=513&amp;dpr=1.25#fpstate=ive&amp;vld=cid:fa39b4a7,vid:GCGLYMeh75Y,st:0">https://www.google.com/search?sca_esv=83d4d981e1094711&amp;q=Cloud+Infra+structure+as+a+Service+(IaaS)&amp;tbm=vid&amp;source=lnms&amp;fbs=AEQNm0CvspUPonaF8UH5s_LBD3JPsLt3iVi1ADG6L3_aaxkBVONud3B_END6F_s_jMhjE18ytQ3vG5kaeCxZodl93jTgZRqy0s_oh17xTaegiIX5fggsFNb7GWISwnQDEhmWtgJPi3SPyWr_zu_mH114Upk18scOv7-Ur-haPVjw915FqIgvHumnUZKvjGb90nCNXQyVuUSP8hLO5vw7wfRmoLjC2c_qg&amp;sa=X&amp;ved=2ahUKEwjaoIqEyvGHAXbV2wGHdpdMIMQ0pQJegQICxAB&amp;biw=1093&amp;bih=513&amp;dpr=1.25#fpstate=ive&amp;vld=cid:fa39b4a7,vid:GCGLYMeh75Y,st:0</a>)</p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>What is IaaS?</li></ol>  |



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|  | <p>2. Name one advantage of IaaS.</p> <p>3. Give an example of an IaaS provider.</p> |
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| <b>Lesson Plan<br/>No. 2.8</b> | <b>Course Name: Cloud Computing<br/>Topic: Cloud Deployment Models</b> | <b>Course No.:<br/>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Define various cloud deployment models.</li><li>- Understand the advantages and disadvantages of each model.</li><li>- Identify examples of each deployment model.</li></ul>  |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Whiteboard</li><li>4. YouTube Videos</li></ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce cloud deployment models.</li><li>- Explain the significance of deployment models in cloud computing.</li><li>- Provide examples of companies using different deployment models.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Public Clouds:<ul style="list-style-type: none"><li>- Define public clouds.</li><li>- Discuss the benefits and challenges of public clouds.</li><li>- Provide examples of public cloud providers.</li></ul></li><li>- Private Clouds:<ul style="list-style-type: none"><li>- Define private clouds.</li><li>- Discuss the benefits and challenges of private clouds.</li><li>- Provide examples of private cloud implementations.</li></ul></li><li>- Community Clouds:<ul style="list-style-type: none"><li>- Define community clouds.</li><li>- Discuss the benefits and challenges of community clouds.</li><li>- Provide examples of community cloud use cases.</li></ul></li></ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"><li>• Match the Cloud Deployment Model to the Scenario</li></ul> |



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|                   | <ul style="list-style-type: none"><li>• <b>Scenario:</b> Your Company is considering adopting a cloud solution and is evaluating different cloud deployment models: Public Cloud, Private Cloud, Hybrid Cloud, and Community Cloud. You need to determine which model best fits the company's needs based on specific requirements.</li><li>• <b>Task:</b> Match each deployment model with the appropriate scenario description.</li></ul>  |
| <b>Closure</b>    | <ol style="list-style-type: none"><li>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</li><li>2. Suggested Reading:<br/><a href="https://cloud.google.com/discover/types-of-cloud-computing">https://cloud.google.com/discover/types-of-cloud-computing</a></li><li>3. Original Paper on the Cloud Deployment Models:<br/><a href="https://www.researchgate.net/publication/350721171_Cloud_Computing_Deployment_Models_A_Comparative_Study">https://www.researchgate.net/publication/350721171_Cloud_Computing_Deployment_Models_A_Comparative_Study</a></li><li>4. Homework<br/>Search news articles or reports related to the Cloud Deployment Models</li><li>5. Spend 5 minutes to wrap up and consolidate the learning's</li></ol> <p><b>References:</b></p> <ul style="list-style-type: none"><li>- [Cloud Deployment Models](<a href="https://www.ibm.com/cloud/learn/cloud-deployment-models">https://www.ibm.com/cloud/learn/cloud-deployment-models</a>)</li><li>- [Understanding Cloud Deployment Models](<a href="https://azure.microsoft.com/en-us/overview/what-are-private-public-hybrid-clouds/">https://azure.microsoft.com/en-us/overview/what-are-private-public-hybrid-clouds/</a>)</li><li>- YouTube Video Reference:<br/>- [Cloud Deployment Models - YouTube](<a href="https://www.youtube.com/watch?v=X1qoKLL040A">https://www.youtube.com/watch?v=X1qoKLL040A</a>)</li></ul> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What is a public cloud?</li><li>2. Name one benefit of private clouds.</li><li>3. Give an example of a community cloud use case.</li></ol>   |



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| <b>Lesson Plan<br/>No. 2.9</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Public Clouds</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Define public clouds.</li><li>- Understand the advantages and disadvantages of public clouds.</li><li>- Identify examples of public cloud providers.</li></ul>  |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Whiteboard</li><li>4. YouTube Videos</li></ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce the concept of public clouds.</li><li>- Explain why public clouds are popular.</li><li>- Mention a few public cloud providers.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Definition and Characteristics:<ul style="list-style-type: none"><li>- Define public clouds.</li><li>- Discuss the key characteristics of public clouds.</li><li>- Explain the shared infrastructure in public clouds.</li></ul></li><li>- Advantages and Disadvantages:<ul style="list-style-type: none"><li>- Discuss the benefits of public clouds like cost savings and scalability.</li><li>- Highlight the potential drawbacks like security concerns.</li><li>- Provide examples of scenarios where public clouds are beneficial.</li></ul></li><li>- Examples of Public Cloud Providers:<ul style="list-style-type: none"><li>- List popular public cloud providers like AWS, Google Cloud, Microsoft Azure.</li><li>- Discuss the features of these providers.</li><li>- Explain how these providers support various business needs.</li></ul></li></ul> |



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|                   | <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Scenario: Your company, a tech startup, is considering adopting a Public Cloud solution to support its growing needs. The company wants to understand the benefits, key features, and potential use cases of Public Cloud before making a decision.</li><li><input type="checkbox"/> Tasks: List three key benefits of using Public Cloud for the company.</li></ul>   |
| <b>Closure</b>    | <ol style="list-style-type: none"><li>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</li><li>2. Suggested Reading:<br/><a href="https://cloud.google.com/learn/what-is-public-cloud">https://cloud.google.com/learn/what-is-public-cloud</a></li><li>3. Original Paper on the Public Cloud:<br/><a href="https://www.researchgate.net/publication/354522682_The_Analysis_of_Public_Cloud">https://www.researchgate.net/publication/354522682_The_Analysis_of_Public_Cloud</a></li><li>4. Homework<br/>Search news articles or reports related to the Public Cloud</li><li>5. Spend 5 minutes to wrap up and consolidate the learning's</li></ol> <p><b>References:</b></p> <ul style="list-style-type: none"><li>- [What is a Public Cloud?](<a href="https://aws.amazon.com/what-is-cloud-computing/">https://aws.amazon.com/what-is-cloud-computing/</a>)</li><li>- [Public Cloud Explained](<a href="https://www.ibm.com/cloud/learn/public-cloud">https://www.ibm.com/cloud/learn/public-cloud</a>)</li><li>- YouTube Video Reference:<br/>- [What is a Public Cloud? - YouTube](<a href="https://www.youtube.com/watch?v=7TFH2JzI4M">https://www.youtube.com/watch?v=7TFH2JzI4M</a>)</li></ul> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What is a public cloud?</li><li>2. Name one advantage of public clouds.</li><li>3. Give an example of a public cloud provider.</li></ol>  |



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| <b>Lesson Plan<br/>No. 2.10</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Hybrid Clouds</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Define hybrid clouds.</li><li>- Understand the advantages and disadvantages of hybrid clouds.</li><li>- Identify examples of hybrid cloud implementations.</li></ul>   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Whiteboard</li><li>4. YouTube Videos</li></ol>  |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>- Introduce the concept of hybrid clouds.</li><li>- Explain the significance of hybrid clouds in modern IT.</li><li>- Provide examples of companies using hybrid clouds.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>- Definition and Characteristics:<ul style="list-style-type: none"><li>- Define hybrid clouds.</li><li>- Discuss the key characteristics of hybrid clouds.</li><li>- Explain the integration of public and private clouds in hybrid models.</li></ul></li><li>- Advantages and Disadvantages:<ul style="list-style-type: none"><li>- Discuss the benefits of hybrid clouds like flexibility and cost savings.</li><li>- Highlight the potential drawbacks like complexity in management.</li><li>- Provide examples of scenarios where hybrid clouds are beneficial.</li></ul></li><li>- Examples of Hybrid Cloud Implementations:<ul style="list-style-type: none"><li>- List companies using hybrid clouds.</li><li>- Discuss the features of their hybrid cloud solutions.</li><li>- Explain how hybrid clouds support their business operations.</li></ul></li></ul> <p><b>3. Exercise (5 minutes) –</b></p> |



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|                   | <ul style="list-style-type: none"><li>• Hybrid Cloud Decision-Making</li><li>• Objective: Reinforce decision-making skills related to Hybrid Cloud solutions.<br/>Instructions:<ul style="list-style-type: none"><li>-Present a set of business needs and Hybrid Cloud approaches.</li><li>-Students individually or in pairs choose the most suitable approach for each need and justify their choices.</li></ul></li><li>• Activity: Share answers and rationales with the class. Discuss different perspectives and solutions.</li></ul>   |
| <b>Closure</b>    | <ol style="list-style-type: none"><li>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</li><li>2. Suggested Reading:<br/><a href="https://cloud.google.com/learn/what-is-hybrid-cloud">https://cloud.google.com/learn/what-is-hybrid-cloud</a></li><li>3. Original Paper on the Hybrid Clouds:<br/><a href="https://www.researchgate.net/publication/356768821_Hybrid_Cloud_A_New_Paradigm_in_Cloud_Computing">https://www.researchgate.net/publication/356768821_Hybrid_Cloud_A_New_Paradigm_in_Cloud_Computing</a></li><li>4. Homework<br/>Search news articles or reports related to the Hybrid Clouds:</li><li>5. Spend 5 minutes to wrap up and consolidate the learning's</li></ol> <p><b>References:</b></p> <ul style="list-style-type: none"><li>- [What is a Hybrid Cloud?](<a href="https://azure.microsoft.com/en-us/overview/what-is-hybrid-cloud-computing/">https://azure.microsoft.com/en-us/overview/what-is-hybrid-cloud-computing/</a>)</li><li>- [Hybrid Cloud Explained](<a href="https://www.ibm.com/cloud/learn/hybrid-cloud">https://www.ibm.com/cloud/learn/hybrid-cloud</a>)</li></ul> <p>YouTube Video Reference:</p> <ul style="list-style-type: none"><li>- [What is a Hybrid Cloud? - YouTube](<a href="https://www.youtube.com/watch?v=2SXVoLU96nE">https://www.youtube.com/watch?v=2SXVoLU96nE</a>)</li></ul> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What is a hybrid cloud?</li><li>2. Name one advantage of hybrid clouds.</li><li>3. Give an example of a company using a hybrid cloud.</li></ol>   |



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| <b>Lesson Plan No. 3.1</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Cloud Business Value: Reducing Costs and Increasing Efficiency through Scalability</b> | <b>Course No.: BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"> <li>• Understand the basic concept of increasing importance of cloud computing in today's business.</li> <li>• Understand how cloud services eliminate the need for large upfront infrastructure investments.</li> </ul>  |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"> <li>1. Power Point Presentation</li> <li>2. Online contents</li> <li>3. Whiteboard</li> <li>4. YouTube Videos</li> </ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"> <li>• How does cloud computing differ from traditional IT infrastructure, and what advantages does it offer to businesses?</li> <li>• How for most businesses, IT has become a necessity.</li> <li>• What is the definition of cloud business value?</li> <li>• Discuss various pricing models</li> </ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"> <li>• What is the main advantage of cloud scalability for cost management?</li> <li>• What are the two types of cloud scalability?</li> <li>• How does auto-scaling help in reducing cloud costs?</li> <li>• What tool can be used to track and manage cloud spending?</li> <li>• How does scalability impact system performance?</li> <li>• Which cloud service feature helps in handling varying workloads?</li> <li>• What is one way to enhance cloud application performance?</li> <li>• Discuss how automatic scaling in the cloud reduces the need for manual intervention, saving time and effort for IT teams.</li> </ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"> <li>• Cost-Benefit Analysis of Cloud Scalability</li> <li>• Objective: Evaluate the potential cost savings and efficiency improvements from adopting cloud scalability features in a hypothetical company.</li> <li>• Scenario: You are the IT manager for a mid-sized retail company that is considering moving its on-premises infrastructure to the cloud. The company experiences seasonal traffic spikes, and the IT budget is tight.</li> </ul> <p>Question: What are the potential benefits of auto-scaling beyond cost saving</p> |



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| <b>Closure</b>    | <ol style="list-style-type: none"><li>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</li><li>2. Suggested Reading:<br/><a href="https://www.indeed.com/career-advice/career-development/cost-efficiencies">https://www.indeed.com/career-advice/career-development/cost-efficiencies</a></li><li>3. Original Paper on the SPI framework:<br/><a href="https://www.researchgate.net/publication/347670637_Research_on_the_Path_of_Reducing_Cost_and_Increasing_Efficiency_of_Retail_Enterprises_From_the_Perspective_of_Intelligent_Supply_Chain">https://www.researchgate.net/publication/347670637_Research_on_the_Path_of_Reducing_Cost_and_Increasing_Efficiency_of_Retail_Enterprises_From_the_Perspective_of_Intelligent_Supply_Chain</a></li><li>4. Homework<br/>Search news articles or reports related to reducing Costs and Increasing Efficiency through Scalability</li><li>5. Spend 5 minutes to wrap up and consolidate the learning's</li></ol> <p><b>References:</b></p> <p><a href="https://www.runn.io/blog/how-to-improve-cost-efficiency">https://www.runn.io/blog/how-to-improve-cost-efficiency</a></p> <p><a href="https://www.investopedia.com/terms/s/scalability.asp">https://www.investopedia.com/terms/s/scalability.asp</a></p> <p>7. YouTube Video Reference:<br/><a href="https://www.google.com/search?sca_esv=6cfb153aab81f25c&amp;sca_upv=1&amp;q=Reducing+Costs+and+Increasing+Efficiency+through+Scalability&amp;tbm=vid&amp;source=Inms&amp;fbs=AEQNm0AeMNWKf4PpcKMI-eSa16lJoRPMIuyspCxWO6iZW9F1Nu5UXIEfGU2YX1CrW9Nmm9Q3JIJZUqyMsLxos5tPU_UnqJUBrgTTZdMQfghyy8PpT_cHSYt6LsMld2_XK7XZstHHUm7NbU1iDBvtcjuK_h_kqH6Dwz8lr4DOT4zoV4UNRTZJRLFWSjCZOBIUJtMtWYlk3wsZc9KkGx3R7G_Sq--ZicncbQ&amp;sa=X&amp;ved=2ahUKEwih0MqDIPGHaxVVcmwGHXgpOv0Q0pQJegQIERAB&amp;biw=1093&amp;bih=513&amp;dpr=1.25#fpstate=ive&amp;vld=cid:2ee54352,vid:RNrE7B8WTCU,st:0">https://www.google.com/search?sca_esv=6cfb153aab81f25c&amp;sca_upv=1&amp;q=Reducing+Costs+and+Increasing+Efficiency+through+Scalability&amp;tbm=vid&amp;source=Inms&amp;fbs=AEQNm0AeMNWKf4PpcKMI-eSa16lJoRPMIuyspCxWO6iZW9F1Nu5UXIEfGU2YX1CrW9Nmm9Q3JIJZUqyMsLxos5tPU_UnqJUBrgTTZdMQfghyy8PpT_cHSYt6LsMld2_XK7XZstHHUm7NbU1iDBvtcjuK_h_kqH6Dwz8lr4DOT4zoV4UNRTZJRLFWSjCZOBIUJtMtWYlk3wsZc9KkGx3R7G_Sq--ZicncbQ&amp;sa=X&amp;ved=2ahUKEwih0MqDIPGHaxVVcmwGHXgpOv0Q0pQJegQIERAB&amp;biw=1093&amp;bih=513&amp;dpr=1.25#fpstate=ive&amp;vld=cid:2ee54352,vid:RNrE7B8WTCU,st:0</a></p> |
| <b>Evaluation</b> | Reflective Questions (What, why, Who?). Allow students to answer.<br><b>Reflective Questions:</b> <ol style="list-style-type: none"><li>1. Benefits of Scalability:</li><li>2. Differentiate between vertical and horizontal scaling.</li><li>3. Give an example of a company using a hybrid cloud.</li></ol>  |



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| <b>Lesson Plan No. 3.2</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Reducing Costs and Increasing Efficiency through Scalability</b> | <b>Course No.: BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"> <li>a. Understand the basic concept Reducing cost and Scalability.</li> <li>b. Understand how elastic scaling helps businesses optimize costs by ensuring resources.</li> </ul>   |
| <b>Teaching Aids (if any)</b> | <ul style="list-style-type: none"> <li>a. Power Point Presentation</li> <li>c. Online contents</li> <li>d. Whiteboard</li> <li>e. YouTube Videos</li> </ul>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"> <li>• What is scalability in cloud computing?</li> <li>• Briefly explain how scalability can impact cost and efficiency.</li> <li>• Discuss the two types of scalability: Vertical (scale-up) and Horizontal (scale-out).</li> <li>• Briefly explain how scalability can impact cost and efficiency.</li> </ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"> <li>• What are the two main types of scalability?</li> <li>• How does scalability help reduce costs in cloud computing?</li> <li>• What is the primary benefit of horizontal scaling</li> <li>• What is a common cloud service feature that supports scalability?</li> <li>• Give an example of a scenario where horizontal scaling would be preferred over vertical scaling.</li> <li>• Which cloud service feature helps in handling varying workloads?</li> <li>• What is one way to enhance cloud application performance?</li> <li>• Discuss how automatic scaling in the cloud reduces the need for manual intervention, saving time and effort for IT teams.</li> </ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"> <li>• Cost-Benefit Analysis of Cloud Scalability</li> <li>• Objective: Evaluate the potential cost savings and efficiency improvements from adopting cloud scalability features in a hypothetical company.</li> <li>• Scenario: You are the IT manager for a mid-sized retail company that is considering moving its on-premises infrastructure to the cloud. The company experiences seasonal traffic spikes, and the IT budget is tight.</li> </ul> |



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| <p><b>Closure</b></p>    | <p>Question: What are the potential benefits of auto-scaling beyond cost savings</p> <ol style="list-style-type: none"> <li>Summarize the Lesson Learning Outcomes and get affirmation from Students on these</li> <li>Suggested Reading:<br/><a href="https://www.indeed.com/career-advice/career-development/cost-efficiencies">https://www.indeed.com/career-advice/career-development/cost-efficiencies</a></li> <li>Original Paper on the SPI framework:<br/><a href="https://www.researchgate.net/publication/347670637_Research_on_the_Path_of_Reducing_Cost_and_Increasing_Efficiency_of_Retail_Enterprises_From_the_Perspective_of_Intelligent_Supply_Chain">https://www.researchgate.net/publication/347670637_Research_on_the_Path_of_Reducing_Cost_and_Increasing_Efficiency_of_Retail_Enterprises_From_the_Perspective_of_Intelligent_Supply_Chain</a></li> <li>Homework<br/>Search news articles or reports related to reducing Costs and Increasing Efficiency through Scalability</li> <li>Spend 5 minutes to wrap up and consolidate the learning's</li> </ol> <p><b>References:</b></p> <p><a href="https://www.runn.io/blog/how-to-improve-cost-efficiency">https://www.runn.io/blog/how-to-improve-cost-efficiency</a></p> <p><a href="https://www.investopedia.com/terms/s/scalability.asp">https://www.investopedia.com/terms/s/scalability.asp</a></p> <ol style="list-style-type: none"> <li>YouTube Video Reference:<br/><a href="https://www.google.com/search?sca_esv=6cfb153aab81f25c&amp;sca_upv=1&amp;q=Reducing+Costs+and+Increasing+Efficiency+through+Scalability&amp;tbm=vid&amp;source=lnms&amp;fbs=AEQNm0AeMNWKf4PpcKMI-eSa16lJoRPMIuyspCxWO6iZW9F1Nu5UXIEfGU2YX1CrW9Nmm9Q3JIJZUqyMsLxos5tPUUnqJUBrgTTZdMQfghyy8PpT_cHSYt6LsMld2_XK7XZstHHUm7NbU1iDBvtcjuK_h_kqH6Dwz8lr4DOT4zoV4UNRTZJRLFWSjCZOBIUJtMtWYlk3wsZc9KkGx3R7G_Sq--ZicncbQ&amp;sa=X&amp;ved=2ahUKEwih0MqDIPGHaxVVcmwGHXgpOv0Q0pQJegQIERAB&amp;biw=1093&amp;bih=513&amp;dpr=1.25#fpstate=ive&amp;vld=cid:2ee54352,vid:RNrE7B8WTCU,st:0">https://www.google.com/search?sca_esv=6cfb153aab81f25c&amp;sca_upv=1&amp;q=Reducing+Costs+and+Increasing+Efficiency+through+Scalability&amp;tbm=vid&amp;source=lnms&amp;fbs=AEQNm0AeMNWKf4PpcKMI-eSa16lJoRPMIuyspCxWO6iZW9F1Nu5UXIEfGU2YX1CrW9Nmm9Q3JIJZUqyMsLxos5tPUUnqJUBrgTTZdMQfghyy8PpT_cHSYt6LsMld2_XK7XZstHHUm7NbU1iDBvtcjuK_h_kqH6Dwz8lr4DOT4zoV4UNRTZJRLFWSjCZOBIUJtMtWYlk3wsZc9KkGx3R7G_Sq--ZicncbQ&amp;sa=X&amp;ved=2ahUKEwih0MqDIPGHaxVVcmwGHXgpOv0Q0pQJegQIERAB&amp;biw=1093&amp;bih=513&amp;dpr=1.25#fpstate=ive&amp;vld=cid:2ee54352,vid:RNrE7B8WTCU,st:0</a></li> </ol> |
| <p><b>Evaluation</b></p> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"> <li>Benefits of Scalability:</li> <li>Differentiate between vertical and horizontal scaling.</li> <li>Give an example of a company using a hybrid cloud.</li> </ol>  |



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| <b>Lesson Plan No. 3.3</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Reducing IT Administrative Overhead</b> | <b>Course No.: BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"> <li>a. Understanding IT Administrative Overhead in Cloud Computing</li> <li>b. Understand Benefits of Reducing IT Administrative Overhead</li> </ul>  |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"> <li>1. Power Point Presentation</li> <li>2. Online contents</li> <li>3. Whiteboard</li> <li>4. YouTube Videos</li> </ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"> <li>• What do you mean by IT Administration?</li> <li>• Explain how automation reduces manual tasks.</li> <li>• Explain IT administrative overhead and its impact on cloud computing.</li> <li>• Describe the advantages of centralized management in cloud-based environments. How does it streamline administrative workflows?</li> <li>• Discuss common challenges associated with managing IT overhead in cloud environment.</li> </ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"> <li>• Discuss how cloud computing can reduce IT administrative overhead, leading to cost savings and increased operational efficiency for businesses.</li> <li>• How automated security checks can reduce administrative overhead.</li> <li>• Discuss how reduced administrative tasks lead to lower labour costs and elimination of the need for dedicated IT staff for certain functions.</li> <li>• Discuss the concept of self-service capabilities in cloud computing and how it empowers users. What benefits does it offer in terms of IT administrative efficiency?</li> </ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"> <li>• Quiz related to topic given to students to solve through Google form.</li> <li>• How does cloud computing contribute to cost savings in terms of IT administrative expenses? Can you provide real-world examples to support your answer?</li> <li>• Explore cloud provider dashboards to set up auto-scaling or monitor resource usage.</li> <li>• Question and answer round related to topic responses and discuss the answers.</li> </ul> |



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| <b>Closure</b>    | <ol style="list-style-type: none"><li>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</li><li>2. Suggested Reading:<br/><a href="https://www.techtargget.com/searchcloudcomputing/feature/5-ways-to-reduce-cloud-costs">https://www.techtargget.com/searchcloudcomputing/feature/5-ways-to-reduce-cloud-costs</a></li><li>3. Original Paper on the Reducing IT Administrative Overhead:<br/><a href="https://www.researchgate.net/publication/265089510_Cloud_Computing_Costs_and_Benefits">https://www.researchgate.net/publication/265089510_Cloud_Computing_Costs_and_Benefits</a></li><li>4. Homework<ol style="list-style-type: none"><li>a. Search news articles or reports related to Reducing IT Administrative Overhead</li></ol></li><li>5. Spend 5 minutes to wrap up and consolidate the learning's</li></ol> <p><b>References:</b></p> <p><a href="https://www.smartb.co/how-can-the-cloud-reduce-your-business-overhead/">https://www.smartb.co/how-can-the-cloud-reduce-your-business-overhead/</a></p> <p><a href="https://www.cloudservus.com/blog/top-4-strategies-to-cut-your-it-management-overhead">https://www.cloudservus.com/blog/top-4-strategies-to-cut-your-it-management-overhead</a></p> <p>7. YouTube Video Reference:<br/><a href="https://www.youtube.com/watch?v=5mBiqzfl8-U">https://www.youtube.com/watch?v=5mBiqzfl8-U</a></p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. Name a tool used for automating cloud resource provisioning.</li><li>2. Which cloud service tool helps in managing and analyzing cloud costs?</li><li>3. What is the purpose of auto-scaling in cloud environments?</li></ol>   |



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| <b>Lesson Plan No. 3.4</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Increasing Organizational Agility</b> | <b>Course No.: BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"> <li>a. Understand how cloud computing can enhance organizational agility and its benefits for businesses.</li> <li>b. Understand organizational agility is the ability to rapidly adapt to changes in the market or industry</li> </ul>   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"> <li>1. Power Point Presentation</li> <li>2. Online contents</li> <li>3. Whiteboard</li> <li>4. YouTube Videos</li> </ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"> <li>• Brief introduction to the concept of organizational agility and its importance.</li> <li>• Discuss the key components of organizational agility.</li> </ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"> <li>• What is organizational agility, and why is it essential for businesses in today's competitive landscape?</li> <li>• How does cloud computing contribute to increasing organizational agility? Provide specific examples of cloud-based features that enhance agility.</li> <li>• Explain the concept of scalability in cloud computing. How can businesses benefit from cloud scalability in terms of organizational agility?</li> <li>• What is a common challenge in implementing agile practices?</li> </ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"> <li>• Quiz related to topic given to students to solve through Google form.</li> <li>• How does cloud computing enable faster time-to-market for businesses?</li> <li>• In what ways does agile development contribute to faster time-to-market for new features and improvements?</li> <li>• Question and answer round related to topic responses and discuss the answers.</li> </ul> |
| <b>Closure</b>                | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</p> <p>2. Suggested Reading:</p> <p><a href="https://www.holaspirt.com/blog/how-can-you-improve-organizational-agility-in-the-workplace">https://www.holaspirt.com/blog/how-can-you-improve-organizational-agility-in-the-workplace</a></p>   |



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|                   | <p>3. Original Paper on the organizational agility:<br/><a href="https://www.researchgate.net/publication/317850910_Organizational_Agility_The_Key_to_Improve_Organizational_Performance">https://www.researchgate.net/publication/317850910_Organizational_Agility_The_Key_to_Improve_Organizational_Performance</a></p> <p>4. Homework<br/>Search news articles or reports related to organizational agility</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b><br/><a href="https://resources.careerbuilder.com/employer-blog/how-to-improve-your-companys-organizational-agility">https://resources.careerbuilder.com/employer-blog/how-to-improve-your-companys-organizational-agility</a><br/><a href="https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/the-impact-of-agility-how-to-shape-your-organization-to-compete">https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/the-impact-of-agility-how-to-shape-your-organization-to-compete</a></p> <p>7. YouTube Video Reference:<br/><a href="https://www.youtube.com/watch?v=uuUFgcx92Nw">https://www.youtube.com/watch?v=uuUFgcx92Nw</a></p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.<br/><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. Name one key component of organizational agility.</li><li>2. What is a key principle of Lean methodology?</li><li>3. What role does leadership play in fostering agility?</li></ol>  |



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| <b>Lesson Plan No. 3.5</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Increasing Organizational Agility</b> | <b>Course No.: BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to:<br><br>c. Understand how cloud computing can enhance organizational agility and its benefits for businesses.<br>d. Understand organizational agility is the ability to rapidly adapt to changes in the market or industry   |
| <b>Teaching Aids (if any)</b> | 1. Power Point Presentation<br>2. Online contents<br>3. Whiteboard<br>4. YouTube Videos  |
| <b>Teaching Development</b>   | <b>1. Introduction (5 minutes)</b><br><ul style="list-style-type: none"> <li>• What do you mean by organizational agility?</li> <li>• Discuss the challenges in implementing agile practices?</li> </ul> <b>2. Development (30 minutes)</b><br><ul style="list-style-type: none"> <li>• Recap previous day’s lesson on organizational agility</li> <li>• Explain the importance of agility in today’s dynamic business environment</li> <li>• Discuss characteristics of agile organizations</li> <li>• Discuss strategies for increasing Organizational Agility</li> </ul> <b>3. Exercise (5 minutes) –</b><br><ul style="list-style-type: none"> <li>• Quiz related to topic given to students to solve</li> <li>• Can you provide examples of how organizations have used cloud solutions to quickly adapt to changing market conditions and improve agility?</li> <li>• Question and answer round related to topic responses and discuss the answers.</li> </ul> |
| <b>Closure</b>                | 1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these<br><br>2. Suggested Reading:<br><br><a href="https://www.holaspirt.com/blog/how-can-you-improve-organizational-agility-in-the-workplace">https://www.holaspirt.com/blog/how-can-you-improve-organizational-agility-in-the-workplace</a><br><br>3. Original Paper on the organizational agility:<br><br><a href="https://www.researchgate.net/publication/317850910_Organizational_Agility_The_Key_to_Improve_Organizational_Performance">https://www.researchgate.net/publication/317850910_Organizational_Agility_The_Key_to_Improve_Organizational_Performance</a><br><br>4. Homework   |



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|                   | <p>Search news articles or reports related to organizational agility</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p><a href="https://resources.careerbuilder.com/employer-blog/how-to-improve-your-companys-organizational-agility">https://resources.careerbuilder.com/employer-blog/how-to-improve-your-companys-organizational-agility</a></p> <p><a href="https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/the-impact-of-agility-how-to-shape-your-organization-to-compete">https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/the-impact-of-agility-how-to-shape-your-organization-to-compete</a></p> <p>7. YouTube Video Reference:</p> <p><a href="https://www.youtube.com/watch?v=uuUFgcx92Nw">https://www.youtube.com/watch?v=uuUFgcx92Nw</a></p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. Name one key component of organizational agility.</li><li>2. What is a key principle of Lean methodology?</li><li>3. What role does leadership play in fostering agility?</li></ol>  |



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| <b>Lesson Plan<br/>No. 3.6</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Examining the Business Impact-1</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to:<br><br>a. Understand the concept of business impact and its importance in decision making   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Whiteboard</li><li>4. YouTube Videos</li></ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>• What is business impact?</li><li>• Discuss the various opportunities that affecting the business.</li><li>• What are the key factors that determine the business impact of a new project?</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>• Begin by discussing the concept of business impact with the students</li><li>• Define business impact as the effects that certain actions, events or decisions have on a business's performance, success and sustainability.</li><li>• How do market trends influence the business impact of a company's decisions?</li><li>• What is the significance of risk management in evaluating business impact?</li></ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"><li>• Quiz related to topic given to students to solve through Google form.</li><li>• How can businesses assess and quantify the tangible and intangible impacts of adopting cloud computing on their operations, cost structures, and overall competitiveness?</li><li>• Question and answer round related to topic responses and discuss the answers.</li></ul> |
| <b>Closure</b>                | <ol style="list-style-type: none"><li>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</li><li>2. Suggested Reading:<br/><br/><a href="https://www.indeed.com/career-advice/career-development/business-impact-analysis">https://www.indeed.com/career-advice/career-development/business-impact-analysis</a></li></ol>  |



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|                   | <p>3. Original Paper on the business impact:</p> <p><a href="https://www.researchgate.net/publication/220300484_Examining_e-business_impact_on_firm_performance_through_website_analysis">https://www.researchgate.net/publication/220300484_Examining_e-business_impact_on_firm_performance_through_website_analysis</a></p> <p>4.Homework</p> <p>Search news articles or reports related to business impact</p> <p>5.Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p><a href="https://www.techtarget.com/searchstorage/definition/business-impact-analysis">https://www.techtarget.com/searchstorage/definition/business-impact-analysis</a></p> <p><a href="https://study.com/academy/lesson/how-to-conduct-a-business-impact-analysis.html">https://study.com/academy/lesson/how-to-conduct-a-business-impact-analysis.html</a></p> <p>7. YouTube Video Reference:</p> <p><a href="https://www.youtube.com/watch?v=0NgIZpxejcU">https://www.youtube.com/watch?v=0NgIZpxejcU</a></p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1 Why were these factors significant in determining the outcome</li><li>2. How can you apply these insights to improve future business decisions?</li><li>3. What are the weaknesses in the business strategy?</li></ol>  |



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| <b>Lesson Plan<br/>No. 3.7</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Examining the Business Impact-2</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to:<br><br>a. Understand the concept of business impact and its importance in decision making  |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Whiteboard</li><li>4. YouTube Videos</li></ol>  |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>• Evaluate the influence of external factors on business performance.</li><li>• Begin with a brief review of key concepts from “Examining the Business Impact-1,” such as metrics and factors influencing business impact.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>• Explain the importance of considering business impact in decision making to ensure long term success</li><li>• Explain how these metrics provide deeper insights into business impact.</li><li>• Encourage students to discuss both positive and negative impacts on revenue, customer satisfaction, brand image etc related to a business scenario(e.g. company launching a new product)</li></ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"><li>• Quiz related to topics given to students to solve</li><li>• How neglecting security and compliance considerations can result in data breaches, legal issues, and damage to reputation.</li><li>• Question and answer round related to topic responses and discuss the answers.</li></ul> |
| <b>Closure</b>                | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</p> <p>2. Suggested Reading:</p> <p><a href="https://www.indeed.com/career-advice/career-development/business-impact-analysis">https://www.indeed.com/career-advice/career-development/business-impact-analysis</a></p>   |



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|                   | <p>3. Original Paper on the business impact:<br/><a href="https://www.researchgate.net/publication/220300484_Examining_e-business_impact_on_firm_performance_through_website_analysis">https://www.researchgate.net/publication/220300484_Examining_e-business_impact_on_firm_performance_through_website_analysis</a></p> <p>4. Homework<br/>Search news articles or reports related to business impact</p> <p>5. Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p><a href="https://www.techtarget.com/searchstorage/definition/business-impact-analysis">https://www.techtarget.com/searchstorage/definition/business-impact-analysis</a></p> <p><a href="https://study.com/academy/lesson/how-to-conduct-a-business-impact-analysis.html">https://study.com/academy/lesson/how-to-conduct-a-business-impact-analysis.html</a></p> <p>7. YouTube Video Reference:<br/><a href="https://www.youtube.com/watch?v=0NgIZpxejcU">https://www.youtube.com/watch?v=0NgIZpxejcU</a></p> |
| <b>Evaluation</b> | <p>Reflective Questions (What, why, Who?). Allow students to answer.<br/><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. <b>What</b> new insights did you gain about analyzing business impact from today's lesson?</li><li>2. Why external factors important for evaluating business decisions?</li><li>3. <b>How</b> can you apply these insights to real-world business scenarios?</li></ol>   |



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| <b>Lesson Plan No. 3.8</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Examining the Business Impact-2</b> | <b>Course No.: BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to:<br><br>-Understand the concept of business impact and its importance in decision making   |
| <b>Teaching Aids (if any)</b> | -Power Point Presentation<br>-Online contents<br>-Whiteboard<br>-YouTube Videos  |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"> <li>• Explain the analytical techniques to assess the impact of strategic decisions.</li> <li>• Discuss the actionable insights based on business impact analysis.</li> </ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"> <li>• Recap the concept of business impact and its importance in decision-making</li> <li>• Discuss recent business events or news that have had significant impact on companies or industries</li> <li>• Encourage students to share their insights and ideas to improve business resilience</li> <li>• Ask students to share any recent experiences or examples where they observed significant business impact.</li> <li>• Explain how these metrics provide deeper insights into business impact.</li> </ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"> <li>• One minute paper.</li> <li>• What recent trends in cloud adoption have had a transformative effect on industries or specific businesses?</li> <li>• Question and answer round related to topic responses and discuss the answers.</li> </ul> |



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| <b>Closure</b>    | <ol style="list-style-type: none"><li>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</li><li>2. Suggested Reading:<br/><a href="https://www.indeed.com/career-advice/career-development/business-impact-analysis">https://www.indeed.com/career-advice/career-development/business-impact-analysis</a></li><li>3. Original Paper on the business impact:<br/><a href="https://www.researchgate.net/publication/220300484_Examining_e-business_impact_on_firm_performance_through_website_analysis">https://www.researchgate.net/publication/220300484_Examining_e-business_impact_on_firm_performance_through_website_analysis</a></li><li>4. Homework<br/>Search news articles or reports related to business impact</li><li>5. Spend 5 minutes to wrap up and consolidate the learning's</li></ol> <p><b>References:</b></p> <p><a href="https://www.techtarget.com/searchstorage/definition/business-impact-analysis">https://www.techtarget.com/searchstorage/definition/business-impact-analysis</a></p> <p><a href="https://study.com/academy/lesson/how-to-conduct-a-business-impact-analysis.html">https://study.com/academy/lesson/how-to-conduct-a-business-impact-analysis.html</a></p> <ol style="list-style-type: none"><li>7. YouTube Video Reference:<br/><a href="https://www.youtube.com/watch?v=0NgIZpxejcU">https://www.youtube.com/watch?v=0NgIZpxejcU</a></li></ol> |
| <b>Evaluation</b> | <ol style="list-style-type: none"><li>2. Reflective Questions (What, why, Who?). Allow students to answer.<br/><b>Reflective Questions:</b></li></ol> <ol style="list-style-type: none"><li>1 <b>What</b> new insights did you gain about analyzing business impact from today's lesson?</li><li>2. Why external factors important for evaluating business decisions?</li><li>3. <b>How</b> can you apply these insights to real-world business scenarios?</li></ol>   |



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| <b>Lesson Plan<br/>No. 3.9</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Evaluating Cloud Computing Costs and<br/>Choosing the Appropriate Cloud Model</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to:<br><br>a. Evaluate cloud computing costs and choose the appropriate cloud model based on their organization's needs   |
| <b>Teaching Aids (if any)</b> | <ol style="list-style-type: none"><li>1. Power Point Presentation</li><li>2. Online contents</li><li>3. Whiteboard</li><li>4. YouTube Videos</li></ol>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>• What are the main cloud service models?</li><li>• Discuss the different cloud computing models and their cost structures.</li><li>• Briefly discuss the concept of cloud computing and its benefits.</li><li>• Explain the differences between <b>public</b>, <b>private</b>, and <b>hybrid</b> cloud deployment models.</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>• Explain the three main cloud service models: Infrastructures as a service(IaaS), Platform as a Service( PaaS) and Software as a Service(SaaS)</li><li>• Discuss factors affecting cloud computing costs.</li><li>• Ask students about their familiarity with different cloud service models (IaaS, PaaS, SaaS) and deployment models (public, private, hybrid).</li></ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"><li>• Discussion- How can organizations ensure cost predictability when using cloud services?</li><li>• Question and answer round related to topic responses and discuss the answers.</li></ul> |



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| <b>Closure</b>    | <ol style="list-style-type: none"><li>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</li><li>2. Suggested Reading:<br/><a href="https://www.fingent.com/blog/cloud-service-models-saas-iaas-paas-choose-the-right-one-for-your-business/">https://www.fingent.com/blog/cloud-service-models-saas-iaas-paas-choose-the-right-one-for-your-business/</a></li><li>3. Original Paper on the business impact:<br/><a href="https://www.researchgate.net/publication/339302398_EVALUATING_CLOUD_COMPUTING_SERVICES">https://www.researchgate.net/publication/339302398_EVALUATING_CLOUD_COMPUTING_SERVICES</a></li><li>4. Homework<br/>Search news articles or reports related to choosing the appropriate cloud model</li><li>5. Spend 5 minutes to wrap up and consolidate the learning's</li></ol> <p><b>References:</b></p> <p><a href="https://www.techtarget.com/whatis/Breaking-Down-the-Cost-of-Cloud-Computing">https://www.techtarget.com/whatis/Breaking-Down-the-Cost-of-Cloud-Computing</a></p> <p><a href="https://www.investopedia.com/terms/s/scalability.asp">https://www.investopedia.com/terms/s/scalability.asp</a></p> <ol style="list-style-type: none"><li>7. YouTube Video Reference:<br/><a href="https://www.youtube.com/watch?v=zi3ql96WLT8">https://www.youtube.com/watch?v=zi3ql96WLT8</a></li></ol> |
| <b>Evaluation</b> | Reflective Questions (What, why, Who?). Allow students to answer.<br><b>Reflective Questions:</b> <ol style="list-style-type: none"><li>1. What are the main cost considerations for each cloud model?</li><li>2. Why is it important to analyze costs when choosing a cloud model?</li><li>3. How can businesses use this information to make strategic decisions about cloud adoption?</li></ol>  |



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| <b>Lesson Plan No. 4.1</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Security in the Cloud</b> | <b>Course No.: BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"> <li>a. Understand cloud security basics.</li> <li>b. Identify common security risks.</li> <li>c. Learn best practices for securing cloud environments.</li> </ul>  |
| <b>Teaching Aids (if any)</b> | 1.Power Point Presentation<br>2.Online contents<br>3. Whiteboard<br>4. YouTube Videos  |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"> <li>• Explain why security is critical in the cloud environment.</li> <li>• Is Cloud Security important? Why?</li> <li>• Explanation of insider threats and examples.</li> <li>• What is a common risk associated with cloud data breaches?</li> </ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"> <li>• How can account and service hijacking occur?</li> <li>• What is one method to protect data both in transit and at rest?</li> <li>• Why are regular audits important in cloud security?</li> <li>• What should a cloud security policy include?</li> <li>• How does cloud security differ from traditional on-premises security approaches?</li> </ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"> <li>• Present a real-world case study involving a cloud security incident.</li> <li>• Discuss what went wrong and lessons learned</li> </ul> |
| <b>Closure</b>                | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</p> <p>2. Suggested Reading:<br/><a href="https://aws.amazon.com/security/">https://aws.amazon.com/security/</a></p> <p>3. Original Paper on the Security in the Cloud:<br/><a href="https://www.researchgate.net/publication/309321387_Data_Security_in_Cloud_Computing">https://www.researchgate.net/publication/309321387_Data_Security_in_Cloud_Computing</a></p>  |





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|                   | <p>4.Homework</p> <p>Search news articles or reports related to Security in the Cloud</p> <p>5.Spend 5 minutes to wrap up and consolidate the learning's</p> <p><b>References:</b></p> <p><a href="https://cloud.google.com/learn/what-is-cloud-security">https://cloud.google.com/learn/what-is-cloud-security</a></p> <p><a href="https://www.ibm.com/topics/cloud-security">https://www.ibm.com/topics/cloud-security</a></p> <p>7. YouTube Video Reference:</p> <p><a href="https://www.youtube.com/watch?v=sF014G2BUXM">https://www.youtube.com/watch?v=sF014G2BUXM</a></p> |
| <b>Evaluation</b> | <p>5. Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What does MFA stand for?</li><li>2. Why is cloud security important?</li><li>3. Who is typically responsible for cloud security in an organization?</li></ol>   |



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| <b>Lesson Plan<br/>No. 4.2</b> | <b>Course Name: Cloud Computing</b><br><b>Topic: Security in the Cloud</b> | <b>Course No.:</b><br><b>BBAMI-305(D)</b> |
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| <b>Objectives</b>             | At the end of the lesson the student shall be able to: <ul style="list-style-type: none"><li>- Understand cloud security basics.</li><li>- Identify common security risks.</li><li>- Learn best practices for securing cloud environments.</li></ul>   |
| <b>Teaching Aids (if any)</b> | <ul style="list-style-type: none"><li>- Power Point Presentation</li><li>- Online contents</li><li>- Whiteboard</li><li>- YouTube Videos</li></ul>   |
| <b>Teaching Development</b>   | <p><b>1. Introduction (5 minutes)</b></p> <ul style="list-style-type: none"><li>• Explain why security is critical in the cloud environment.</li><li>• Is Cloud Security important? Why?</li><li>• Explanation of insider threats and examples.</li><li>• What is a common risk associated with cloud data breaches?</li></ul> <p><b>2. Development (30 minutes)</b></p> <ul style="list-style-type: none"><li>• How can account and service hijacking occur?</li><li>• What is one method to protect data both in transit and at rest?</li><li>• Why are regular audits important in cloud security?</li><li>• What should a cloud security policy include?</li><li>• How does cloud security differ from traditional on-premises security approaches?</li></ul> <p><b>3. Exercise (5 minutes) –</b></p> <ul style="list-style-type: none"><li>• Present a real-world case study involving a cloud security incident.</li><li>• Discuss what went wrong and lessons learned</li></ul> |
| <b>Closure</b>                | <p>1. Summarize the Lesson Learning Outcomes and get affirmation from Students on these</p> <p>2. Suggested Reading:<br/><a href="https://aws.amazon.com/security/">https://aws.amazon.com/security/</a></p> <p>3. Original Paper on the Security in the Cloud:<br/><a href="https://www.researchgate.net/publication/309321387_Data_Security_in_Cloud">https://www.researchgate.net/publication/309321387_Data_Security_in_Cloud</a></p>  |





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| <b>Evaluation</b> | <p>-Reflective Questions (What, why, Who?). Allow students to answer.</p> <p><b>Reflective Questions:</b></p> <ol style="list-style-type: none"><li>1. What does MFA stand for?</li><li>2. Why is cloud security important?</li><li>3. Who is typically responsible for cloud security in an organization?</li></ol>  |