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INNOVATIONS IN TEACHING

Innovative teaching approaches assist faculty in delivering lectures in a timelier and effective manner allowing students to stay current with technological improvements. Furthermore, by making learners more proactive, innovative teaching tools to encourage rational thinking and self-sufficient mental processes in their minds. The following processes have been initiated by the Department of Computer Science & Engineering to ensure overall involvement of faculty and students for improvement of teaching-learning process.

S.No	Innovation Method	Mode Of Teaching / Learning Process	Objective
1	**Multi-Media Learning**	Demonstration Of Topics Using Software Tools In Real Time	Student's General Comprehension Is Improved, And Teachers Are Able To Convey Their Teachings In A More Dynamic Manner.
2	**Wit& Wil**	Presentation	The Respective Faculty Promotes Students Awareness And Emphasizes The Importance Of The Appropriate Subject Or Laboratory
3	**Jam Sessions**	Jam Session Is Known As Just A Minute Session. Jam Sessions Are Conducted In Class Room Will Help The Students To Participate In Different Topics. Implementation Of Jam: Jam Sessions Are Useful To Test The Communication Skills And General Knowledge Of The Students. To Conduct These Sessions, The Faculty Gives Some Topics And Asks The Students To Speak On It	Communication Skills • Quick Response • The Flow Of Thoughts And Flow Of Speech • Confidence In Thoughts And Speech • Time Management

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S. No	Innovation Method	Mode of Teaching / Learning Process	Objective
4	**Plickers**	Interactive Teaching Tool	Plickers is an assessment tool that allows teachers to collect on-the-spot formative assessment data without the need to have students use devices or paper and pencil. Teachers can use this tool with previous planning or on the go as needed.Plickers, a free formative assessment tool used in the classroom, are paper cards with unique QR codes on them. Students are each given their own Plickers card, which is designed to be held up by the students to answer questions. Teachers will then use a mobile device to scan the cards, which quickly collects and analyzes student responses, resulting in a low-tech yet effective way to engage students and gauge their understanding
5	**Think Pair Share**	Think-Pair-Share (TPS) is a collaborative learning strategy where students work together to solve a problem or answer a question about an assigned reading. This strategy requires students to (1) think individually about a topic or answer to a question; and (2) share ideas with classmates. Discussing with a partner maximizes participation, focuses attention and engages students in comprehending the reading material	Implementation of Think-Pair-Share Methodology: 1.Decide upon the text to be read and develop the set of questions or prompts that target key content concepts. 2.Describe the purpose of the strategy and provide guidelines for discussions. 3.Model the procedure to ensure that students understand how to use the strategy. Monitor and support students as they work throughthefollowing: T : (Think) Teachers begin by asking a specific question about the text. Students "think" about what they know or have learned about the topic. P : (Pair) Each student should be paired with another student or a small group. S : (Share) Students share their thinking with their partner. Teachers expand the "share" into a whole-class discussion

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S.No	Innovation Method	Mode Of Teaching / Learning Process	Objective
6	**Brainstorming**		Process For Generating Creative Ideas And Solutions Through Intensive And Freewheeling Group Discussion. Every Student In The Class Is Encouraged To Think Aloud And Suggest As Many Ideas As Possible, No Matter Seemingly How Outlandish Or Bizarre. Analysis, Discussion, Or Criticism Of The Aired Ideas Is Allowed Only When The Brainstorming Session Is Over And Evaluation Session Begins.
7	**Assignment Practices**	Analyze & Preparation	Improving The Cognitive Abilities.
8	**Kahoot**	Game Based Learning	Kahoot! Is A Game-Based Learning Platform That Makes Learning Fun And Interactive Through Quizzes, Discussions, And Surveys
9	**Roal Play Session**	interactive and dynamic teaching method	Role play is an interactive and dynamic teaching method that falls under **Experiential Learning** and **Active Learning** approaches.
10	**Group Discussions**	effective teaching method	Group discussions (GDs) are a popular and effective teaching method used in educational settings to enhance learning and promote collaborative thinking

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1.Multimedia Learning

The teacher will use software tools to communicate some concepts in this class. These learning aids are essential for imparting subject knowledge. Students can quickly identify the presentation's main topics. In the classroom, a live demonstration can be a useful technique for presenting material and encouraging student learning. Multimedia integrates basic types of media such as text, audio, video, and images into a learning environment, resulting in a strong teaching tool. As a result, the learners are able to focus more on the concepts. It also improves students in better thinking and analyzing concepts

In the modern era of education, traditional teaching methods are being supplemented by the use of multimedia learning tools, which help create a more engaging and interactive classroom environment. At **Malineni Lakshmaiah Women's Engineering College**, a series of lessons were conducted using multimedia learning tools and software to communicate complex concepts to students effectively. These tools included presentations, videos, animations, simulations, and interactive software, all of which facilitated a more dynamic learning experience.

Multimedia learning aids are essential for imparting subject knowledge because they help students better understand and retain information. By presenting content in different forms, such as text, audio, video, and interactive components, these tools cater to various learning styles and make complex concepts easier to grasp.

Plan of Action:

To simplify their presentation, the teacher uses Software Tools/Animation/Videos to demonstrate some topics in their regular teaching procedure.

Expected Outcomes

- A more straightforward method of delivering subject knowledge than traditional teaching Methods.
- Students will have a better understanding of the ideas.

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IMPLEMENTATION MULTIMEDIA LEARNING SESSIONS ON OOPS THROUGH JAVA CONCEPTS

Multimedia learning has significantly transformed the teaching of Object-Oriented Programming (OOP) concepts in Java for **2nd-year Computer Science Engineering students**. Faculty innovations, including interactive lectures, video tutorials, coding challenges, and flipped classrooms, have enhanced engagement, comprehension, and practical application of OOP principles. While challenges such as technical barriers and faculty training exist, the benefits of multimedia learning in improving student outcomes are evident. As technology continues to evolve, multimedia tools will play an even greater role in shaping the future of programming education.

Details of lesson plan

Faculty Name	Mrs. R.Akhila
Subject	Oops Through Java
Branch	Computer Science And Engineering
Year /Sem	II/II
VENUE	II/II CLASS ROOM(427)

Following topics are covered in this learning process

Multimedia Tool Used	Impact/Outcome	Link/Proof
UML Diagrams, Java IDEs	Improved visualization of class relationships, better understanding of OOP concepts	UML Diagram Resource
JavaFX, Processing	Helped students visualize complex OOP principles like inheritance and polymorphism	JavaFX Tutorial
YouTube, Vimeo	Increased accessibility to learning resources, allowed for self-paced learning	YouTube Learning
JavaFX, Processing	Reinforced OOP knowledge through practice, instant	JavaFX Tutorial
YouTube, Vimeo	Enabled deeper in-class discussions, collaborative problem-solving	YouTube Learning

Key Concepts Covered

Object-Oriented Programming (OOP): Focused on core principles like inheritance, polymorphism, and encapsulation in Java.

Java Syntax: Emphasized proper syntax, method structure, and variable declarations

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Multimedia Learning

Following topics are covered in this learning process

The class began with a PowerPoint presentation which provided a structured explanation of key JAVA concepts. The topics discussed were:

Topic	Details	Link	Date
Introduction to JAVA	Overview of JAVA, its features, and uses.	UML Diagram Resource	11/1/2024
Data Types and Variables	Primitive types, reference types in Java.	JavaFX Tutorial	20/2/2024
Control Structures	Conditional statements and loops in Java.	YouTube Learning	24/2/2024
Methods	How to declare and use methods/functions.	JavaFX Tutorial	13/3/2024
OOP Concepts	Classes, Objects, Inheritance, and Polymorphism.	YouTube Learning	20/4/2024

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IMPLEMENTATION MULTIMEDIA LEARNING SESSIONS ON CLOUD COMPUTING CONCEPTS

The session successfully demonstrated the application of multimedia tools in teaching complex topics like cloud computing. The combination of visual, auditory, and interactive elements helped students gain a deeper understanding of cloud concepts. The session also highlighted how faculty can innovate their teaching methods to make abstract concepts more accessible and engaging.

Based on student feedback, the following suggestions were made:

- **More Hands-on Practice**: Incorporating live demonstrations or mini-projects using cloud platforms like AWS or Google Cloud.
- **Deeper Dive into Advanced Cloud Concepts**: Exploring topics like cloud security, cost optimization, and serverless computing in greater detail.

The class concluded with a preview of the next lesson, which will cover cloud security and the future trends in cloud computing.'

Details of lesson plan

Faculty Name	Mrs.K.M.L Priyanka
Subject	**Cloud Computing**
Branch	Computer Science And Engineering
Year /Sem	IV/I
VENUE	IV/I CLASS ROOM(418)

Following topics are covered in this learning process

The following resources provide further access to cloud computing concepts and related topics:

Resource	Link	DATE
Introduction to Cloud Computing	Cloud Computing Overview - Cloud Academy	20/8/2023
Cloud Service Models Explained	AWS Overview - Amazon Web Services	2/9/2023
Practical Cloud Applications	Cloud Computing Case Studies	12/10/2023
Cloud Computing for Beginners	Cloud Computing Course on Coursera	20/10/2023
Cloud Computing Video Tutorials	Cloud Computing Basics - YouTube	3/11/2023

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

ESTD : 2008

Approved by AICTE, New Delhi, Affiliated to JNTUK, Kakinada : : Accredited by "NBA" for our CSE & ECE and NAAC A+ Grade

Pulladigunta (V) Vatticherukuru (M), Guntur (Dist.)

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2.WIT& WIL SESSION

The process of reflecting on **"Why am I Teaching & What I am Teaching"** and **"Why am I Learning & What I am Learning"** is crucial for developing a more effective and engaging teaching and learning experience. It helps both teachers and students understand their motivations, goals, and the relevance of the content being taught. The reflective process encourages better alignment between the educational practices and the needs of the students, ultimately leading to more meaningful learning outcomes.

By engaging in continuous reflection, both educators and learners can foster a dynamic, motivating, and enriching educational environment that benefits all involved.

The Benefits of Reflecting on "Why am I Teaching & What I am Teaching" and "Why am I Learning & What I am Learning"

1. Enhanced Engagement and Motivation

- **Teachers**: When teachers reflect on their purpose and the relevance of the content they deliver, it helps them maintain enthusiasm and fosters more engaging lessons. Passionate teachers tend to inspire greater student involvement and curiosity.
- **Students**: When students understand the purpose of what they are learning and how it relates to their goals, they are more likely to stay motivated and engaged throughout the course.

2. Increased Alignment Between Teaching and Learning

- Reflecting on these questions helps to ensure that what is being taught aligns with the goals and needs of the students. For instance, students may not fully appreciate a topic unless they understand its real-world application, while teachers may adjust their teaching methods to cater to the learning styles and needs of their students.

3. Better Educational Outcomes

- Teachers and students who reflect on their motivations are more likely to experience improved outcomes. For teachers, this reflection can help them refine their teaching strategies and make the learning process more effective. For students, understanding the relevance of their learning enhances retention and application of knowledge.

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3. JAM SESSION:

The "Just a Minute" (JAM) session is a unique and engaging activity that can be used in college classrooms across various subjects. In a JAM session, a student is given one minute to speak on a given topic, often with no prior preparation. This activity encourages quick thinking, effective communication, and can be a fun way to build confidence in public speaking.

Here's how JAM sessions can be used in college classrooms for different subjects:

At Malineni Lakshmaiah Women's Engineering College, innovation in teaching and learning is at the forefront of enhancing student engagement and learning outcomes. In an effort to promote active participation, communication skills, and quick thinking, a "Just a Minute" (JAM) session was organized in one of the classrooms. The session was designed to introduce an interactive, student-centered approach to teaching and learning, focusing on improving public speaking, critical thinking, and subject comprehension

CONDUTING JAM SESSIONS ON_MEAN STACK DEVELOPMENT BY III/II STUDENTS

The **Just A Minute (JAM)** sessions were conducted with III-II Computer Science Engineering students focusing on the subject **MEAN Stack Development**. JAM sessions, a popular method to enhance public speaking and spontaneous thinking, were employed as part of a learning strategy to boost student confidence, improve communication skills, and test their understanding of key topics related to MEAN Stack Development. In these sessions, students were required to speak on various aspects of MEAN Stack for a duration of one minute without pauses or hesitation.

Details Of JAM Sessions

Faculty Name	Mrs.K.M.L Priyanka
Subject	**MEAN STACK DEVELOPMENT**
Branch	CSE
Year /Sem	III/II
VENUE	III/II CLASS ROOM(422)

Objectives of the JAM Session

- To improve students' communication skills related to the MEAN Stack (MongoDB, Express.js, Angular, Node.js).
- To help students articulate the core concepts of MEAN Stack development clearly and concisely.
- To enhance quick thinking and time management by speaking for one minute without deviations.
- To provide a platform for students to discuss various topics within MEAN Stack and solidify their understanding of the framework.
- To build confidence in speaking about technical subjects in front of peer

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Feedback From Students

- After each speech, students were encouraged to provide feedback on their peers' presentations. This helped identify areas of improvement and strengths in speaking and technical knowledge.

Topics Covered in the JAM Sessions

The following are the topics that were covered during the JAM sessions, highlighting key concepts of MEAN Stack Development:

Topic	Description	Student Details	Date	Remarks
What is MongoDB and its Features	Discussing MongoDB as a NoSQL database and its flexibility.	1.G.prasanna(22KE1A05E2) 2.P.Tejaswini(22KE1A05F6) 3.Ch.Akhila(22KE1A05G3) 4.N.sreya(22KE1A05D7)	2/2/2024	**GOOD**
Role of Express.js in MEAN Stack	Explanation of how Express.js helps with server-side logic and routing in the MEAN stack.	1.N.Navya(22KE1A05E4) 2.Krishna veni(22KE1A05G4) 3.Ch.Rupa Swathi (22KE1A05G8) 4.N.Mallika(22KE1A05D8)	11/3/2024	**GOOD**
Angular and Two-Way Data Binding	Overview of Angular's two-way data binding and its impact on the user interface.	1.Nikitha(22KE1A05H5) 2.Ammulu(22KE1A05C9) 3.lavanya (22KE1A05E9) 4.Bhagya (22KE1A05E0)	20/3/2024	**GOOD**
Node.js and Its Asynchronous Nature	Describing the event-driven, non-blocking I/O model of Node.js.	1.Maalya Sri Lakshmi (22KE1A05G2) 2.Varshitha (22KE1A05G5) 3.Kavitha Varshini(22KE1A05G0) 4.Deepika(22KE1A05E8)	**13/4/2024**	**GOOD**
Integration of MongoDB, Express, Angular, and Node	A brief explanation of how these technologies integrate to create full-stack web applications.	1.P.Hema Sahasra (5G1) 2.G.Madhuri(5D4) 3.M.Harsha vardhini(5C1) 4.Sk.Ashabi(5H9)	**20/4/2024**	**GOOD**
RESTful APIs in MEAN Stack	Understanding how RESTful APIs are used for communication between client and server.	1.P. Deepthi Praffulla(5F4) 2.M. Gayathri(5C8) 3.G. Bhavani(5E3) 4.M. Swathi(5D1)	**30/4/2024**	**GOOD**

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5. Benefits and Outcomes of the JAM Sessions

- **Improved Communication Skills**: The activity helped students speak clearly, with coherence, and avoid unnecessary pauses or fillers.
- **Increased Confidence**: Students gained confidence in speaking about technical topics in front of their peers.
- **Active Participation**: The interactive nature of JAM sessions encouraged students to actively participate and pay attention to their

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CONDUTING JAM SESSIONS ON DEEP LEARNING BY IV/I STUDENTS

As part of the ongoing effort to enhance student engagement and promote interactive learning at Malineni Lakshmaiah Women's Engineering College, a series of "Just a Minute" (JAM) sessions on Deep Learning were conducted for the IV/I (4th semester, first year) students. These sessions were aimed at improving students' understanding of Deep Learning concepts, encouraging them to articulate complex topics succinctly, and boosting their confidence in public speaking.

Deep Learning, being a crucial subfield of Artificial Intelligence (AI), plays a vital role in modern technologies like image recognition, natural language processing, and autonomous systems. The JAM session approach provided students with an innovative method to learn, present, and discuss core concepts within this rapidly evolving domain.

Details Of JAM Sessions

Faculty Name	Dr.G.Ramaswamy
Subject	**DEEP LEARNING**
Branch	CSE
Year /Sem	IV/I
VENUE	IV/I CLASS ROOM ()

Objectives of the JAM Session

The primary objectives of conducting the JAM sessions were:

1. To foster a better understanding of Deep Learning concepts by encouraging students to speak on specific topics within a limited time frame.
2. To develop students' communication skills, focusing on clear, concise, and effective articulation of technical topics.
3. To promote peer learning through collaborative feedback and discussions on challenging topics in Deep Learning.
4. To enhance public speaking and time management skills, essential for students in academic and professional settings.

Student Participation:

All students actively participated in the session, taking turns to present. While some students were more familiar with the technical terms and concepts, others were encouraged to simplify their explanations for clarity, ensuring everyone could understand the discussion.

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Feedback and Evaluation:

After each presentation, the faculty and peers provided feedback on how well the student articulated the concepts, the accuracy of the content, and the effectiveness of the communication. Positive feedback was given to encourage confidence, and constructive suggestions were made to improve articulation and delivery.

Topics Covered in the JAM Sessions

Deep Learning concepts that were covered in the JAM sessions, each with a brief explanation and evidence from a table summarizing key details.

TOPIC	Description	Student Participation	Date	Remarks
1. Neural Networks (NN)	Neural Networks are computational models inspired by the human brain, consisting of layers of neurons (nodes).	Pentyala Likhitha(20KE1A0581) Gogula pavanI(20KE1A0526) Gottam Hemalatha(20KE1A0529) Induri Sirisha(20KE1A0533)	2/6/2023	**GOOD**
2. Backpropagation	Backpropagation is a training algorithm for Neural Networks, where errors are propagated backward to update weights.	Konanki Lavanya(20KE1A0549 Laga Meghana(20KE1A0551) Mandava Sravani(20KE1A0561)	12/7/2023	**GOOD**
3. Convolutional Neural Networks (CNN)	CNNs are a specialized class of neural networks used primarily for image and video recognition.	Boppudi Tirupatanjali(20KE1A0509) Chityala Bindhu Sri(20KE1A0517) Dunna Lahari(20KE1A0522) Elchuri Ahalya(20KE1A0523)	20/7/2023	**GOOD**
4. Recurrent Neural Networks (RNN)	RNNs are neural networks designed for sequential data, such as time series or natural language.	Mandlem Akhileswari(20KE1A0562 Maram Sneha Latha (20KE1A0563)	3/8/2023	**GOOD**
5. Activation Functions	Activation functions introduce non-linearity into a neural network, allowing it to learn complex patterns.	Marapala Sailaja(20KE1A0564) Munaga Nandini(20ke1a0572) Neerumalla Lakshmi Kavya (20KE1A0575)	22/8/2023	**GOOD**

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5. Benefits and Outcomes of the JAM Sessions

1. **Improved Conceptual Clarity**:
   - Students were able to present complex Deep Learning concepts in a simplified manner, which deepened their understanding. By presenting each topic in just 60 seconds, they had to focus on the most important aspects, helping them internalize the core principles of Deep Learning.
2. **Enhanced Communication Skills**:
   - Through the practice of delivering concise presentations, students improved their ability to communicate technical information clearly. This skill is essential for academic presentations, interviews, and professional settings, where clear and effective communication is valued.
3. **Increased Confidence**:
   - The opportunity to present in front of peers helped students overcome any public speaking anxiety. The supportive classroom environment allowed them to build confidence in speaking about complex topics. As students presented more frequently, their comfort level and confidence grew.
4. **Real-Time Feedback**:

The immediate feedback provided by peers and faculty allowed students to quickly understand what they did well and where they could improve. This real-time evaluation encouraged iterative learning, helping students refine their presentation skills and deepen their understanding of Deep Learning concepts

The group discussion on "Role of Big Data in Engineering Decision-Making" was conducted with engineering students to explore how **big data** is impacting the decision-making process in the field of engineering. Participants discussed the benefits, challenges, and practical applications of big data in various engineering domains, such as **civil engineering**, **mechanical engineering**, **electrical engineering**, and **software engineering**.

The discussion aimed to understand the importance of data-driven decisions in engineering and how engineers can leverage large datasets to optimize processes, innovate designs, and improve efficiency.

Objective

The main objectives of integrating **Plickers** in the classroom were:

1. **Enhance Student Participation**: Create a more interactive classroom environment where all students actively participate in discussions and assessments.
2. **Facilitate Real-Time Feedback**: Provide immediate feedback to students and instructors, allowing quick identification of learning gaps.
3. **Encourage Active Learning**: Allow students to engage with content actively and test their understanding in a fun and interactive way.
4. **Support Formative Assessment**: Conduct frequent formative assessments to monitor student progress and understanding in real-time

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Benefits of Using Plickers in the Classroom

The use of Plickers has led to numerous benefits for both students and faculty members:

1. **Increased Student Engagement**:
   - Plickers made the learning process more engaging by allowing students to actively participate in class without needing individual devices. This form of interactive learning motivated students to stay focused and involved in the lesson.
2. **Instant Feedback and Assessment**:
   - The real-time feedback allowed students to instantly gauge their understanding of the material. It also enabled instructors to address misconceptions or clarify concepts on the spot, leading to a more effective learning experience.
3. **Active Learning and Participation**:
   - By responding to questions with Plickers cards, students became more actively involved in the learning process. This method encouraged active learning, as students were required to think critically about the questions and participate in the discussion.
4. **Reduced Technology Barriers**:
   - Since Plickers requires only a mobile device to scan the students' responses, there was no need for individual student devices or internet access, making it an ideal solution for large classrooms with limited resources.
5. **Improved Classroom Management**:
   - Plickers allowed instructors to manage the classroom more efficiently by reducing the time spent on collecting and processing responses. The immediate availability of results also helped instructors adjust the pace of the lesson to suit student understanding.
6. **Formative Assessment and Monitoring**:
   - Frequent use of Plickers enabled continuous formative assessments to gauge student progress throughout the lesson. The detailed reports generated after each session helped instructors monitor overall class performance and identify students who needed additional support.
7. **Data-Driven Insights**:
   - The ability to collect and analyze data from each session provided instructors with valuable insights into individual and class-wide learning outcomes. These insights could be used to tailor future lessons to better address student needs.

Outcomes of Using Plickers

1. **Enhanced Learning Outcomes**:
   - The interactive nature of Plickers helped improve overall learning outcomes. Students demonstrated a better understanding of the material, as they received immediate feedback on their responses and had the opportunity to clarify doubts right away.

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2. **Increased Student Motivation**:
   - The novelty and interactivity of using Plickers kept students motivated and engaged throughout the lesson. They were more likely to participate and think critically about the content, as they could see their responses reflected in real time.
3. **Better Understanding of Concepts**:
   - The instant feedback allowed students to learn from their mistakes and correct misunderstandings, leading to a better grasp of the concepts being taught. Misconceptions were quickly addressed, preventing them from becoming ingrained.
4. **Improved Classroom Atmosphere**:
   - The use of Plickers created a positive and energetic classroom environment. It reduced the pressure associated with traditional assessments and encouraged students to take an active role in their learning.
5. **Facilitated Peer Learning**:
   - As students actively participated, they were also more likely to engage in discussions with their peers. This encouraged collaborative learning and allowed students to share their perspectives and solutions to problems.

Implementing Plickers in Database Management System (DBMS) Subject

Introduction: Plickers is an innovative classroom response system that allows teachers to collect real-time feedback and responses from students using paper-based cards. This tool is particularly useful for subjects like

Database Management System (DBMS), where engaging students and providing quick feedback can significantly enhance understanding. Below is a step-by-step process on how to implement Plickers in the DBMS subject to promote interactive learning, active participation, and real-time assessment.

1. Preparation Phase

A. Understanding the Scope of DBMS Topics

- **Identify Key Topics**: The first step is to identify the key concepts in DBMS that can be assessed using Plickers. Topics such as **relational databases**, **SQL queries**, **normalization**, and **database transactions** are ideal for using Plickers as they require understanding and application of core concepts.
- **Prepare Questions**: Based on the identified topics, the instructor should create a series of multiple-choice questions (MCQs) designed to evaluate student understanding. Each question should focus on a critical concept or a frequently misunderstood idea.

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B. Setting Up Plickers

- **Create a Plickers Account**: The instructor should sign up for a Plickers account (free or pro version). Once signed up, they can create their own classes and import students.
- **Generate Plickers Cards**: Each student will receive a unique Plickers card that has a QR code on it. This QR code will be scanned during assessments to track student responses.
- **Download Plickers App**: The instructor needs to install the Plickers app on a smartphone or tablet. This app is used to scan the QR codes on students' cards and collect their responses.
- **Prepare for Real-Time Use**: Ensure that there is proper internet connectivity for the Plickers app to function, and that the classroom setup allows for easy scanning of the cards.

2. Implementation Phase

A. Introduction of Plickers to Students

- **Explain the Tool to Students**: Before starting, the instructor should introduce the Plickers system to the students, explaining how the tool works, how to use the cards, and how it benefits their learning.
- **Distribute Cards**: Each student is provided with their unique Plickers card. Students should be made aware that the card's QR code represents them individually, and their answers will be recorded and assessed.

B. Integrating Plickers into the DBMS Class

- **During the Lecture**: As the instructor progresses through the DBMS lecture (covering topics like **SQL queries**, **data models**, **normalization**, etc.), they can use Plickers to pose questions after explaining key concepts.
    - Example Question 1: "Which SQL command is used to retrieve data from a database?"
        - A) SELECT
        - B) INSERT
        - C) UPDATE
        - D) DELETE
    - Example Question 2: "What is the first normal form (1NF) in database normalization?"

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- A) Eliminate duplicate rows
- B) Eliminate partial dependency
- C) Eliminate transitive dependency
- D) Ensure that each column contains only atomic value.

Important Topics Covered Using Plickers in DBMS

The integration of Plickers into the DBMS course for II/II CSE students focused on reinforcing important concepts from the curriculum, including:

1. **Relational Database Model**:
   - **Important Concept**: Understanding the structure of relational databases, including tables, keys, and relationships.
   - **Plickers Question Example**: "Which of the following is used to uniquely identify each record in a table?"
     - A) Foreign Key
     - B) Primary Key
     - C) Candidate Key
     - D) Composite Key
2. **Normalization**:
   - **Important Concept**: The process of organizing data to minimize redundancy and ensure data integrity.
   - **Plickers Question Example**: "Which of the following normal forms eliminates partial dependency?"
     - A) 1st Normal Form (1NF)
     - B) 2nd Normal Form (2NF)
     - C) 3rd Normal Form (3NF)
     - D) Boyce-Codd Normal Form (BCNF)
3. **SQL Queries and Commands**:
   - **Important Concept**: Writing and executing SQL queries for various database operations.
   - **Plickers Question Example**: "Which SQL command is used to retrieve data from a database?"
     - A) SELECT
     - B) INSERT
     - C) UPDATE
     - D) DELETE
4. **Database Integrity Constraints**:
   - **Important Concept**: Ensuring the accuracy and reliability of data by using constraints like **NOT NULL**, **UNIQUE**, and **CHECK**.

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- **Plickers Question Example**: "Which constraint ensures that a column in a table cannot have a NULL value?"
  - A) UNIQUE
  - B) NOT NULL
  - C) CHECK
  - D) DEFAULT

5. **Database Transactions and ACID Properties**:
   - **Important Concept**: Understanding the **ACID** properties (Atomicity, Consistency, Isolation, Durability) of database transactions.
   - **Plickers Question Example**: "Which ACID property ensures that all parts of a transaction are completed successfully or none are?"
     - A) Atomicity
     - B) Consistency
     - C) Isolation
     - D) Durability

Conducting details:

Faculty Name	Mr.G.Srilakshmi
Subject	**DBMS**
Branch	CSE
Year /Sem	II/II
VENUE	II/II CLASS ROOM(427)

Outcomes of Using Plickers in DBMS Classroom

1. **Better Retention and Concept Mastery**:
   - Students were able to retain key DBMS concepts better due to the active learning process facilitated by Plickers. The immediate feedback helped reinforce learning and clarify doubts.
2. **Improved Classroom Engagement**:
   - The use of Plickers resulted in greater classroom participation and engagement. Students were more attentive and involved in discussions, leading to an overall positive classroom atmosphere.
3. **Timely Identification of Learning Gaps**:
   - Through real-time assessments, the instructor could quickly identify areas where students were struggling, such as SQL queries or normalization. This allowed for targeted revisions and personalized teaching.

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IMPLEMENTATION OF PLICKERS ON CRYPTOGRAPHY AND NETWORK SECURITY CONCEPTS

At **Malineni Lakshmaiah Women's Engineering College**, innovative teaching methods are continuously being integrated to enhance the learning experience. One such method is the use of **Plickers**, a classroom response system that allows for real-time feedback using paper-based cards. This tool has been utilized in the **Cryptography and Network Security (CNS)** course for **II/II CSE students**, providing an interactive and engaging learning environment for students to better understand the complex concepts of the subject.

Cryptography and Network Security is a crucial area in computer science that deals with protecting data and ensuring secure communication over networks. To promote active student participation and quickly assess their understanding, **Plickers** has been used as an innovative tool for interactive learning and teaching in this subject.

Objective

The main objectives of using **Plickers** in the **Cryptography and Network Security (CNS)** class are:

1. **Enhance Student Engagement**: Encourage all students to actively participate in class discussions and answer questions.
2. **Instant Feedback**: Provide real-time assessment and feedback on student responses.
3. **Reinforce Key Cryptography and Security Concepts**: Focus on understanding cryptographic algorithms, network security protocols, and attack prevention mechanisms.
4. **Monitor Student Understanding**: Track the learning progress of students and identify areas where additional focus is required.
5. **Promote Collaborative Learning**: Foster group discussions and peer-to-peer learning through interactive question.

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Implementation Process

1. Preparation Phase

A. Selecting Key Topics in Cryptography and Network Security

- **Core Topics**: The instructor identifies key topics in Cryptography and Network Security that are fundamental for understanding the subject. Some of the important areas include:
  - **Symmetric and Asymmetric Encryption**
  - **Public Key Infrastructure (PKI)**
  - **Hash Functions and Digital Signatures**
  - **Network Security Protocols (SSL/TLS, IPSec)**
  - **Cryptographic Attacks (Brute Force, Man-in-the-Middle Attacks)**

B. Setting Up Plickers

- **Create a Plickers Account**: The instructor creates an account on the Plickers platform and adds the **II/II CSE class** to it.
- **Generate Plickers Cards**: Each student is provided with a unique **Plickers card**, which contains a QR code representing their individual identity.
- **Prepare Questions**: The instructor designs multiple-choice questions (MCQs) related to cryptography and network security topics. These questions aim to assess the students' understanding of complex concepts like encryption techniques, attack prevention, and security protocols.
- **Download the Plickers App**: The instructor installs the Plickers app on a mobile device for easy scanning of students' responses during the class.

C. Classroom Setup

- **Ensure Proper Lighting and Seating**: The classroom is arranged to ensure that students' Plickers cards are easily visible for scanning by the instructor.
- **Introduce Plickers to Students**: The instructor explains the process to students, demonstrating how to hold the cards correctly and how to respond to questions

2. Benefits of Using Plickers in CNS Class

A. Enhanced Student Engagement

- Plickers ensures active participation from all students, including those who might otherwise be hesitant to speak up. Since all students can participate simultaneously using their Plickers cards, the instructor gets a more comprehensive view of class-wide understanding.

B. Real-Time Feedback

- The instant feedback mechanism of Plickers allows the instructor to gauge student comprehension immediately. This real-time assessment helps prevent misunderstandings from persisting and allows for quick intervention.

C. Encouragement of Peer Learning

- By discussing responses with classmates, students gain different perspectives on the material, enhancing their understanding. Peer discussions promote collaborative learning and increase student involvement.

Important Topics Covered Using Plickers in Cryptography and Network Security

1. **Symmetric and Asymmetric Encryption**
    - **Example Question**: "Which encryption algorithm uses the same key for both encryption and decryption?"
        - A) RSA
        - B) DES
        - C) AES
        - D) ECC
2. **Hash Functions and Digital Signatures**
    - **Example Question**: "What is the primary purpose of a hash function in cryptography?"
        - A) To encrypt data
        - B) To ensure data integrity
        - C) To manage keys
3. **Public Key Infrastructure (PKI)**
    - **Example Question**: "In PKI, which component is used to verify the authenticity of a digital certificate?"
        - A) Certificate Authority (CA)
        - B) Registration Authority (RA)

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- C) Public Key
- D) Private Key

4. **Network Security Protocols (SSL/TLS)**
   - **Example Question**: "Which protocol is used to secure communication over the internet by establishing an encrypted link between the web server and the client?"
     - A) HTTP
     - B) SSL/TLS
     - C) FTP
     - D) SMTP
5. **Cryptographic Attacks**
   - **Example Question**: "What type of attack tries to intercept and alter the communication between two parties without their knowledge?"
     - A) Brute Force Attack
     - B) Man-in-the-Middle Attack
     - C) Denial-of-Service Attack
     - D) Phishing Attack

Conducting details:

Faculty Name	Dr.Charles Jayarao
Subject	**CNS**
Branch	CSE
Year /Sem	III/II
VENUE	III/II CLASS ROOM(422)

Outcomes of Implementing Plickers in CNS Class

1. **Improved Engagement and Participation**:
   - Students showed increased participation in the lesson, with every student actively engaging during Plickers sessions.
2. **Enhanced Understanding of Complex Topics**:
   - Real-time feedback and discussion helped students clarify doubts and develop a deeper understanding of cryptographic algorithms, network security protocols, and cryptographic attacks.
3. **Identifying Learning Gaps**:
   - The instructor was able to identify areas where students were struggling (e.g., public key cryptography) and provide additional resources or review sessions.

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5.Think Pair Share

Think-Pair-Share (TPS) is a collaborative learning strategy where students work together to solve a problem or answer a question about an assigned reading. This strategy requires students to (1) think individually about a topic or answer to a question; and (2) share ideas with classmates. Discussing with a partner maximizes participation, focuses attention and engages students in comprehending the reading material

What is Think-Pair-Share?

Think-Pair-Share is an interactive learning strategy that involves three distinct steps:

1. **Think**: The teacher poses a question or problem to the class, and each student spends a few moments thinking about it individually. This step encourages personal reflection and allows students to organize their thoughts before sharing.
2. **Pair**: Students then pair up with a partner to discuss their thoughts, ideas, or solutions. This step promotes collaboration, communication, and the exchange of perspectives.
3. **Share**: Finally, pairs share their discussion with the whole class, either through a verbal presentation or by writing their responses on the board or a shared platform. This step fosters group learning and allows the teacher to gauge students' understanding and clarify any misconceptions.

Implementation of Think-Pair-Share at Malineni Lakshmaiah Women's Engineering College

At **MLWEC**, the **Think-Pair-Share** strategy has been incorporated into various courses across different departments, particularly in the **Computer Science and Engineering (CSE)**.

For example, in courses such as ARITIFICAL or **Cryptography and Network Security**, where complex concepts and problem-solving are key components, TPS has been an effective strategy for helping students process and internalize information.

Benefits of Think-Pair-Share

1. **Active Participation**: Think-Pair-Share promotes individual thinking as well as group collaboration. Each student is required to actively engage with the content, which helps improve attention and reduces passive learning.

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2. **Enhances Critical Thinking**: The "Think" phase encourages students to reflect on the topic, enhancing their critical thinking skills. This leads to a deeper understanding of the material, as students are given time to analyze and process the information before discussing it with their peers.

Implementation of Think-Pair-Share (TPS) in Artificial Intelligence:

At **Malineni Lakshmaiah Women's Engineering College (MLWEC)**, the **Think-Pair-Share (TPS)** strategy has been successfully implemented in the **Artificial Intelligence (AI)** course, a subject that involves complex concepts and critical problem-solving. AI, which includes topics like **machine learning algorithms**, **neural networks**, and **search techniques**, can be challenging for students to fully comprehend. By utilizing TPS, students are provided an interactive and structured approach that helps them process, internalize, and apply this complex information.

Example of Think-Pair-Share in Artificial Intelligence (AI)

Here are some example questions that can be used in the **Think-Pair-Share (TPS)** method for teaching **Artificial Intelligence (AI)**. These questions are designed to stimulate thinking and facilitate discussion on complex AI concepts:

1. Supervised vs. Unsupervised Learning

- **Think**: "What is the difference between supervised and unsupervised learning in machine learning? Can you identify real-world scenarios where each would be applied?"
- **Pair**: Discuss with a peer which machine learning technique is better suited for tasks like spam email detection (supervised learning) versus customer segmentation (unsupervised learning).
- **Share**: Share your thoughts with the class, explaining the key differences between the two techniques and providing real-world examples.

2. Neural Networks

- **Think**: "How does a neural network mimic the human brain's functioning? What are the key components of a neural network?"
- **Pair**: Pair up and discuss the role of neurons, layers, and activation functions in a neural network. How do these components contribute to decision-making in AI systems?
- **Share**: Present your understanding of neural networks, including how they function similarly to the human brain and the importance of each component.

3. Reinforcement Learning

- **Think**: "What is reinforcement learning, and how does it differ from supervised and unsupervised learning?"

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- **Pair**: Pair up and discuss a scenario where reinforcement learning can be applied, such as in robotics or video games. How do agents learn and improve their actions in these environments?
- **Share**: Share your thoughts on reinforcement learning with the class and provide a real-world example, explaining how agents interact with their environment to maximize rewards.

4. Ethical Considerations in AI

- **Think**: "What ethical issues arise in the development and deployment of AI systems, particularly in areas like facial recognition or autonomous vehicles?"
- **Pair**: Discuss with a peer how ethical concerns such as bias in AI algorithms or privacy issues might affect the adoption of AI technology in various industries.
- **Share**: Present the ethical challenges you discussed, and suggest possible solutions to mitigate these issues while developing AI systems.

5. AI and Data Privacy

- **Think**: "What role does AI play in data privacy, and how can AI systems inadvertently compromise privacy?"
- **Pair**: Pair up and discuss the balance between using AI for data analytics and ensuring data privacy. How can AI be used to enhance privacy protection while also being used for analysis?
- **Share**: Present your thoughts on the intersection of AI and privacy, suggesting solutions like differential privacy to safeguard sensitive information.

DETAILS OF SESSION:

Faculty Name	A.SurendraBabu
Subject	Artificial Intelligence (AI)
Branch	CSE
Year /Sem	III/I
VENUE	III/I CLASS ROOM(422)

Outcome of TPS in AI Courses

The implementation of **Think-Pair-Share** in **Artificial Intelligence** courses has led to significant positive outcomes at **Malineni Lakshmaiah Women's Engineering College**:

- **Increased Conceptual Understanding**.
- **Improved Retention of Information**
- **Development of Critical Thinking and Problem-Solving Abilities**:

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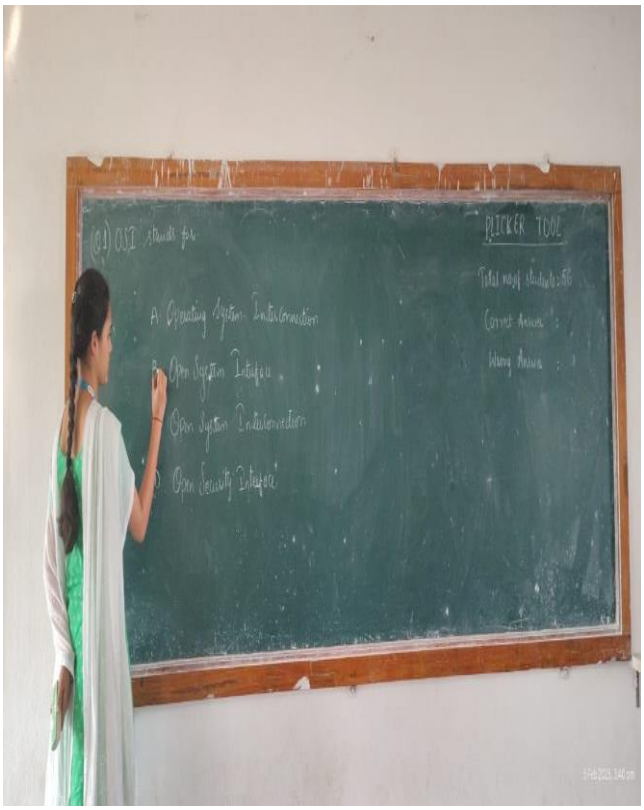
- **Boosted Confidence in Communication**:



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Implementation Think-Pair-Share SESION in Data Warehousing and Data Mining:

At **Malineni Lakshmaiah Women's Engineering College**, the **Think-Pair-Share (TPS)** strategy has been effectively implemented in the **Data Warehousing and Data Mining** course. This subject deals with intricate concepts related to **data models**, **data structures**, **data extraction**, **ETL processes**, **mining algorithms**, and **pattern recognition**, which can be challenging for students. By employing TPS, the instructor encourages students to actively think, engage with their peers, and clarify concepts through discussion, fostering better understanding and retention.

Example Topics for Think-Pair-Share in Data Warehousing and Data Mining

Here are some example topics and questions that can be used to implement **Think-Pair-Share** in the course:

1. **Data Preprocessing**:
   - **Think**: "Why is data preprocessing important in Data Mining? What steps are involved in cleaning raw data?"
   - **Pair**: Discuss how techniques like **normalization**, **handling missing values**, and **feature selection** contribute to better data analysis.
   - **Share**: Share the preprocessing methods used in the class and discuss how each technique affects the data mining model's performance.
2. **Association Rule Mining**:
   - **Think**: "What are the key metrics in association rule mining, and how do they help assess the strength of discovered rules?"
   - **Pair**: Pair up and discuss how **support**, **confidence**, and **lift** are calculated and their significance in identifying strong association rules.
   - **Share**: Share examples of how association rules are used in real-world applications such as **market basket analysis**.
3. **Clustering Techniques**:
   - **Think**: "How do clustering algorithms, such as K-means, group data points into clusters? What challenges might arise in the clustering process?"

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- **Pair**: Discuss with a classmate how **distance metrics** influence the clustering results and what steps can be taken to mitigate challenges like **choosing the right number of clusters**.
- **Share**: Discuss the importance of **distance measures** and the role of **initial cluster centroids** in achieving good clustering outcomes.

4. **Data Mining Algorithms**:
   - **Think**: "What are the key differences between decision trees and neural networks for data mining tasks?"
   - **Pair**: Discuss how **decision trees** are used for classification and how **neural networks** work for more complex problems such as image recognition or natural language processing.
   - **Share**: Share which algorithm is better suited for different types of data mining problems and why.

DETAILS OF SESSION:

Faculty Name	Mr.K.Praveen Kumar
Subject	**Data Warehousing and Data Mining**
Branch	CSE
Year /Sem	III/I
VENUE	III/I CLASS ROOM(422)

Outcome of TPS in Data Warehousing and Data Mining

The implementation of **Think-Pair-Share** in the **Data Warehousing and Data Mining** course results in several positive outcomes:

- **Enhanced Understanding**.
- **Better Retention**
- **Increased Student Engagement**
- **Improved Problem-Solving and Analytical Skills**

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6.Brainstorming

Process for generating creative ideas and solutions through intensive and freewheeling group discussion. Every student in the class is encouraged to think aloud and suggest as many ideas as possible, no matter seemingly how outlandish or bizarre. Analysis, discussion, or criticism of the aired ideas is allowed only when the brainstorming session is over and evaluation session begins.

Brainstorming Session for M3 (Mathematics III) at Malineni Lakshmaiah Women's Engineering College

Objective:

The brainstorming session aimed to engage III-II (third year, second semester) students in meaningful discussions around the subject **Mathematics III (M3)**. The goal was to improve understanding of key concepts, enhance problem-solving skills, and foster active participation in learning.

Key Areas to Cover in the Session:

1. **Subject Overview**:
   - Mathematics III typically includes topics like **Complex Analysis**, **Partial Differential Equations (PDEs)**, **Transforms**, and **Fourier Series**.
   - The focus is on understanding theoretical concepts and applying them to real-world problems.
2. **Brainstorming Ideas and Questions**: During the session, the students were divided into groups and asked to brainstorm around the following areas:
   - **Complex Analysis**:
     - What is the significance of **Cauchy-Riemann equations**?
     - How does **analyticity** relate to the physical world (e.g., fluid dynamics, heat flow)?
     - Can you explain **integration of complex functions** and its real-life applications?
   - **Partial Differential Equations (PDEs)**:
     - What are some practical applications of **PDEs** in engineering, such as in **heat conduction** or **wave propagation**?
     - How do we solve **boundary value problems** in PDEs? What are the **Dirichlet** and **Neumann** conditions?
     - How do **Fourier Series** help in solving PDEs?

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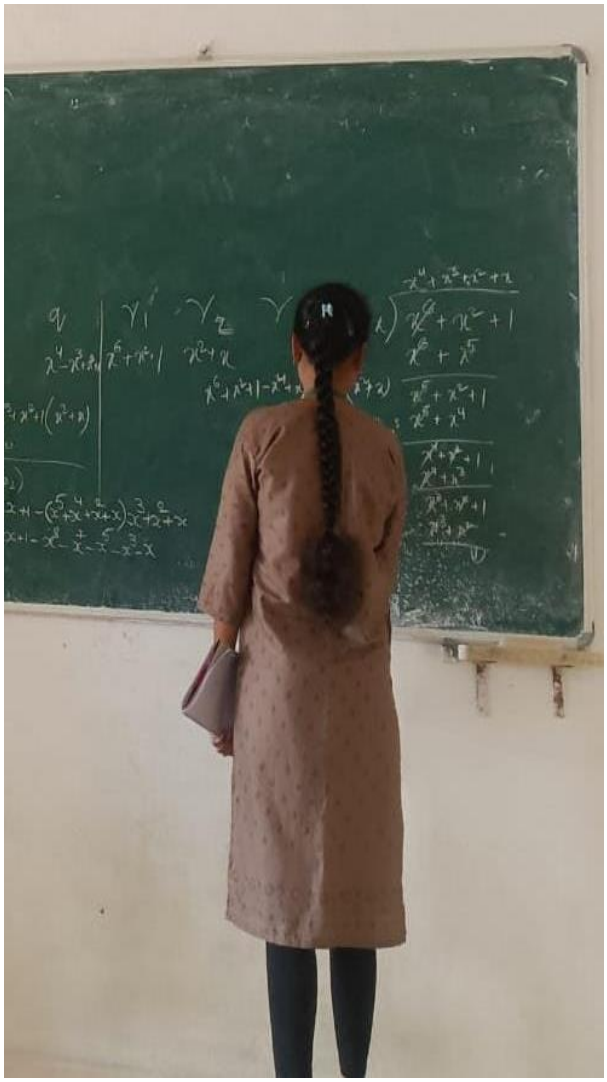
DETAILS OF SESSION:

Faculty Name	**MRS.J.SIRISHA**
Subject	**Mathematics III (M3).**
Branch	**CSE**
Year /Sem	**II/I**
VENUE	**II/I CLASS ROOM(427)**



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Outcome of the Brainstorming Session:

- **Increased Student Engagement**: By discussing real-world applications and allowing for problem-solving, students were more engaged in the learning process.
- **Clarification of Complex Topics**: The group discussions and interactive Q&A helped clarify challenging concepts, such as **Laplace Transforms**, **Fourier Series**, and **PDEs**.
- **Better Understanding of Applications**: Students gained a deeper appreciation of how the concepts in Mathematics III are used in various fields of engineering, reinforcing the importance of the subject in their academic and professional careers.

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7.Assignment Practices:-

In general, students will be given activities to help them improve their knowledge by self-learning and referring to available resources. However, by introducing new methods into the assignment preparation process, the end result will be better.

Execution Plan : One assignment per unit during the semester

Expected Outcome **:** Improving learning ability.

Improving subject knowledge.

Assignment Practice in Classrooms at Malineni Lakshmaiah Women's Engineering College

At Malineni Lakshmaiah Women's Engineering College, assignments play a pivotal role in reinforcing students' understanding of theoretical concepts and enhancing their problem-solving abilities. The practice of assigning regular tasks in the classroom is an integral part of the learning process. These assignments are designed not only to evaluate student knowledge but also to encourage independent learning, critical thinking, and practical application of theoretical concepts across various subjects.

This report aims to provide an overview of the assignment practices in classrooms, highlighting their objectives, implementation methods, and impact on student learning outcomes.

Objective of Assignment Practices:

The primary objectives of assignments at Malineni Lakshmaiah Women's Engineering College are as follows:

1. **Reinforcement of Theoretical Concepts**:
   - To help students consolidate their understanding of course material.
   - To bridge the gap between theoretical knowledge and its practical application.
2. **Skill Enhancement**:
   - To improve problem-solving skills, critical thinking, and research capabilities.
   - To enhance students' writing, presentation, and communication skills through detailed reports and presentations.
3. **Continuous Evaluation**:
   - To provide a mechanism for continuous assessment of student progress.
   - To identify areas where students need improvement and offer timely feedback.
4. **Promote Self-Learning**:
   - To encourage students to take initiative and develop self-learning habits.
   - To foster a sense of responsibility and discipline in completing tasks.

Assignment Submission Process:

- Assignments are typically given at the beginning of a term or unit and have a fixed deadline.

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- Students are expected to submit their assignments either in written form or electronically, depending on the subject requirements.
- For some assignments, students may be asked to present their findings in the classroom or submit a report

DETAILS OF SESSION:

Faculty Name	**K.M.L Priyanka**
Subject	**Mean Stack Development**
Branch	**CSE**
Year /Sem	**III/II**
VENUE	**III/II CLASS ROOM(422)**

Sample Assignment question papers per unit

Subject: Mean Stack Development

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Pulladigunta (V) Vatticherukuru (M), Guntur (Dist.)

Unit-I Assignment Question-Paper

Subject:Mean Stack Development Date:30/1/2024

Marks:5M

Q.No.	QUESTION	Marks Allotted	Course Outcome mapping	Taxonomy level
1.	Create a Login Form by using HTML5 features?	2.5M	CO.1	Apply
2	Develop IEKARTS Online Shopping Website Homepage?	2.5M	CO.1	Apply

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Pulladigunta (V) Vatticherukuru (M), Guntur (Dist.)

Unit-I1 Assignment Question-Paper **Date:27/2/2024**

Subject: MeanStackDevelopment **Marks**:5M

Q.No.	QUESTION	Marks Allotted	Course Outcome mapping	Taxonomy level
1.	Write a JavaScript code to validate login form of the IEKARTS web site.	2.5M	C205.2	Apply
2	Write JavaScript code to book movie tickets online and calculate the total price, considering the number of tickets and price per ticket as Rs. 150. Also, apply a festive season discount of 10% and calculate the discounted amount.	2.5M	C205.2	Apply

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE
ESTD : 2008
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Unit-I1I Assignment Question-Paper **Date:2/3/2024**

Subject: MeanStackDevelopment **Marks**:5M

Q.No.	QUESTION	Marks Allotted	Course Outcome mapping	Taxonomy level
1.	Validate the user by creating a login module. Hints: (i) Create a file login.js with a User class. (ii) Create a validate method with username and password as arguments. (iii) If the username and password are equal it will return "Login Successful" else "incorrect username and pwd.	2.5M	C205.3	Apply
2	How to Install and configure and restarting node.js server.	2.5M	C205.3	Apply

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Pulladigunta (V) Vatticherukuru (M), Guntur (Dist.)

Unit-IV Assignment Question-Paper Date:20/4/2024

Subject: MeanStackDevelopment **Marks**:5M

Q.No.	QUESTION	Marks Allotted	Course Outcome mapping	Taxonomy level
1.	Explain MongoDB Queries with example?	2.5M	C205.3	understand
2	Develop Registration form and store the data in mongo db database	2.5M	C205.3	Apply

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Unit-V Assignment Question-Paper Date:3/5/2024

Subject: MeanStackDevelopment **Marks**:5M

Q.No.	QUESTION	Marks Allotted	Course Outcome mapping	Taxonomy level
1.	Compare Angular and AngularJs	2.5M	C205.3	Analyze
2	Create a template using Angular's structural directives (ngIf, ngFor, ngSwitch) to display a list of products with varying availability statuses.	2.5M	C205.3	Apply

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8. Kahoot!

Kahoot! is an interactive, game-based learning platform that is widely used in classrooms, corporate environments, and various learning settings. It helps to make education fun and engaging by combining quizzes, discussions, and surveys into a dynamic learning experience. This platform fosters collaboration, competition, and active participation from learners, making learning more enjoyable and effective.

Key Features of Kahoot!:

1. **Quizzes**:
   - The core feature of Kahoot! is its ability to create quizzes that test students' knowledge in a wide range of subjects.
   - These quizzes can consist of multiple-choice questions, true/false questions, and puzzles.
   - Teachers or instructors can set a time limit for each question, encouraging quick thinking and engagement.
   - Quizzes can be customized to meet the needs of different age groups and subjects, making it versatile for various educational levels.
2. **Surveys**:
   - Kahoot! allows instructors to create surveys where students can respond to open-ended or multiple-choice questions.
   - These surveys are used for collecting feedback, conducting polls, and understanding students' opinions, interests, or prior knowledge before starting a lesson.
   - Surveys are a useful tool for informal assessments and getting immediate feedback from learners.
3. **Discussions**:
   - Kahoot! has a discussion feature that enables real-time interaction. This feature encourages students to discuss a topic or respond to questions collaboratively.
   - Instructors can use this feature to prompt student engagement and stimulate meaningful discussions.
4. **Challenges and Assignments**:
   - Kahoot! also allows students to play challenges at their own pace outside of class. Teachers can assign a quiz as homework or as a review activity.
   - This feature enables students to revisit content they may need to practice more and allows for independent learning.

BENEFITS OF KAHOOT! IN LEARNING:

1. **Enhances Engagement**:
2. **Boosts Motivation**:
3. **Immediate Feedback**:

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Details of session :

Faculty Name	Mrs.R.Akhila
Subject	Oops thought java
Branch	CSE
Year /Sem	II/II
VENUE	Online lab(5&6)

BatchNo.	Name Of The Faculty	HallticketNo	Topic Name	
Batch1	Mrs.R.Akhila	22KE1A05C1	Quiz On Java Programming	11/3/2024
		22KE1A05C2		
		22KE1A05C3		
		22KE1A05C4		
		22KE1A05C5		
		22KE1A05C6		
		22KE1A05C7		
		22KE1A05C8		
		22KE1A05C9		
		22KE1A05D0		
		22KE1A05D1		
		22KE1A05D2		
		22KE1A05D3		
		22KE1A05D4		
		22KE1A05D5		
		22KE1A05D6		
		22KE1AO5D7		
		22KE1AO5D8		
		22KE1AO5D9		
		22KE1AO5E0		

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BatchNo.	Name Of The Faculty	HallticketNo	Topic Name	
Batch2	Mrs.R.Akhila	22KE1A05E1	Quiz On Java Programming	20/4/2024
		22KE1A05E2		
		22KE1A05E3		
		22KE1A05E4		
		22KE1A05E5		
		22KE1A05E6		
		22KE1A05E7		
		22KE1A05E8		
		22KE1A05E9		
		22KE1A05F0		
		22KE1A05F1		
		22KE1A05F2		
		22KE1A05F3		
		22KE1A05F4		
		22KE1A05F5		
		22KE1A05F6		

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BatchNo.	Name Of The Faculty	HallticketNo	Topic Name	
Batch3	Mrs.R.Akhila	22KE1A05E1	Quiz On Java Programming	30/4/2024
		22KE1A05E2		
		22KE1A05E3		
		22KE1A05E4		
		22KE1A05E5		
		22KE1A05E6		
		22KE1A05E7		
		22KE1A05E8		
		22KE1A05E9		
		22KE1A05F0		
		22KE1A05F1		
		22KE1A05F2		
		22KE1A05F3		
		22KE1A05F4		
		22KE1A05F5		
		22KE1A05F6		
		22KE1AO5F7		
		22KE1AO5F8		
		22KE1AO5F9		
		22KE1AO5G0		

Kahoot! is an interactive game-based learning platform that enhances student engagement through quizzesand challenges. This report highlights the game play session conducted with 3 batches , 20 Students per batch from II-CSE C Section on 25-02-2024.

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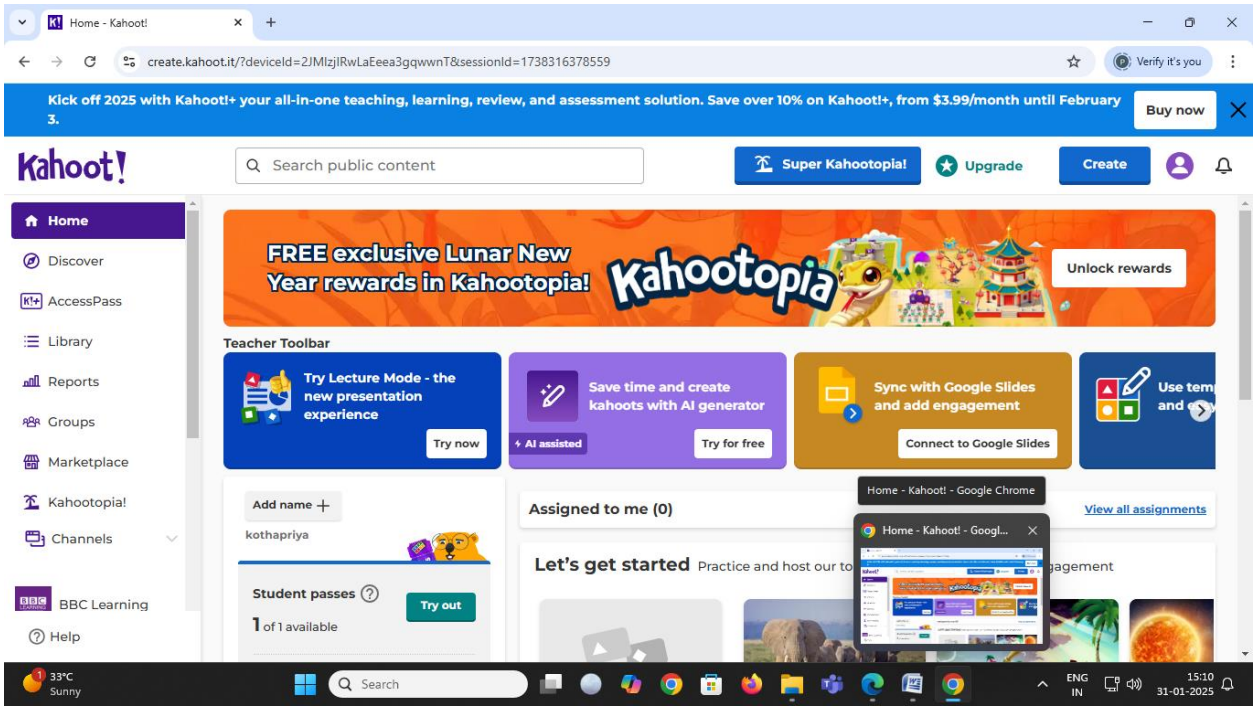

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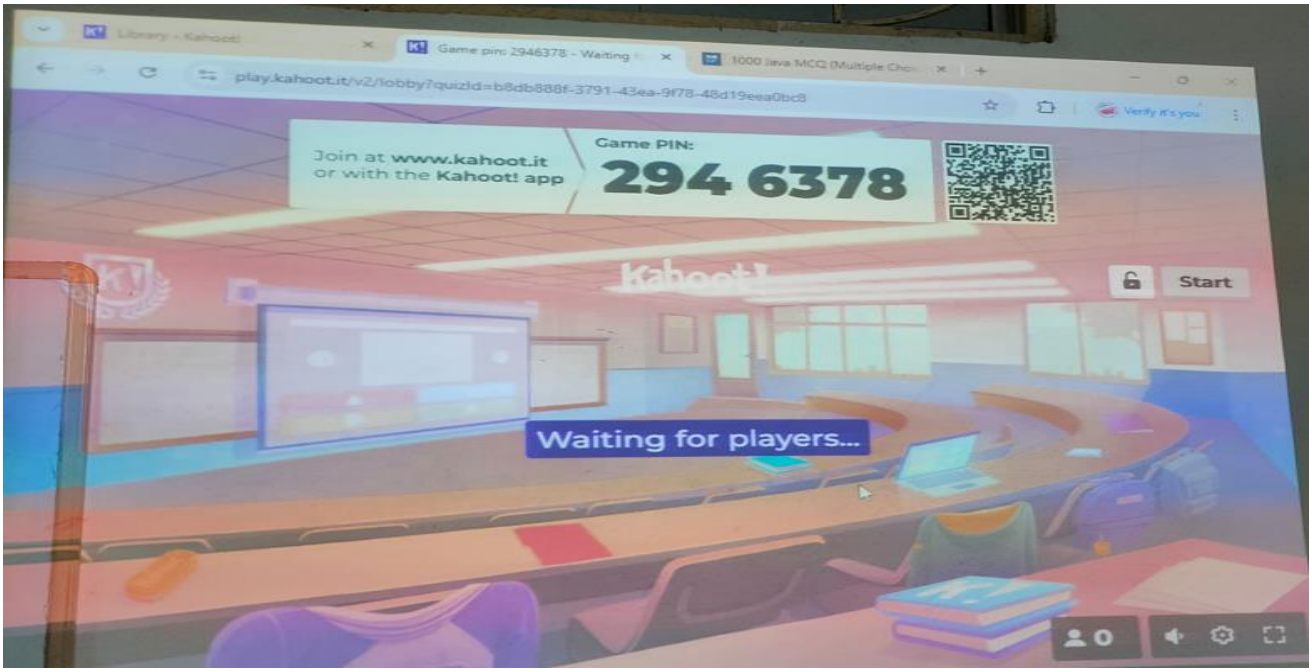

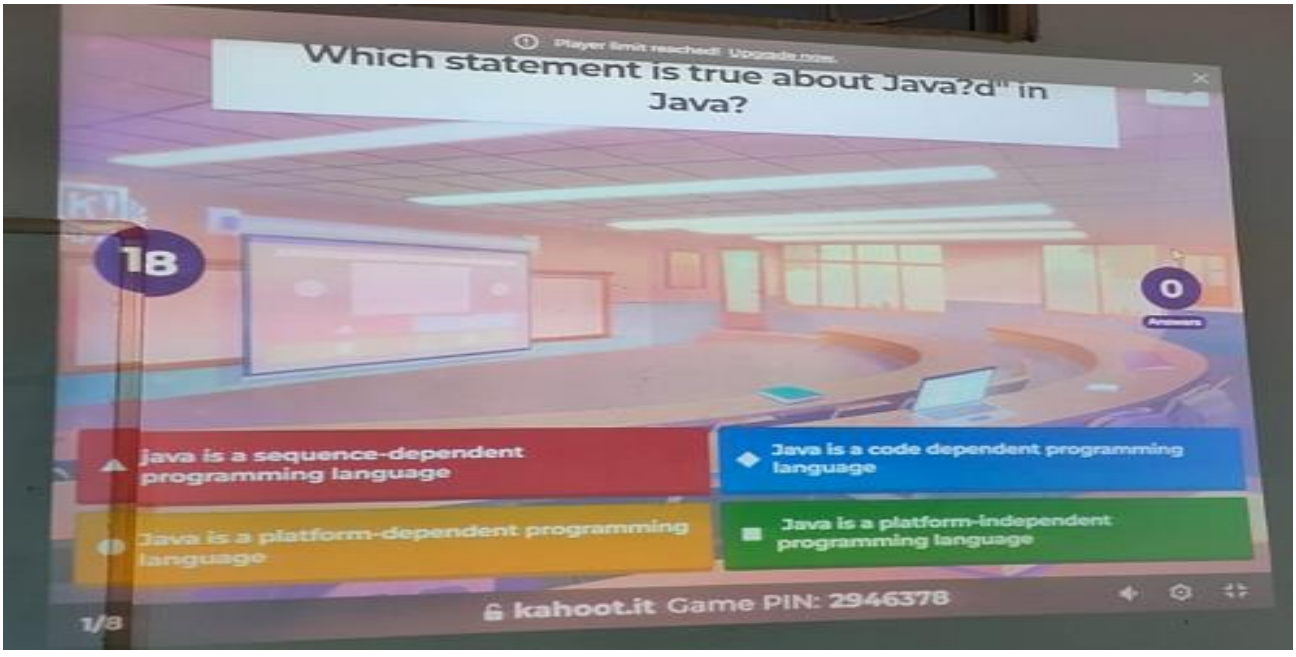

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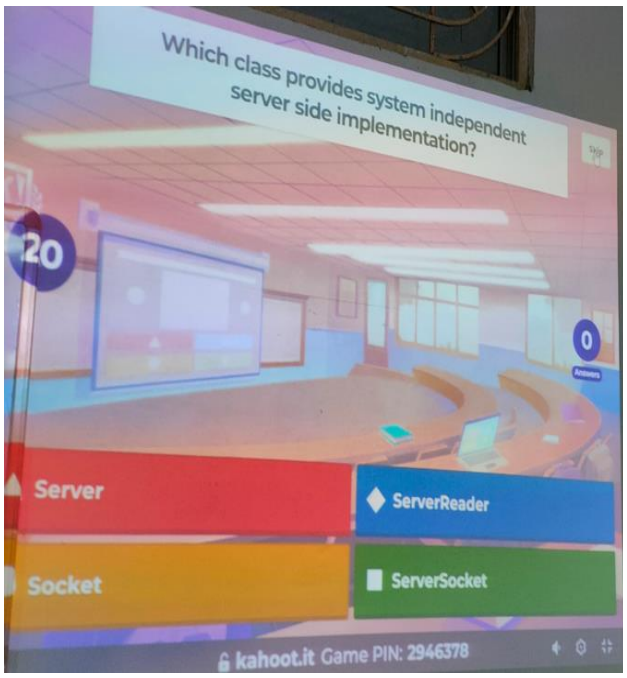
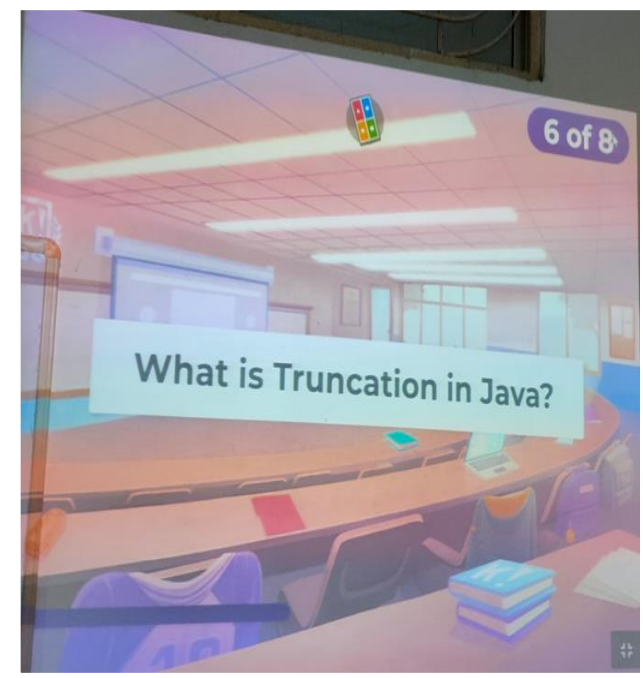
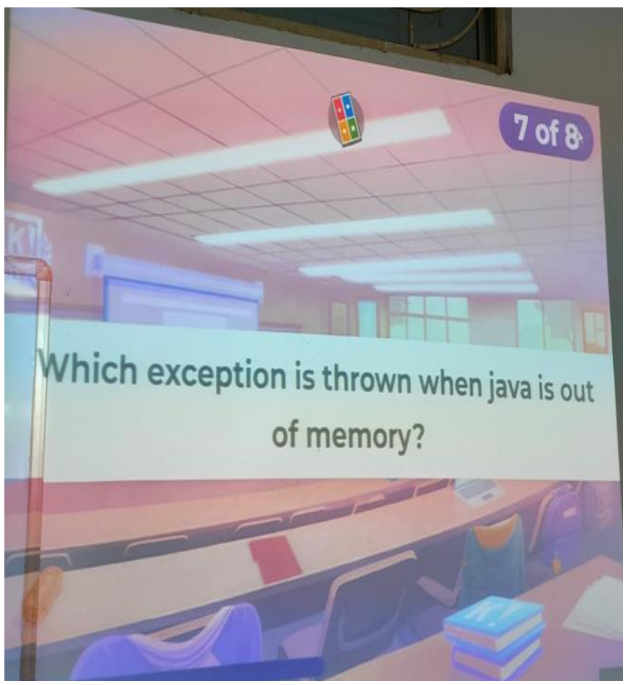
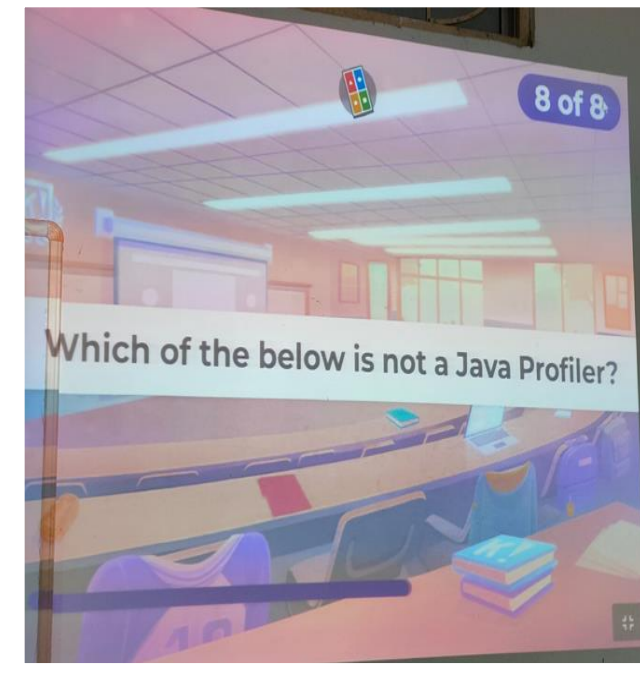
quiz questions:









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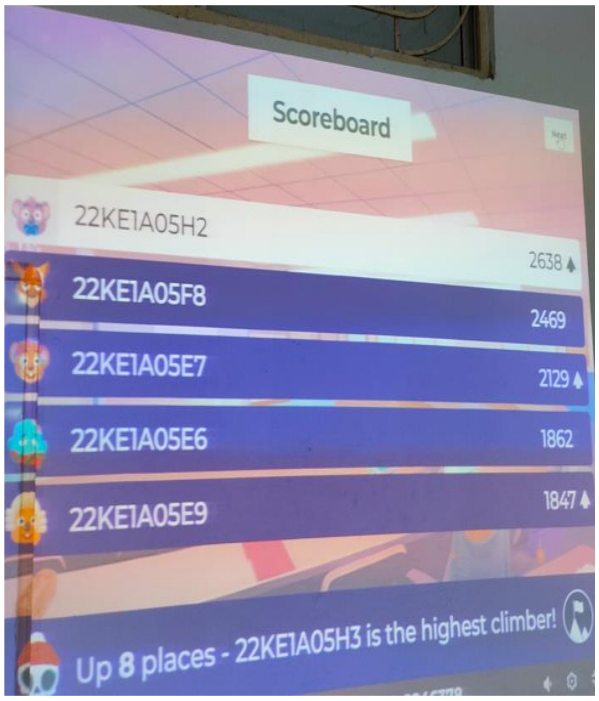

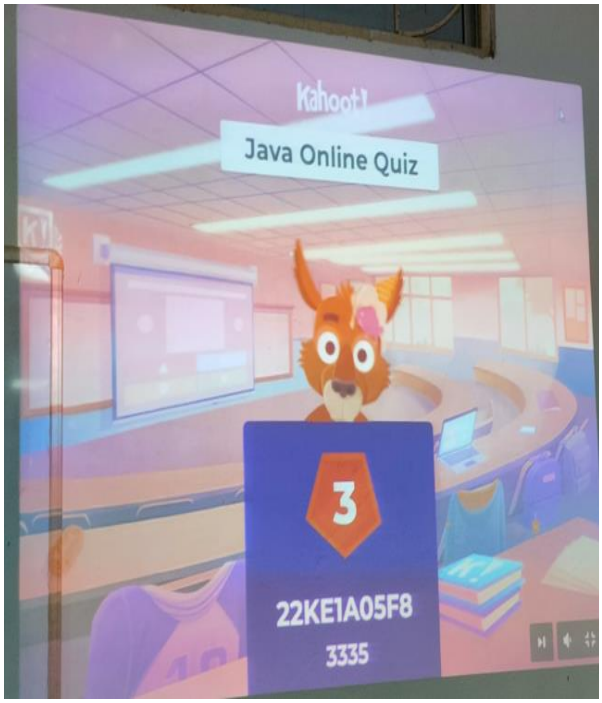

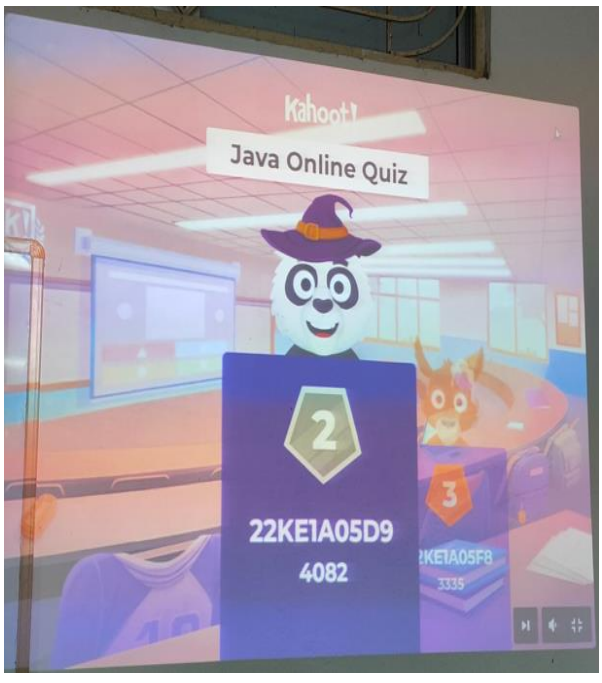

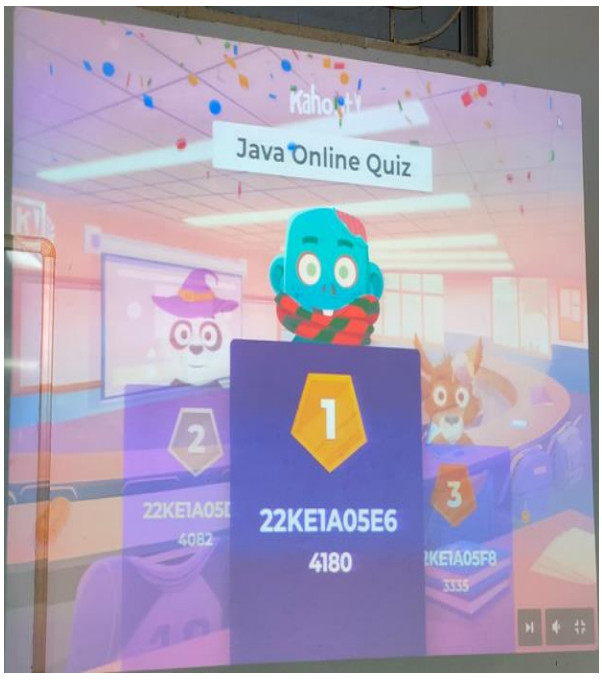

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REPORT:

Java Online Quiz	
Played on	25-02-2024.
Hosted by	P.Vemana
Played with	21 players
Played	8 of 8

Overall Performance	
Total correct answers (%)	30.36%
Total incorrect answers (%)	69.64%
Average score (points)	1937.43 points

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FEED BACK:

Feedback					
Number of responses	21				
How fun was it? (out of 5)	90.00 out of 5				
Did you learn something?	100.00% Yes		0.00% No		
Do you recommend it?	100.00% Yes		0.00% No		
How do you feel?	90.00% Positive		10.00% Neutral		0.00% Negative

Feedback from Students:

- **Positive Feedback**:
  - **Interactive and Fun**: Students found the quiz format fun and engaging. Many mentioned that Kahoot! made learning Java more enjoyable.
  - **Clearer Understanding**: Some students reported that the quiz helped clarify concepts they had previously found confusing, such as **polymorphism** and **method overriding**.
- **Suggestions for Improvement**:
  - Several students suggested incorporating more coding challenges where they could type in code and predict the output, rather than just answering multiple-choice questions.
  - A few students expressed interest in a feature that would allow them to review their answers after the quiz to reinforce learning.

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9.ROAL PLAY SESSION

Incorporating **Role Play** in the classroom is an innovative approach to enhancing learning, particularly in technical subjects like **Data Structures**. Role play, when applied to the learning process, transforms a passive classroom into an interactive and engaging environment. In a Data Structures class, students can assume various roles related to the data structures being studied, such as **Array**, **Linked List**, **Stack**, **Queue**, or even roles like **Programmer**, **Debugger**, or **Algorithm Designer**. This active learning technique helps solidify theoretical knowledge by putting it into practice in real-world scenarios.

Objectives of Role Play in Data Structures:

1. **Deepen Understanding**: By assuming different roles, students can better understand how data structures operate and how they are applied in problem-solving.
2. **Active Participation**: Students engage directly in the learning process, making the topic more relatable and engaging.
3. **Collaboration and Communication**: Role play enhances communication, teamwork, and presentation skills, which are important for professionals.
4. **Practical Problem-Solving**: Students can visualize and simulate how data structures are used in solving real-world computational problems.
5. **Critical Thinking**: Role play encourages students to critically think about the purpose and functionality of each data structure and how it interacts with others.

Bubble Sort for I/II Students

In an effort to make the learning process more interactive and engaging, the concept of **Role Play** was introduced in the Data Structures class to demonstrate and teach the **Bubble Sort** algorithm. This innovative approach aimed to provide students with a practical, hands-on understanding of the sorting algorithm. By acting out the steps of the **Bubble Sort** algorithm, students were able to visualize how the algorithm works, thereby enhancing their comprehension and retention.

This report outlines the role play session conducted for the **Bubble Sort** topic, highlighting the purpose, process, roles, and outcomes of the activity. The role play was designed for **I/II-year students**, particularly those in the Data Structures course

Objective:

The primary objectives of the role play session were as follows:

1. To demonstrate the **Bubble Sort** algorithm in a more engaging and interactive way.
2. To help students visualize the iterative comparison and swapping process involved in Bubble Sort.

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3. To improve the understanding of **algorithmic logic** and its application through experiential learning.
4. To develop teamwork, communication, and problem-solving skills in students by involving them in a practical exercise.

Bubble Sort Algorithm Overview:

Bubble Sort is a simple comparison-based sorting algorithm. It repeatedly steps through the list, compares adjacent elements, and swaps them if they are in the wrong order. The pass through the list is repeated until the list is sorted.

Steps of the Bubble Sort Algorithm:

1. Compare the first two elements of the list.
2. If the first element is larger than the second, swap them.
3. Move to the next pair of adjacent elements and repeat the process.
4. Continue this process until the end of the list is reached.
5. After each full pass, the largest element is "bubbled" to its correct position.
6. The algorithm continues to pass through the list, reducing the number of elements to compare after each pass until the list is fully sorted.

Role Play Setup:

To ensure that all students were actively involved in the role play, the class was divided into groups, with each group assuming different roles to demonstrate the **Bubble Sort** algorithm in action.

Roles:

1. **Array Elements (Students as Data Items)**: These students represented the elements of an array to be sorted. Each student had a card with a number that was part of the array.
2. **Swappers**: Two students were assigned to act as the "swappers," responsible for swapping the positions of the two adjacent students when required.
3. **Algorithm Coach (Instructor)**: The instructor played the role of the **algorithm coach** who explained the steps of Bubble Sort and facilitated the entire session.
4. **Observer/Debugger**: A few students acted as **observers** or **debuggers**, ensuring that each step was correctly executed, and giving feedback when necessary.
5. **Timer/Stopwatch**: One student was assigned the role of keeping track of time and ensuring that each pass of the algorithm was completed in a reasonable amount of time.

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DETAILS OF SESSION :

FACULTY NAME	**MS.D.VIJAYA LAKSHMI**
SUBJECT	**DATA STRUCTURES**
BRANCH	**CSE**
YEAR /SEM	**I/II**
VENUE	**I/II CLASS ROOM**

Topic	Description	Student Details	Date	Remarks
Bubble Sort	Bubble Sort is a simple comparison-based sorting algorithm. It repeatedly steps through the list, compares adjacent elements, and swaps them if they are in the wrong order. The pass through the list is repeated until the list is sorted.	1.G.prasanna(22KE1A05E2) 2.P.Tejaswini(22KE1A05F6) 3.Ch.Akhila(22KE1A05G3) 4.N.sreya(22KE1A05D7)	2/7/2023	**GOOD**
Queue (Data Structure)	he instructor introduces a scenario where students are tasked with simulating a **Queue** in the context of a **Ticketing System** (e.g., movie theater tickets, customer support). The goal is to understand the functionality of a queue—First-In, First-Out (FIFO)—and how it manages elements over time.	1.N.Navya(22KE1A05E4) 2.Krishna veni(22KE1A05G4) 3.Ch.Rupa Swathi (22KE1A05G8) 4.N.Mallika(22KE1A05D8)	12/8/2023	**GOOD**
Stack((Data Structure)	This role play session simulates the **Stack** data structure and its operations to help students understand the **push** and **pop** operations and the overall concept of how a stack works. The role play is designed for students in the **Data Structures** course, typically in the early semesters of their studies.	1.Nikitha(22KE1A05H5) 2.Ammulu(22KE1A05C9) 3.lavanya (22KE1A05E9) 4.Bhagya (22KE1A05E0)	20/8/2023	**GOOD**

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ROLE PLAY ON BUBBLE SORT:

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ROLE PLAY ON QUEUE (DATA STRUCTURE):

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ROLE PLAY ON STACK((DATA STRUCTURE)

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Outcomes from the Role Play:

1. **Understanding LIFO Principle**: Students can now better visualize and understand the **Last In, First Out (LIFO)** principle by physically acting out the stack operations.
2. **Interactive Engagement**: Through role play, students became active participants in the learning process, making the concept of stack operations much easier to grasp.
3. **Clearer Concept of Push and Pop**: The role play made the **push** and **pop** operations more intuitive. Students directly experienced how the stack grows and shrinks, and how elements are added or removed.
4. **Concept of Stack Overflow and Underflow**: Students now understand the **overflow** and **underflow** conditions in the stack. This hands-on experience highlights how these errors can occur when the stack reaches its limit or is emptied completely.
5. **Real-World Applications**: Through the role play, students also explored where stacks are used in real-world programming scenarios, such as:
    - **Function calls in recursion** (the call stack in programming languages).
    - **Undo operations** in text editors.
    - **Expression evaluation** (infix to postfix conversion).

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10: Group discussions:

Group discussions (GDs) are a popular and effective teaching method used in educational settings to enhance learning and promote collaborative thinking. In a group discussion, students are given an opportunity to share ideas, analyze different perspectives, and solve problems collectively. This approach not only boosts communication and critical thinking skills but also nurtures teamwork, creativity, and leadership among students. It is particularly useful in subjects like **Java**, where concepts require collaborative thinking and problem-solving.Objectives of Group Discussions in Classroom:

1. **Enhance Critical Thinking**:
   - Encourage students to think critically about topics and formulate their own perspectives.
   - Develop reasoning and analytical skills by evaluating different viewpoints during the discussion.
2. **Foster Collaboration**:
   - Promote teamwork by having students work together, share ideas, and learn from each other's experiences and knowledge.
   - Encourage listening skills as students learn to respect and understand differing opinions.
3. **Improve Communication Skills**:
   - Help students become more articulate in expressing their thoughts clearly and confidently.
   - Enhance their ability to present ideas, give arguments, and debate effectively in a respectful manner.
4. **Deepen Understanding of the Subject**:
   - In technical subjects like **Java**, students can discuss specific programming problems, share solutions, and learn from peer explanations. This reinforces learning and leads to better understanding.
5. **Promote Active Participation**:
   - Ensure that all students actively participate, reducing passive learning. Every student gets an opportunity to speak, ask questions, and contribute to the learning process.
6. **Improve Problem-Solving Skills**:
   - Group discussions often involve solving practical problems or case studies, which enhances students' ability to approach challenges from different angles and develop solutions together.

Group Discussion Process:

1. **Topic Selection**:
2. **Formation of Groups**:
3. **Conducting the Discussion**:
4. **Reporting**:
5. **Feedback and Reflection**:

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TeamNo	TeamName	TopicName	HallticketNo	DATE	Remarks
1	Speak up squads	Gap between Acadamic learning &Industry	22KE1A05D3 22KE1A05C4 22KE1A05F2 22KE1A05E1 22KE1A05E2 22KE1A05F6 22KE1A05G3 22KE1A05D7	12/6/2023	GOOD
2	We can achieve	Blockchain beyond crypto currency application in engineering	22KE1A05G9 22KE1A05H0 22KE1A05F9 22KE1A05H6 22KE1A05E4 22KE1A05G4 22KE1A05G8 22KE1A05D8	20/7/2023	GOOD
3	Conversation Crew	IOT-Impact on life	22KE1A05H5 22KE1A05C9 22KE1A05E9 22KE1A05E0 22KE1A0 5F5 22KE1A05D5 22KE1A05C6	19/8/2023	GOOD
4	Team Talk Squad	Electrical vehicles challenges for engineers	22KE1A05G2 22KE1A05G5 22KE1A05G0 22KE1A05E8 22KE1A05C5 22KE1A05H7 22KE1A05H8 22KE1A05E7	22/8/2023	GOOD

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TeamNo	TeamName	TopicName	HallticketNo	Remarks	
5	The E-crew	Role of Big data in engineer decision making	22KE1A05F4 22KE1A05C8 22KE1A05E3 22KE1A05D1 22KE1A05F8 22KE1A05G7 22KE1A05H2 22KE1A05F3	20/9/2023	GOOD
6	Dream Chasers	Where should engineer begin their career	22KE1A05G1 22KE1A05D4 22KE1A05C1 22KE1A05H9 22KE1A05E5 22KE1A05H1 22KE1A05H3 22KE1A05F1	2/10/2023	GOOD

DETAILS OF SESSION :

FACULTY NAME	**Ms.Teena**
SUBJECT	**DATA STRUCTURES**
BRANCH	**CSE**
YEAR /SEM	**III/II**
VENUE	**III/II CLASS ROOM(422)**

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GROUP DISCUSSIONS IOT-IMPACT ON LIFE

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GROUP DISCUSSIONS ROLE OF BIG DATA IN ENGINEER DECISION MAKING

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Output of Group Discussion on "IoT - Impact on Life"

The group discussion on "Internet of Things (IoT) - Impact on Life" was conducted with students to explore and analyze how IoT is transforming various aspects of modern life. The discussion was aimed at understanding both the **positive and negative impacts** of IoT on personal, social, and professional spheres. Participants were encouraged to share their knowledge, insights, and experiences related to IoT technology.

The output of the group discussion reveals a wide array of perspectives on how **IoT** is reshaping daily life, affecting industries, and presenting both opportunities and challenges.

Output of Group Discussion on "Role of Big Data in Engineering Decision-Making"

The group discussion on "Role of Big Data in Engineering Decision-Making" was conducted with engineering students to explore how **big data** is impacting the decision-making process in the field of engineering. Participants discussed the benefits, challenges, and practical applications of big data in various engineering domains, such as **civil engineering**, **mechanical engineering**, **electrical engineering**, and **software engineering**.

The discussion aimed to understand the importance of data-driven decisions in engineering and how engineers can leverage large datasets to optimize processes, innovate designs, and improve efficiency.

Benefits of Group Discussion in the Classroom

1. **Enhances Communication Skills**

2. **Promotes Critical Thinking and Analytical Skills**

3. **Develops Interpersonal Skills**

4. **Boosts Confidence**

5. **Fosters Creativity**

6. **Improves Decision-Making Skills**

7. **Promotes Peer Learning**

8. **Encourages Self-Reflection**

Watch Video's On Roleplay

Role play on Linear search

Role play on Bubble sort

Watch Video's On JAM

JAM On Advanved Computer Networks