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BVRIT HYDERABAD College of Engineering for Women

Department of Computer Science & Engineering(AI&ML)

Activity: Integration of Case Studies and Real-Life Examples in Data Structures Course

Faculty Name: Dr. M. Indrasena Reddy
Class: I-II
Academic Year: 2025-26
Subject Name: Data structures
Topic: All Units
Date: 27-04-2026

Brief Write – Up:

To make **Data Structures** more engaging and application-oriented, case studies and real-life examples were integrated into classroom teaching. Instead of focusing only on theoretical concepts, students were encouraged to understand how data structures are used to solve practical problems in industry and everyday life. Each topic was linked with a real-world application, enabling students to appreciate the relevance and importance of selecting appropriate data structures for different scenarios.

Some examples include:

- **Arrays** – Student marks management system, inventory management.
- **Linked Lists** – Music playlists, browser back/forward navigation.
- **Stacks** – Undo/Redo operations in text editors, expression evaluation, function calls.
- **Queues** – Printer queues, ticket booking systems, CPU scheduling.
- **Circular Queues** – Round Robin CPU scheduling, circular buffering.
- **Priority Queues (Heaps)** – Emergency patient scheduling, task scheduling.
- **Trees** – File directory organization, family trees, XML/HTML document structure.
- **Binary Search Trees (BSTs)** – Fast searching and database indexing.
- **AVL Trees** – Self-balancing search applications requiring efficient retrieval.
- **Graphs** – Google Maps route finding, social networks, airline route planning.
- **Hash Tables** – Password authentication, caching, symbol tables in compilers.

Students analyzed these case studies, identified the most suitable data structures, discussed the advantages and limitations of different approaches, and developed simple C programs to implement the solutions. This activity promoted experiential learning and strengthened their understanding of theoretical concepts through practical applications.

Impact:

Enhanced students' understanding of abstract data structure concepts through practical examples.

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Improved analytical and problem-solving abilities by connecting theory with real-life situations.

Increased classroom interaction, participation, and collaborative learning.

Enabled students to select appropriate data structures based on application requirements.

Strengthened programming and implementation skills through case-based coding exercises.

Improved confidence in solving interview-oriented and industry-related problems.

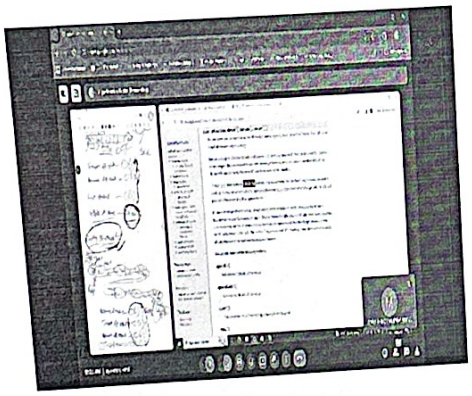
Increased student interest and motivation by demonstrating the practical relevance of Data Structures.

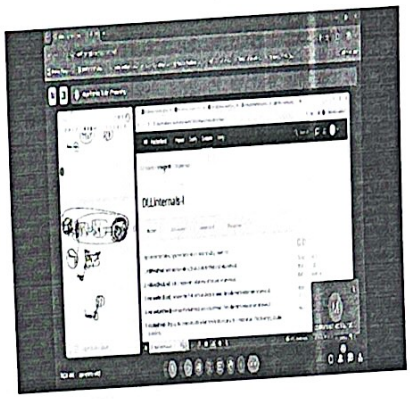
Developed critical thinking and decision-making skills while comparing multiple data structure solutions.

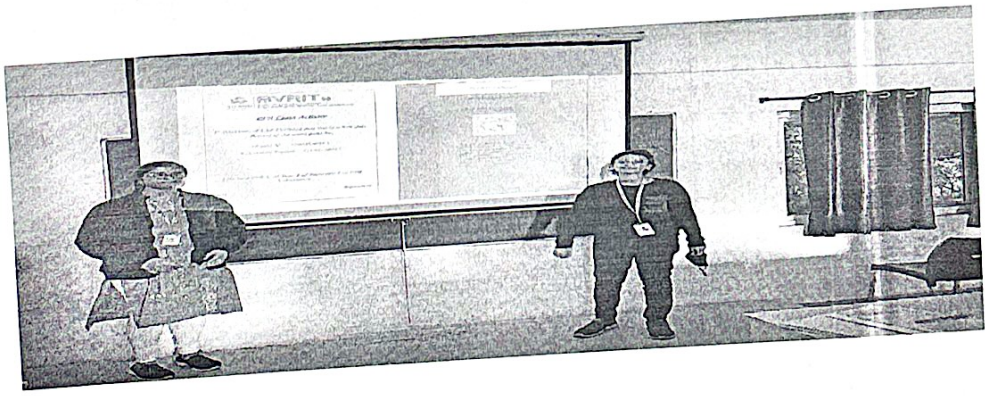
Better preparation for internships, competitive programming, and software development careers.

Overall improvement in academic performance, conceptual clarity, and practical application skills.

Photos:







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Department of Computer Science and Engineering (AI &ML)

Academic Year – 2025-2026

Name of the Activity: Mind to Paper – a true learning

Faculty Name: Ms.B.Shanmukha Priya

Class: II-II

Academic Year: 2025-26

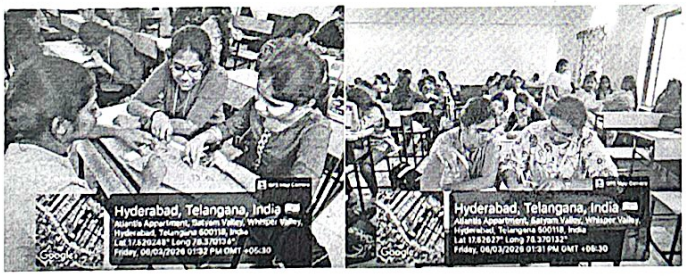
Subject Name: Operating Systems

Topic: Unit -2

Brief Write – Up:

The activity was done after the unit has been completed. It was very interactive and it also makes clear what to teach in the revision session of that particular unit. The students were able to assess themselves based on the things they remember during the activity. No phone or book was allowed for self-introspection of students. The activity was very helpful for me to know where the students are facing difficulty to understand that particular topic.

Photos:



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Department of Computer Science and Engineering (AI &ML)

Academic Year – 2025-2026

Name of the Activity: Quiz

Faculty Name: Ms.B.Shanmukha Priya

Class: II-II

Academic Year: 2025-26

Subject Name: Operating Systems

Topic: Unit -4

Brief Write – Up:

A **20-question quiz** was conducted to assess students' understanding of the topic. Each question carried **0.5 marks**, for a maximum score of **10 marks**. **Overall, 53 students participated** in the quiz.

The quiz results indicate **excellent overall student performance**, with more than half of the participants achieving scores in the **9.50–10.00** range. The limited number of students in the lower and middle score ranges suggests that the learning outcomes were successfully achieved, although targeted support may benefit the few students who scored below average.

Photos:

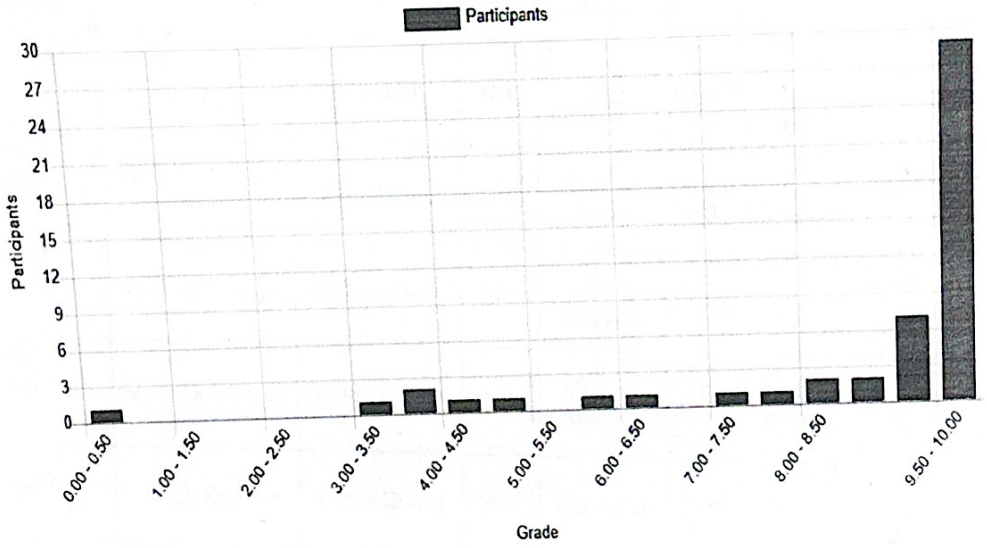
Quiz-Unit-4		
S. No	**Roll No**	**Grade**
1	25wh5a6601	9
2	24wh1a6663	9
3	25wh5a6605	6.5
4	24wh1a6616	8
5	24wh1a6622	3.5
6	24wh1a6636	9.5
7	24wh1a6641	8.5
8	24wh1a6657	8.5
9	25wh5a6606	9
10	24wh1a6654	9.5
11	24wh1a6659	9.5
12	24wh1a6652	9.5
13	24wh1a6649	10
14	24wh1a6647	10
15	24wh1a6632	4
16	24wh1a6625	6
17	24wh1a6661	9.5
18	24wh1a6604	7
19	24wh1a6634	10
20	24wh1a6603	10
21	24wh1a6633	9.5
22	24wh1a6601	10
23	24wh1a6617	3.5
24	24wh1a6617	2
25	24wh1a6640	9.5
26	25wh5a6602	9
27	24wh1a6646	9.5
28	24wh1a6642	9.5
29	24wh1a6643	10
30	25wh5a6607	4.5
31	24wh1a6655	5.5
32	24wh1a6610	10
33	24wh1a6615	10
34	24wh1a6648	10

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35	24wh1a6630	10
36	24wh1a6628	10
37	24wh1a6656	10
38	24wh1a6653	10
39	24wh1a6626	9.5
40	24wh1a6623	9.5
41	24wh1a6613	3
42	24wh1a6658	10
43	24wh1a6639	10
44	24wh1a6644	9

45	25wh5a6603	10
46	24wh1a6618	10
47	24wh1a6631	9
48	24wh1a6638	8
49	24wh1a6662	9
50	24wh1a6660	7.5
51	25wh5a6604	0
52	24wh1a6633	0
53	25wh5a6605	9.5

Overall number of students achieving grade ranges



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Teaching Learning and Assessment Report

VEDIC

Faculty: Spurthi.K
Year & Sem: I-I
Branch:AIML-B
Subject : Programming for Problem Solving

Title of the Report:

Conducted presentations on Programming for Problem Solving.

Motivation/ Teaching Problem statement

Many engineering students face challenges in making and giving Presentations. This report presents a **problem-based learning strategy** aimed at reinforcing these concepts through hands-on coding activities and interactive simulations. The objective is to help students to build confidence.

Learning Goals/ Course Outcomes

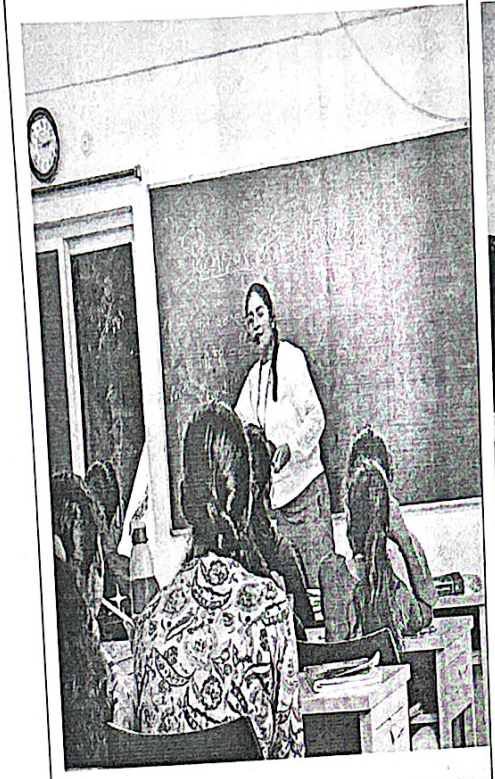
CO5	Explore different techniques

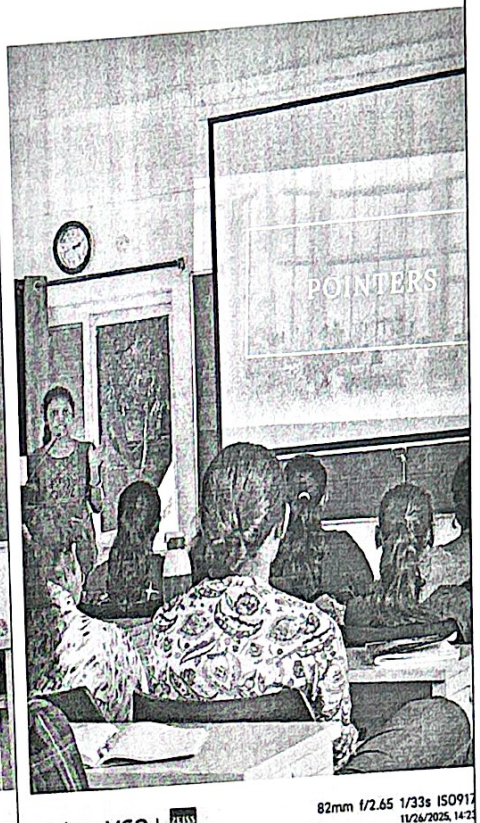
Activity Setup and Group Formation

A total of 30 students were divided into groups, each with 2 students.

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Teaching Learning and Assessment Report





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Teaching Learning and Assessment Report

VEDIC

Faculty: Spurthi.K
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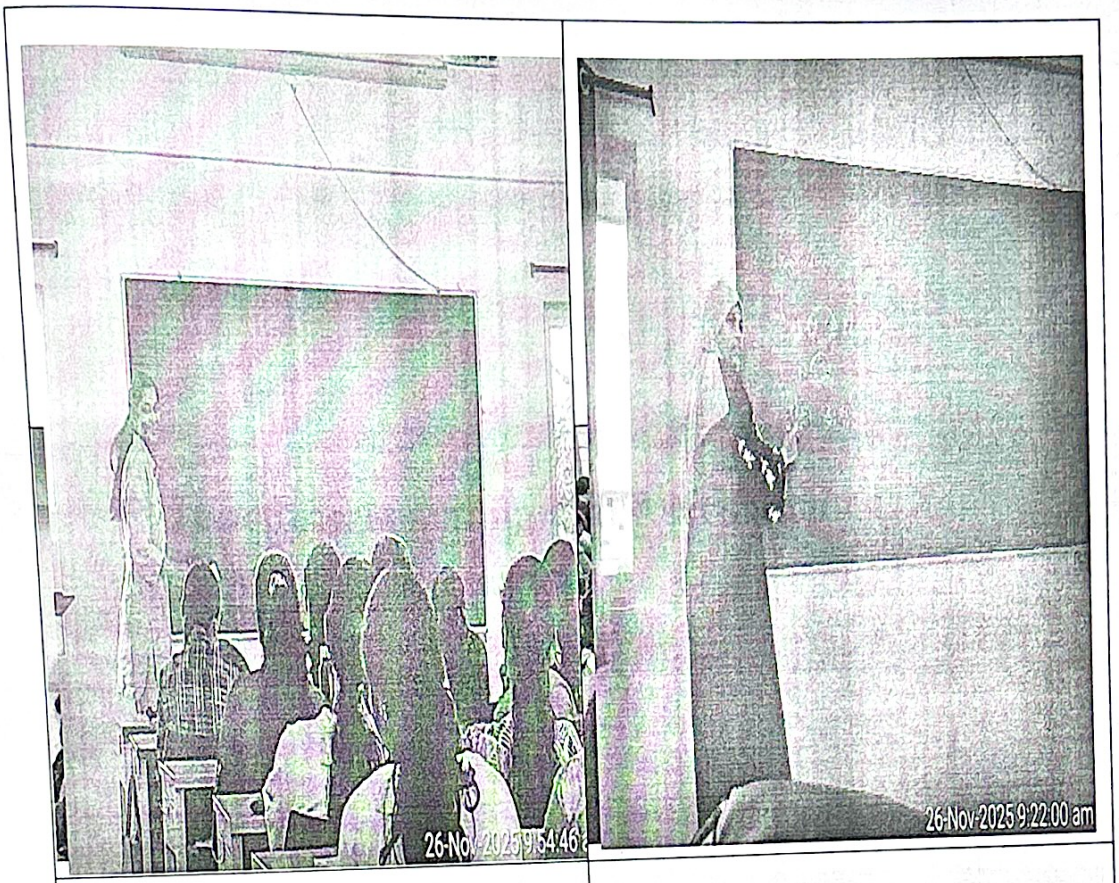
Learning Goals/ Course Outcomes

CO5	Explore different techniques

Activity Setup and Group Formation

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Department of Computer Science and Engineering (AI &ML)
Academic Year – 2025-2026

Name of the Activity: Open Book Test

Faculty Name: Dr.B.Lakshmi Praveena

Class: II Year I Sem

Academic Year: 2025-26

Subject Name: Object Oriented Programming through Java

Topic: Java Fundamentals, OOPS, Exceptions, Inheritance

Brief Write – Up:

An Open Book Test was conducted for II Year I Semester students as part of the academic activities for the subject Object Oriented Programming through Java, under the guidance of Dr. B. Lakshmi Praveena during the academic year 2025–26.

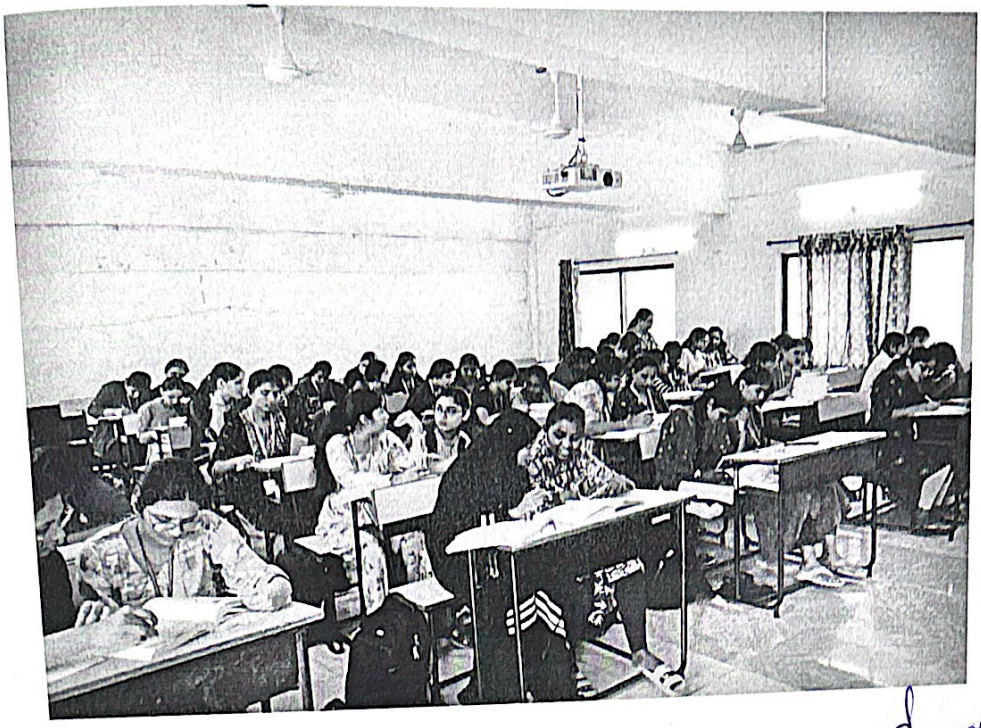
The objective of this activity was to assess students' conceptual understanding and their ability to apply knowledge rather than relying on memorization. The test covered important topics such as Java Fundamentals, Object-Oriented Programming concepts (OOPS), Exception Handling, and Inheritance.

Students were allowed to refer to textbooks and notes during the test, which encouraged them to focus on problem-solving, logical thinking, and proper implementation of concepts. The questions were designed to test analytical skills and real-time application of Java programming principles.

Overall, the activity helped students improve their understanding of core Java concepts and enhanced their ability to use resources effectively to solve problems.

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Department of Computer Science and Engineering (AI &ML)
Academic Year – 2025-2026

Name of the Activity: QUIZ

Faculty Name: Dr.B.Lakshmi Praveena

Class: II Year I Sem

Academic Year: 2025-26

Subject Name: Oops Through Java

Topic: Inheritance, Multi Threading, Exception handling, GUI

Brief Write – Up:

A Quiz was conducted for II Year I Semester students in the subject OOPs Through Java, under the guidance of Dr. B. Lakshmi Praveena during the academic year 2025–26.

The main objective of this activity was to evaluate students' understanding of key concepts such as Inheritance, Multithreading, Exception Handling, and GUI. The quiz included a variety of questions designed to test both theoretical knowledge and conceptual clarity.

Students actively participated in the quiz, which helped in reinforcing their learning and improving their quick thinking and problem-solving skills. It also encouraged healthy competition among students and created an engaging learning environment.

Overall, the activity was effective in assessing students' knowledge and strengthening their understanding of advanced Java concepts.

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Rank	First Name	Total Questions Attempted	Accuracy	Score	Correct
1	24WH1A6664	15	100%	13710	15
2	24WH1A6650	15	100%	12340	15
3	6649_	15	100%	10180	15
4	24WH1A6656	15	100%	10680	15
5	Bavya	15	100%	10180	15
6	24WH1A6622	15	100%	10130	15
7	24WH1A6606	15	100%	11840	15
8	24WH1A6639	15	100%	11840	15
9	24WH1A6629	15	100%	10850	15
10	24WH1A6659	15	100%	9900	15
11	24WH1A6605	15	100%	11030	15
12	24WH1A6611	15	100%	11150	15
13	24WH1A6646	15	100%	11400	15
16	24WH1A6632	15	93%	9520	14
17	24WH1A6604	15	87%	8780	13
18	24WH1A6638	15	87%	8740	13
19	24WH1A6651	15	87%	8250	13
20	24WH1A6610	15	87%	9680	13
21	24WH1A6630	15	87%	8200	13
22	24WH1A6624	15	87%	9300	13
23	24WH1A6615	15	87%	8200	13
24	24WH1A6617	15	80%	9220	12
26	24WH1A6620	15	80%	7640	12
27	24WH1A6621	15	80%	7770	12
28	24WH1A6661	15	73%	8480	11
29	24WH1A6636	15	73%	7170	11
31	24WH1A6618	15	67%	6360	10
32	24WH1A6654	15	47%	4800	7
33	24WH1A6645	9	40%	3920	6

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(Dr.B.Lakshmi Praveena)



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Department of Computer Science and Engineering (AI &ML)

Academic Year – 2025-2026

Name of the Activity: Quiz

Faculty Name: Ms.B.Shanmukha Priya

Class: IV-I

Academic Year: 2025-26

Subject Name: Scripting Languages

Topic: PERL and TCL

Brief Write – Up:

A total of **44 students** attempted the quiz. The overall performance indicates that most students demonstrated a **moderate to good understanding** of the concepts, while a smaller group requires additional academic support.

Performance Summary

- **Highest Score: 90%**, achieved by **2 students**, reflecting excellent conceptual understanding.
- **High Performers (≥75%): 8 students (18.2%)** scored between **75% and 90%**, indicating strong mastery of the subject.
- **Average Performers (50%–74%): 29 students (65.9%)** scored in this range, demonstrating satisfactory performance with scope for improvement.
- **Below Average (<50%): 7 students (15.9%)** scored below 50%, suggesting the need for remedial guidance and additional practice.

Key Observations

- The majority of students (**84.1%**) secured **50% or above**, indicating that the class has achieved the basic learning outcomes of the quiz.
- Several students scored between **52% and 68%**, showing that while they understand the fundamentals, they need to strengthen their problem-solving and application skills.
- A small number of students scored below **40%**, with the lowest score being **18%**, highlighting the need for focused intervention and personalized support.
- The distribution of scores suggests a **balanced spread**, with a concentration of students in the middle-performance range rather than at the extremes.

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S No	Name of the Student	Accuracy
1	Harshini	90%
2	ASHRITHA	90%
3	MONISREE	85%
4	NANDITHA	82%
5	SRIPADA	78%
6	VAISHNAVI	78%
7	KAMUNI	75%
8	KOTHAKAPU	75%
9	GEETHIKA	72%
10	PRASHANTHI	72%
11	DEVIKA	70%
12	SIVANI	68%
13	SANJANA	68%
14	TARANNUM	68%
15	PITLA	65%
16	PRASANNA	65%
17	HARSHITHA	62%
18	RISHITA	62%
19	PANUGANTI	60%
20	Vijaya	57%
21	PADMA	57%
22	SAAHITHYA	57%
23	SIRI	57%
24	Gedda	57%
25	TANEERU	57%
26	AKSHAYA	55%
27	JAHNAVI	55%
28	GAYATHRI	55%
29	POTUKUCHI	52%
30	KEERTHI	52%
31	PREETHI	52%
32	PATIBANDLA	52%
33	VIMALA	52%
34	PRASANNA	50%
35	HEMANYA	50%
36	PEDDAPURAM	50%
37	ANUSHA	48%
38	MUSKAAN	48%
39	MADHURI	45%
40	NIKHITA	40%
41	SAI	35%
42	SAI	32%
43	Lakshmi	28%
44	SRI	18%

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Department of CSE(AI&ML)

Activity: Concept Mapping and Activity-Based Learning

Faculty Name: Ms. Asha Vuyyuru

Class: III-I

Academic Year: 2025–26

Subject Name: Computer Networks

Topic: Concept Mapping and Routing Simulation

Date: 13-11-2025

Brief Write-Up

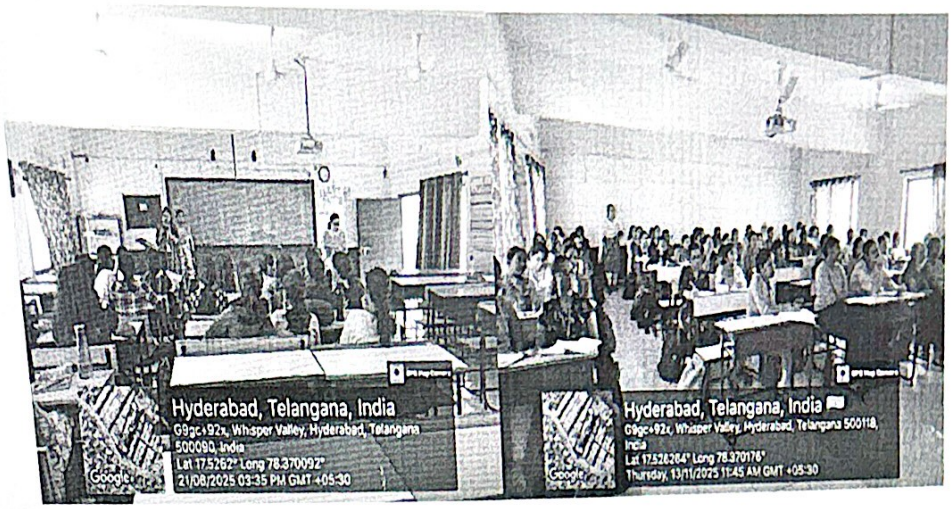
Students participated in an activity-based learning session to improve their understanding of Computer Networks. The activity consisted of two sessions. In the first session, students prepared concept maps of the OSI model by identifying the functions of each layer and the associated protocols. In the second session, students implemented routing algorithms using simulation tools to observe shortest path behavior and understand congestion control mechanisms. The activity encouraged active learning, peer discussions, and practical application of networking concepts.

Impact

The activity enabled students to:

1. Understand the layered architecture of computer networks.
2. Analyze routing and congestion control mechanisms.
3. Improve conceptual clarity through mind mapping.
4. Apply theoretical concepts using simulation tools.
5. Develop analytical thinking and collaborative learning skills.

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Activity Details

S.No	Name of Activity	Date	No. of Students	Remarks
1	OSI Model Mind Mapping	13-11-2025	65	Students created mind maps representing the OSI layers, their functions, and associated protocols.
2	Routing Simulation using Dijkstra's Algorithm	13-11-2025	68	Students implemented routing simulations and observed shortest path behavior to understand routing mechanisms.

Evaluation Rubrics

S.No	Student Name & Roll No.	Activity	Preparation	Relevance of Content	Presentation/Performance	Remarks
1	Ms.Keerthana 23WH1A6650	OSI Model Mind Map	3	3	3	Demonstrated clear understanding of OSI layers and protocols.
2	Ms.Sri Vedha 24WH1A6601	Routing Simulation	3	3	2	Successfully implemented simulation and explained routing concepts.

Asha. V.
Faculty Signature

B Praveena

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Department of CSE (AI & ML)

Activity: UML Diagram Development and Software Development Life Cycle (SDLC)

Faculty Name: Ms. Asha Vuyyuru
Class: II-I
Academic Year: 2025–26

Subject Name: Software Engineering

Topic: UML Diagram Development and Software Development Life Cycle (SDLC)

Date: 24-11-2025

Brief Write-Up

Students participated in an activity-based learning session to strengthen their understanding of Software Engineering concepts. The activity consisted of two sessions. In the first session, students prepared concept maps illustrating the Software Development Life Cycle (SDLC) phases and software process models. In the second session, students designed UML diagrams such as Use Case, Class, and Sequence diagrams for a real-world software application. The activity promoted active learning, problem-solving, teamwork, and practical application of software engineering principles.

Impact

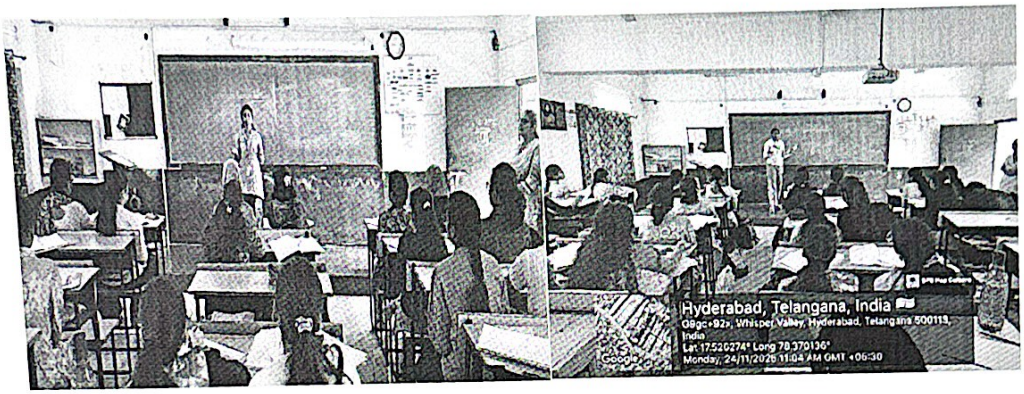
The activity enabled students to:

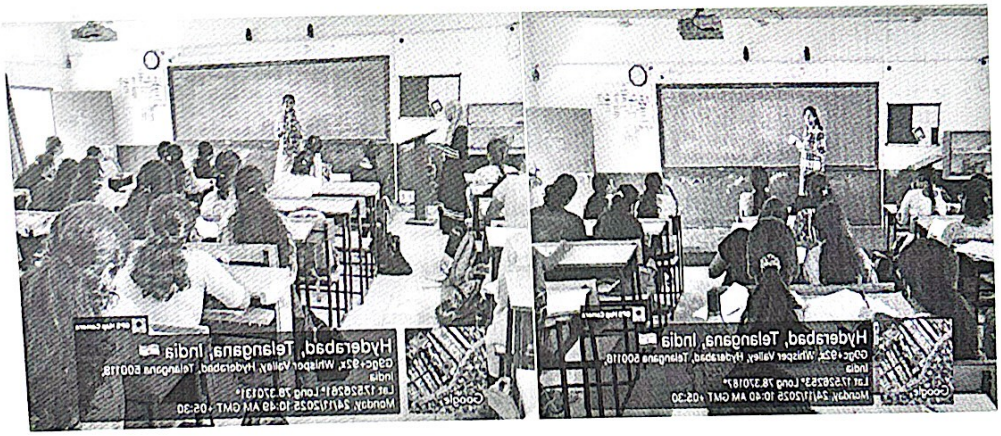
1. Understand various phases of the Software Development Life Cycle.
2. Differentiate between software process models.
3. Develop UML diagrams for software design.
4. Improve analytical and system design skills.
5. Enhance teamwork and communication through collaborative learning.

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Activity Details

S.No	Name of Activity	Date	No. of Students	Remarks
1	SDLC Concept Mapping	24-11-2025	68	Students created concept maps explaining SDLC phases and software process models.
2	UML Diagram Design	24-11-2025	68	Students designed UML diagrams for a Library Management System and explained their purpose.





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Evaluation Rubrics

S.No	Student Name & Roll No.	Activity	Preparation	Relevance of Content	Presentation / Performance	Remarks
1	JULA GRACY PRASANNA 24WH1A6641 NITHYA KOGANTI 24WH1A6642	SDLC Concept Mapping	3	3	3	Demonstrated clear understanding of SDLC phases and software models.
2	BENDURTHY GLORYPRANAVI 24WH1A6620 PAIDIPALLI KEERTHANA 24WH1A6656	UML Diagram Design	3	3	2	Successfully designed UML diagrams and explained system functionality.

Asha V.

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Department of Computer Science & Engineering (AI&ML)

Activity: Case Study

Faculty Name: Mr B Kishore Kumar

Class: III-I / CSE(AI&ML)

Academic Year: 2025-26

Subject Name: Full Stack Development

Topic: Travel Management Application

Case Study Report 1:

Title: Design and Development of a Travel Management Application Using Full Stack Technologies

1. Introduction

The rapid growth of the travel and tourism industry has increased the demand for intelligent web-based applications that can efficiently manage travel planning, reservations, and customer interactions. Traditional travel management processes often involve multiple platforms for booking flights, hotels, and transportation services, resulting in inefficiencies and poor user experience. Full Stack Development enables the creation of integrated web applications that combine frontend interfaces, backend services, and database systems into a unified solution. This case study demonstrates the development of a Travel Management Application using Spring Boot, Hibernate, REST APIs, and MySQL database technologies.

2. Objective of the Case Study

- To understand the architecture of Full Stack web applications.
- To develop RESTful APIs using Spring Boot.
- To integrate relational databases using Hibernate ORM.
- To implement booking, feedback, and trip management functionalities.
- To gain practical experience in enterprise-level web application development.

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Benefits Observed:

- Improved customer experience
- Centralized booking management
- Faster data retrieval
- Efficient database operations
- Enhanced scalability and maintainability

7. Real-Time Applications

- Online Travel Booking Systems
- Airline Reservation Systems
- Hotel Reservation Platforms
- Tourism Management Applications
- Travel Planning Portals
- Customer Relationship Management Systems

8. Conclusion

The Travel Management Application demonstrates the practical implementation of Full Stack Development concepts for solving real-world travel management problems. The integration of Spring Boot, Hibernate, REST APIs, and MySQL enabled the development of a scalable and efficient web application. This case study helped students understand enterprise application development practices and enhanced their skills in modern web technologies.

9. References

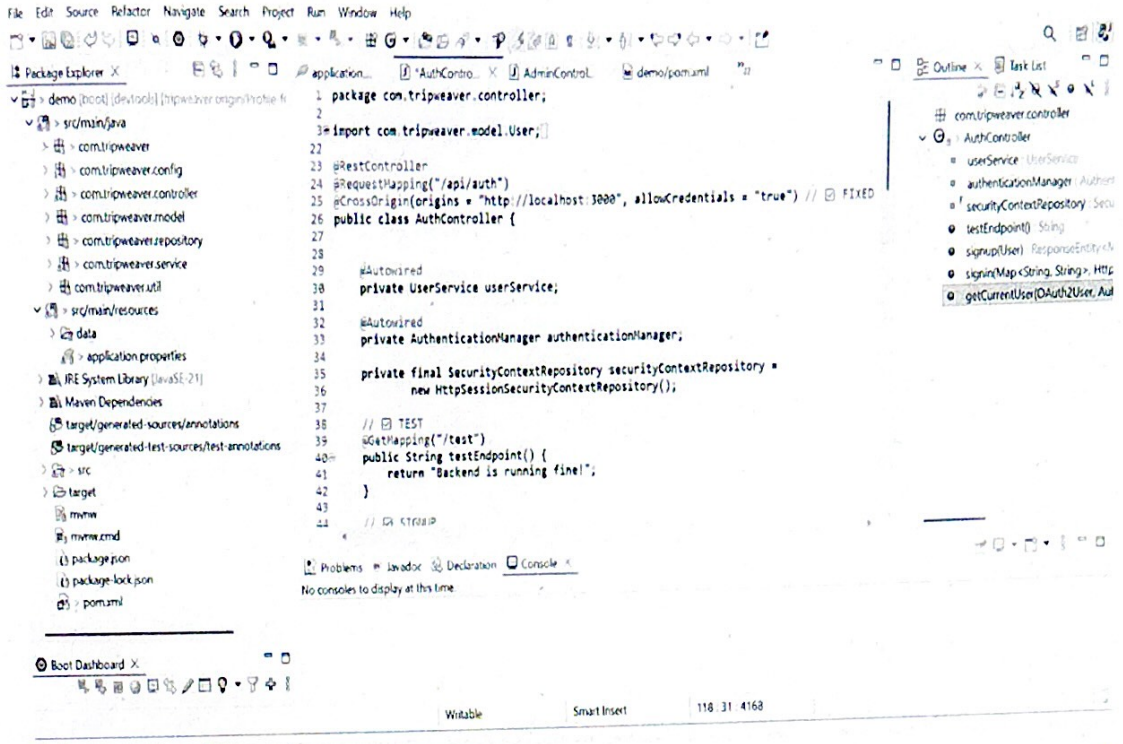
1. Vasan Subramanian, *Pro MERN Stack*, Apress, 2019.
2. Mayur Ramgir, *Full Stack Java Development with Spring MVC, Hibernate, jQuery, and Bootstrap*, Wiley Publications, 2020.
3. Spring Boot Documentation.
4. Hibernate ORM Documentation.

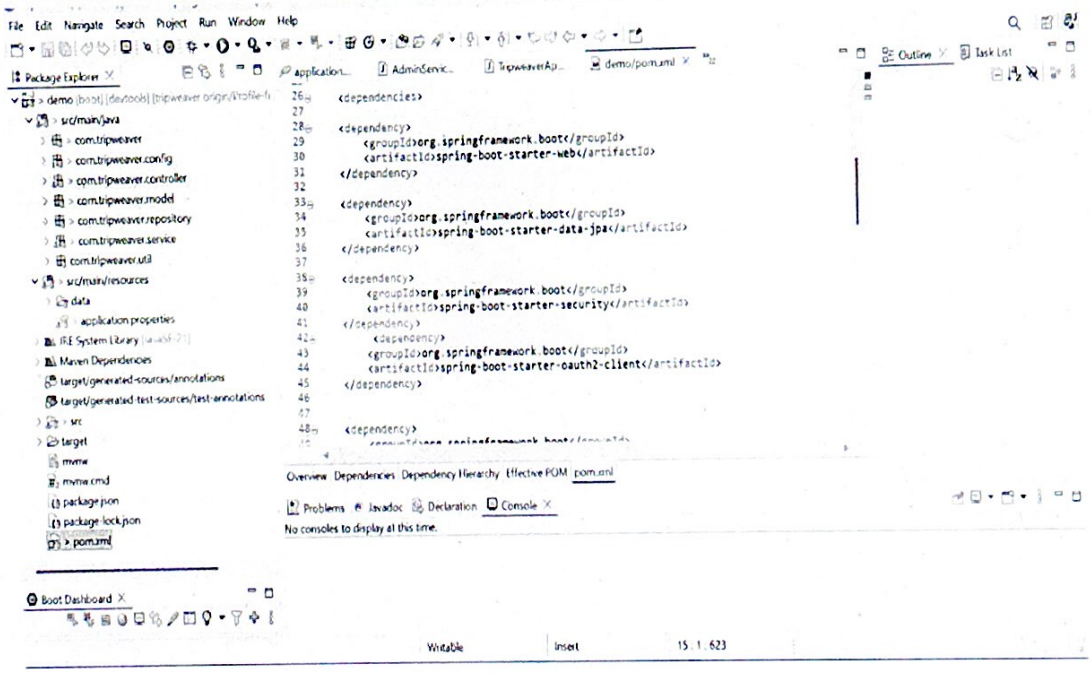
Case Study Using Full Stack Application Development Process

Students designed and developed the Travel Management Application using Spring Boot, Hibernate, REST APIs, and MySQL database integration in Eclipse IDE. The project involved creating entity classes, repositories, controllers, and backend services for managing travel-related operations. Various booking and travel scenarios were tested to validate application functionality, performance, and database consistency.

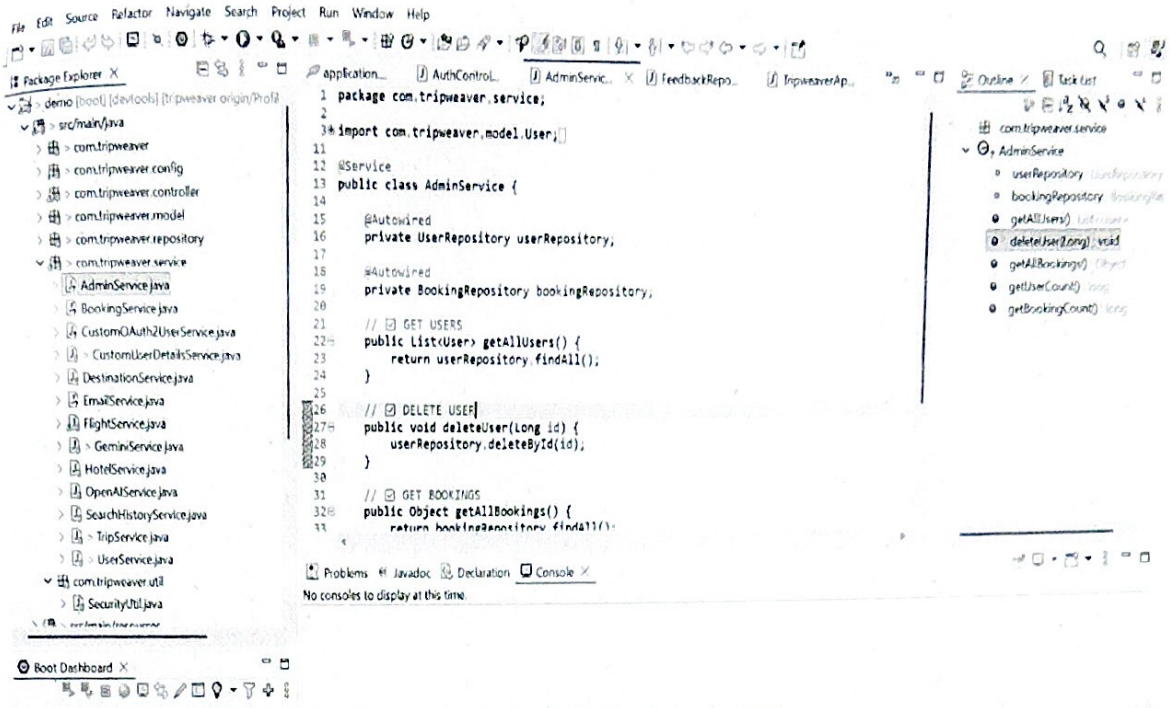
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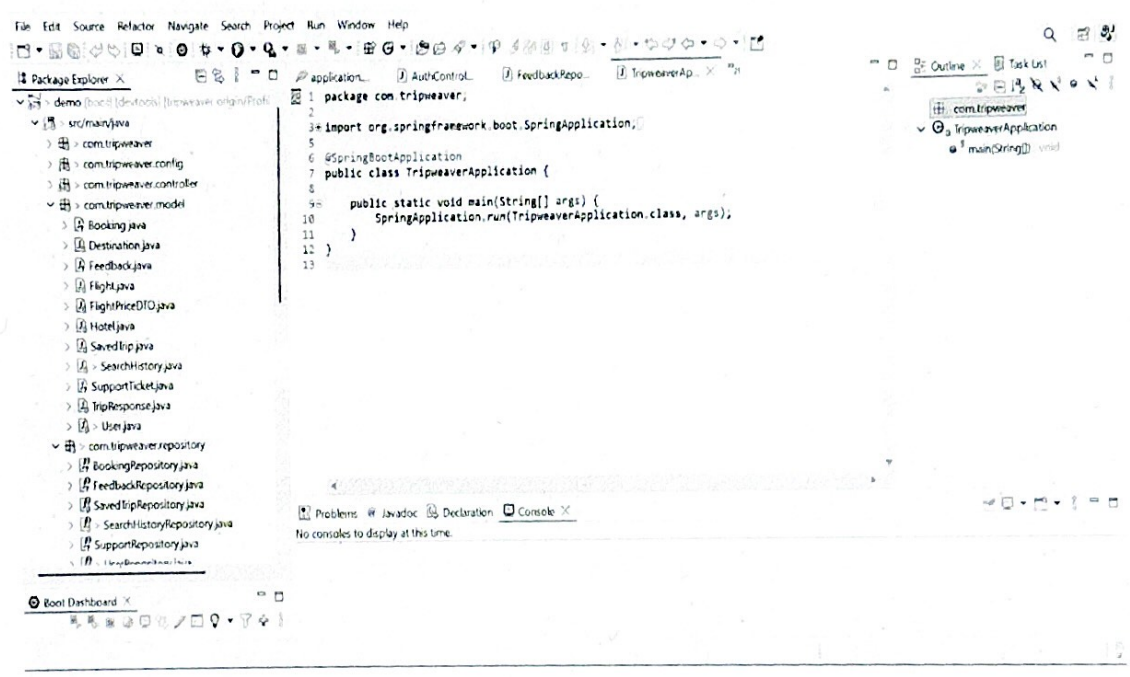
Below are the screenshots illustrating the coding, implementation, and testing of the Travel Management Application using Spring Boot, Hibernate, REST APIs, and MySQL database integration.





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