




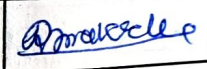

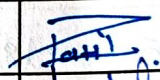


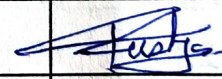

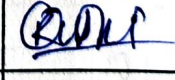






Digital Electronics and Logic Design

Class : SE(AI & DS) A. Y. 2025-26

Date: 13/10/25

Attendance for Expert session Simulation of Combinational and sequential Circuit

Sr. No.	Roll No.	Name of Student	Sign
1	3	Siddhant S. Bali	
2	24	Samyukta N. Jagtap	
3	38	Prince P. Moudal	
4	09	Yash Bidgar	
5	33	Atharva Chetan Lakade	
6	34	Rupesh Dnyaneshwar Malode	
7	31	Harsh Prashant Kokate	
8	47	Prem Prashant Patil	
9	43	Ayush Y. Pardeshi	
10	40	Mohit More	
11	54	TUSHAR B. PAWAR	
12	58	Raj B. Rathod	
13	37	Rushikesh J. Moharkar	
14	29	Premkumar G. Khillare	
15	55	Devasi K. Petiwala	
16	63	Jay Nitin Surse	
17	04	Manasi T. Balkawade	

Digital Electronics and logic Design

Class : SE(AI & DS) A. Y. 2025-26

Date: 13/10/25

Attendance for Expert session Simulation of Combinational and sequential Circuit

Sr. No.	Roll No.	Name of Student	Sign
18	21	Rashmi ^o Bhagwan Jadhav	
19	50	Aniket Bhaunao Pawale	
20	48	RAJ Vinod PAHIL	
21	42	Tarvi Murtode	T.S. Murtode
22	25	Vaishnavi Kamankar	
23	81	Vibhuti S. Waghmare	
24	71	Puja. Deolalkar	
25.	18	Kiet Vikas Gaikwad.	Kial,
26	13	Bhakti Desle.	
27	46	Kalyani Bhikan Patil	
28	05	Vidhi. Abhay. Bhalerao	
29.	14	Shravani m. Derhare	
30	35	Tanishka Deepak Malodi.	
31	32	Nikita Ananda Kute	
32	02	Tarvi Atul Bogul	
33	10	Swarupa manoj Borade	
34	23	Shruti Mangesh Jadhav	

Internal Note

AI&DS/

Date: 11/10/2025

To: SE AI & DS Students

From: Prof. Deepali Suryawanshi

Through: H.O.D

Reference: Digital Electronics and logic design

Subject: Digital Electronics and logic Design

Dear Students,

The Department of Artificial Intelligence and Data Science is organizing an Expert Session on "Simulation of combinational and sequential Circuits" by Mr. Rahul Mandlik Assistant Professor, Computer department, MET'S IOE

Date: 13th October 2025

Time: 11.00 AM

Venue: Classroom no 202, MET's BKC IOE, Nashik

Objectives of the Session:

To enhance students' understanding of simulation of digital circuits

To provide industry-oriented insights and real-world applications.

To prepare students for problem-solving and placement readiness.

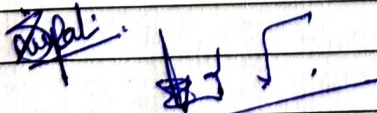
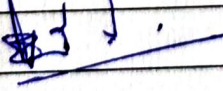
Attendance is compulsory for all SE AI & DS students

With Regards


(Prof. D. S. Suryawanshi)

Bhujbal Knowledge City
MET's Institute of Engineering
Artificial Intelligence & Data Science Department

Activity/ Event Report

Title	Expert Session on Simulation of Combinational and sequential Circuit														
Date	13/10/2025 11.am to 1.00 pm .														
Venue	202 class room Second floor IOE MET, BKC, Nasik														
Association, if Any	Department of Computer Engineering														
Objective	<ol style="list-style-type: none"> 1. To understand the basics and importance of digital logic circuits. 2. To differentiate between combinational and sequential circuits. 3. To learn simulation techniques using tools such as DigitalWorks (mention whichever was used). 4. To design and analyze circuits like adders, multiplexers, counters, flip-flops, etc. 5. To provide hands-on exposure for better conceptual clarity. 														
PO/PSO Addressed & Attainment	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
	2.43	-	-	-	-	2.43	-	2.71	2.71	2.71	2.29	2.43	-	-	-
Name of Incharge	Coordinator: Prof. D. S. Suryawanshi														
	Co-Coordinator: -----														
	Supporting Staff: —														
Approved By	HOD <input checked="" type="checkbox"/> Principal <input type="checkbox"/> Other <input type="checkbox"/> (Specify: _____)														
Detailed Report Attached	Yes														
Details of Guest/ Speaker/.....	Name: Prof. Rahul Mandalik														
	Designation: Asst. Professor														
	Contact Details: 8975881423														
Photograph/Video Available	: Yes If Yes: Print / Soft <input checked="" type="checkbox"/> and Submitted to _____														
Feedback of Activity	: Collected/ Not Collected														
Brief about Activity /Event	Prof. Rahul Mandlik delivered an informative and engaging talk with the objective of enhancing their understanding of digital circuit design and simulation tools. The session focused on explaining the fundamental concepts of combinational and sequential logic, followed by hands-on demonstrations using digital simulation software.														
Sign. of Coordinator															
Sign. of HOD															
Remark if Any (for office use)	—														

**List of Encl:- Attendance sheet , Snaps of Activity
 Feedback Form, Report**

Department of Artificial Intelligence and Data Science

Academic Year 2025-26

Expert Session on "Simulation of Combinational and sequential Circuit"

- **Event Title-** Simulation of Combinational and sequential Circuit
- **Date and Time:** 13/10/2025, 11AM to 1PM (202 Class room)
- **Target Participants-** SE Students
- **Resource Person-** Prof.Rahul Mandlik
- **Event Coordinator-**Prof.D. S. Suryawanshi
- **Course Objectives:**
 1. To understand the basics and importance of digital logic circuits.
 2. To differentiate between combinational and sequential circuits.
 3. To learn simulation techniques using tools such as **DigitalWorks**
 4. To design and analyze circuits like adders, multiplexers, counters, flip-flops, etc.
 5. To provide hands-on exposure for better conceptual clarity.
- **Course Outcome:**

After attending the session, students were able to:

1. Understand the working principles of combinational and sequential circuits.
2. Perform circuit simulations independently using digital tools.
3. Interpret simulation results and correct design errors.
4. Apply digital logic concepts in mini-projects and lab work.

Summary:

An expert session on "Simulation of Combinational and sequential Circuit" was conducted by **Prof. Rahul Mandlik**, Assistant Professor, Department of Computer Engineering, MET's Institute of Engineering, Nashik, on **13th October 2025** in **Classroom 202** for **Second Year AI & DS students**. Prof. Rahul Mandlik delivered an informative and engaging talk with the objective of enhancing their understanding of digital circuit design and simulation tools. The session focused on explaining the fundamental concepts of combinational and sequential logic, followed by hands-on demonstrations using digital simulation software.

The expert covered the following major points:

A. Combinational Circuits

- Introduction and characteristics
- Truth tables and Boolean expressions

- Design and simulation of:
 - Half Adder & Full Adder, Multiplexer (MUX) & Demultiplexer (DEMUX)
 - Encoder & Decoder, Comparator, Arithmetic circuits

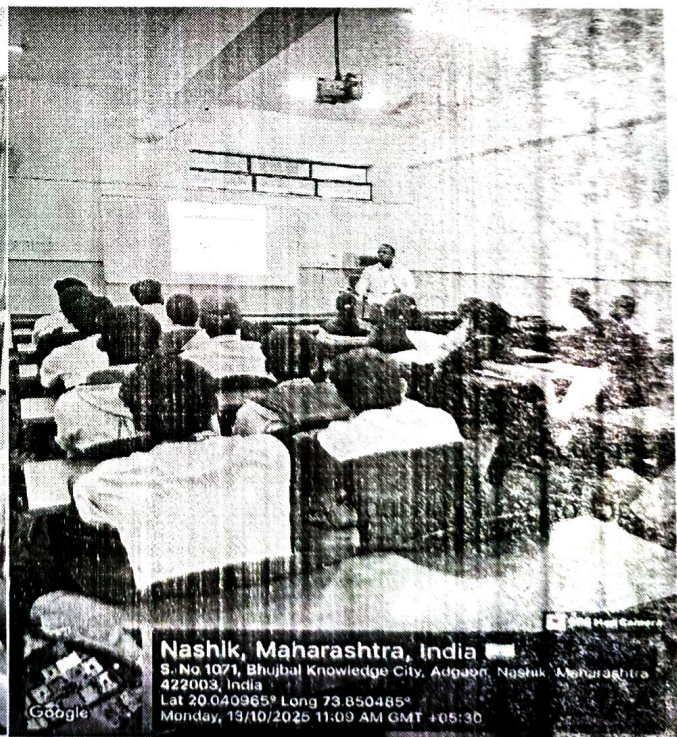
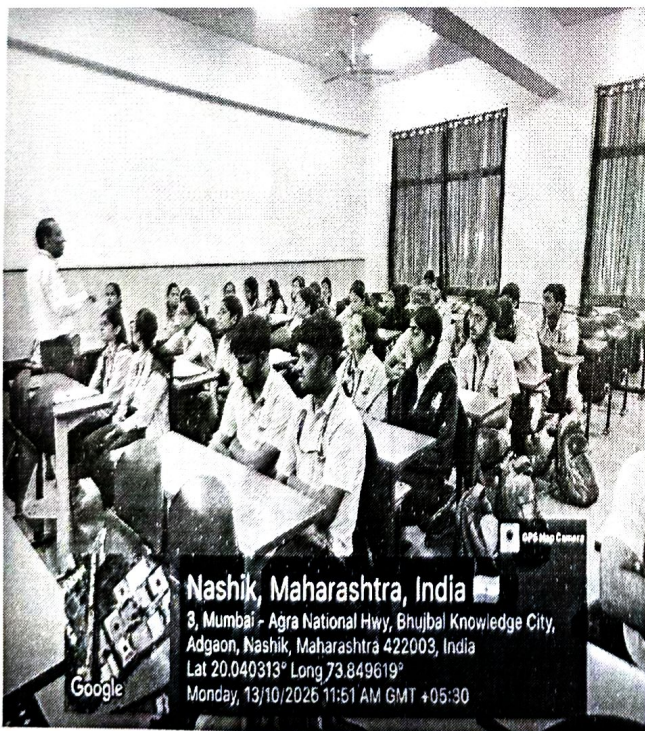
B. Sequential Circuits

- Difference between combinational and sequential logic, Clock signal and timing diagrams
- Design and simulation of:
 - SR, JK, D, and T Flip-Flops, Counters (Asynchronous & Synchronous)
 - Shift Registers, Sequence generators

C. Hands-On Demonstration

- Live simulation of circuits
- Analysis of waveform outputs
- Debugging common circuit design errors

Students actively participated by designing sample circuits, running simulations, and discussing the results. Many students interacted with the resource person to clarify doubts related to logic gates, flip-flops, and timing diagrams.



Suryawansi

Prof. D. S. Suryawansi
 Coordinator

Gumaste

Dr. S. V. Gumaste
 H.O.D.



Bhujbal Knowledge City, Adgaon, Nashik
MET's Institute of Engineering
Department of Artificial Intelligence & Data Science

Date: 9/10/2025

To,
Prof. Rahul Mandlik,
Asst. Professor
Computer Dept. MET's IOE BKC Nashik

Subject: Thanks for Conducting Expert Session on "Simulation of Combinational and sequential Circuit"


Dear Sir,

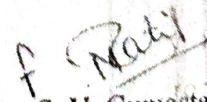
On behalf of the Department of Artificial Intelligence and Data Science, MET's Institute of Engineering, Nashik, we extend our sincere gratitude to you for sparing your valuable time and delivering an insightful Expert Session on "Simulation of Combinational and sequential Circuit" on 13th Oct 2025 for our Second-Year AI & DS Engineering students.

Your expertise, practical demonstrations, and interactive approach have significantly enriched our students' understanding and provided them with valuable exposure to Digital electronics and Logic design. The session was highly engaging, and the students benefited immensely from your guidance.

We truly appreciate your gracious presence and valuable contribution towards enhancing the learning experience of our students. We look forward to your continued association with our institute for many more such academic collaborations in the future.

With warm regards,


Prof. Deepali Suryawanshi
Subject Coordinator


Dr. S. V. Gumaste
H. O.D

Date:-9/10/2025

To,
Prof. Rahul Mandlik,
Asst. Professor
Computer Dept. MET's IOE BKC Nasik

Subject: Invitation for Expert Session on "Simulation of Combinational and sequential Circuit"


Dear Sir,


On behalf of the Department of Artificial Intelligence and Data Science, MET's Institute of Engineering, Nashik, we are delighted to invite you as a distinguished resource person to conduct an Expert Session on "Simulation of Combinational and sequential Circuit" for our Second-Year AI & DS students.

The session is scheduled on 13/10/2025 from 11 am to 1 pm at our institute premises. We are confident that your valuable insights and expertise in the field will enrich the knowledge of our students and provide them with a deeper understanding of digital marketing concepts, strategies, and their real-world applications.

We sincerely look forward to your gracious presence and an engaging interaction with our students.

Thanks and warm regards.


Prof. Deepali Suryawanshi
Subject Coordinator


Dr. S. V. Gumaste
H. O.D

Bhujbal Knowledge City

Expert Session on

“Simulation of Combinational and sequential Circuit”

Organized by Department of AI & DS

13th October 2025

Resource Person's Feedback

EVALUATION

Thank you for delivering the **expert session**. We hope that you found the participants interesting and that we met your expectations. We would be very grateful if you could take a moment to complete the expert session's evaluation form. Your comments will assist us in improving future expert sessions that we will organize.


WORKSHOP ORGANIZATION

SCALE: 1-STRONGLY AGREE; 2-AGREE; 3-NEUTRAL; 4-DISAGREE; 5-STRONGLY DISAGREE

Please provide feedback in the comments box

	1	2	3	4	5
1. The expert session facilities viz classroom, projectors, audio system, coordinators were appropriate and satisfactory.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Participants were enthusiastic.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Sessions were interactive and participants were attentive during sessions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Your comments about Expert session: -


 Mandlik R.B.