



RAMCO INSTITUTE OF TECHNOLOGY

Approved by AICTE, New Delhi & Affiliated to Anna University
NAAC Accredited with 'A+' Grade & An ISO 9001: 2015 Certified Institution
NBA Accredited UG Programs: CSE, EEE, ECE and MECH

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Academic Year 2025 – 2026 (Even Semester)

Degree, Semester & Branch: II Semester B.Tech. AI&DS - 'A' & 'B'

Course Code & Title: CS25C06 & Digital Principles and Computer Organization

Name of the Faculty member (s): Mrs. M. Santhikala

Unit / Topic: Module 1 / Build logic circuits

Course Outcome: CO2

Activity Chosen: Flipped Classroom

Justification:

A flipped classroom is a pedagogical model that reverses traditional instruction by delivering educational content, such as pre-recorded lectures, outside the classroom. A flipped classroom is a pedagogical model that reverses traditional instruction by delivering educational content, such as pre-recorded lectures, outside the classroom.

Time allotted for this activity: 45 Minutes

Objectives:

- To help students understand concepts clearly through self-learning before class.
- To use classroom time for active learning, discussions, and hands-on practice.
- To improve conceptual understanding of the topic.
- To promote critical thinking and problem-solving skills.
- To encourage student participation, collaboration, and interaction.

Implementation:

1. Plan:

- Students were provided with study materials on basic logic gates, their symbols, truth tables, and Boolean expressions.
- Students were asked to watch study the materials, and make notes of any doubts or questions.

2. In-Class Activities:

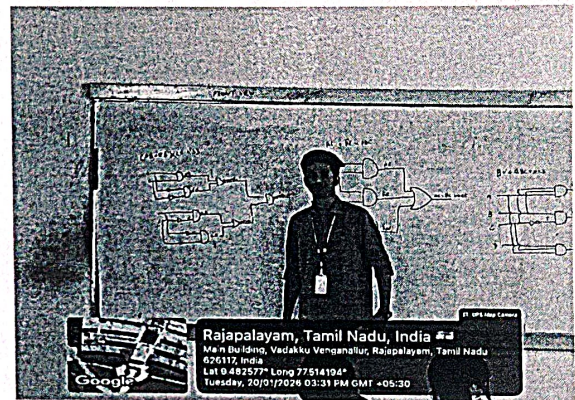
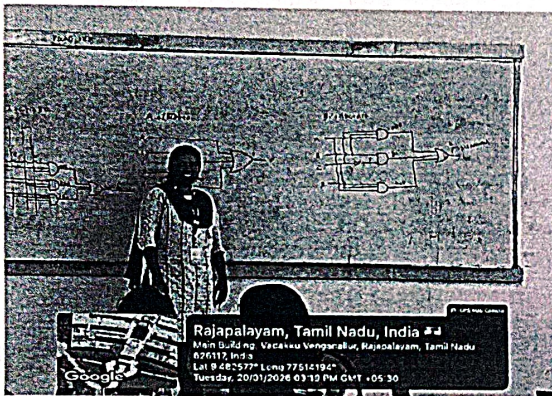
- The class began with a brief discussion to clarify doubts raised by students during their pre-class preparation.

- Instructor give the demo for the students about the logic diagrams.
- Students were divided into small groups and assigned tasks to design and build logic gate circuits using their notebooks.
- Each group constructed circuits, verified truth tables, and explained the working of the circuits to the instructor and peers.
- The instructor guided the students, provided feedback, corrected errors, and encouraged peer-to-peer learning.

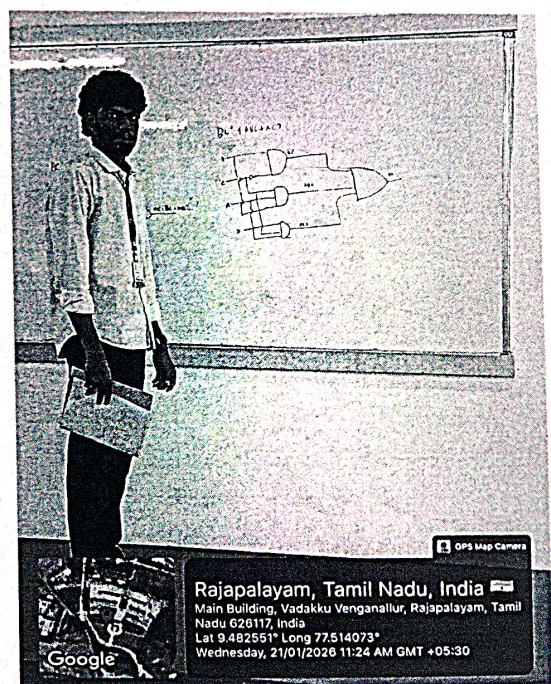
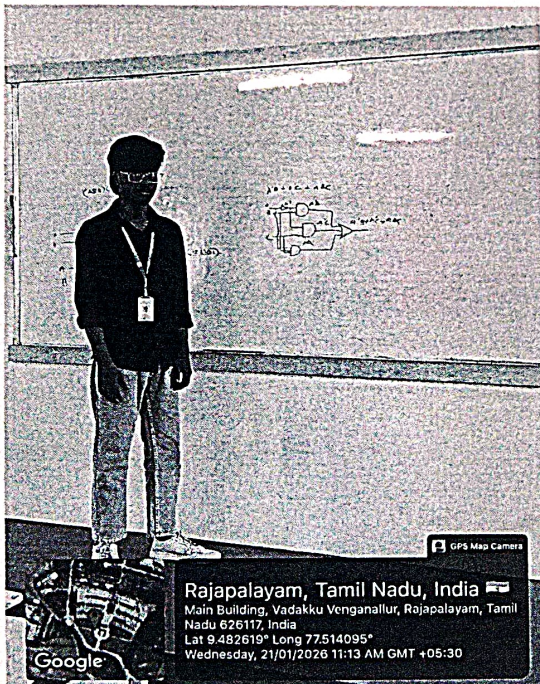
CO/ PO and PSO mapping:

S No	Topic	PO1	PO2	PO8	PSO1	PSO2
1	Build logic circuits	3	2	3	3	3

Glimpses of Activity:
A section:



B Section:



- ❖ ***Feedback of practice from students and other stakeholders:***
 - Learning the basics before class made it easier to follow the practical session.
 - Working in groups helped me understand concepts from different perspectives.
 - The activity was fun and made learning logic gates less intimidating.
- ❖ ***Benefit of the practice:***
 - Students understood logic gates more clearly by learning the theory at their own pace before class.
 - Classroom time was used for hands-on circuit building, problem-solving, and discussions.
 - Students participated actively, asked questions, and collaborated in groups.
- ❖ ***Challenges faced in implementation:***
 - Some initial confusion in mapping Boolean expressions to circuits.
 - Difficulty in handling certain ICs while building physical circuits.
 - Coordinating tasks and sharing responsibilities within the group efficiently.

References:

1. <https://bokcenter.harvard.edu/flipped- classrooms/>
2. https://en.wikipedia.org/wiki/Flipped_classroom
3. <https://omerad.msu.edu/teaching/teaching-skills-strategies/27-teaching/162-what-why-and-how-to- implement-a-flipped-classroom-mode>



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DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Academic Year 2025 – 2026 (Even Semester)

FEEDBACK Active Learning Best practices: Flipped Classroom

Degree, Semester & Branch : B.Tech, V & AI / DS

Course Code & Title : CS25C06 & Digital Principles and Computer Organization

Name of the Faculty member : Mrs. M. Santhikala, AP/AD

Theme of discussion : Build logic circuits

Date and Time : 20.01.2026 & 03.00 pm to 3.45 pm. (A Section)

21.01.2026 & 10.50 am to 11.35 am. (B Section)

Feedback collected in class and also through online

FEEDBACK QUESTIONS

1. Does the activity encourage cooperative learning among yourself?

Yes / No

2. Do you have a clear understanding about the Logic circuits?

Excellent /Very Good /Good /Satisfactory

3. Did the active learning method encourage active participation and communication?

Yes / No

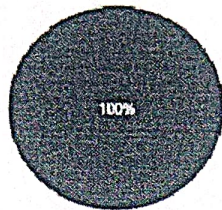
4. Did the active learning method prompt you to think more deeply or critically about the topic?

Yes / No

Feedback analysis:

1. Does the activity encourage cooperative learning among yourself?

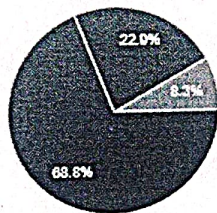
122 responses



● Yes
● No

2. Do you have a clear understanding about the Logic circuits?

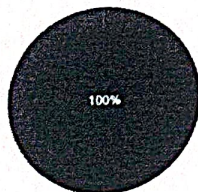
122 responses



● Excellent
● Very good
● Good
● Satisfactory

3. Did the active learning method encourage active participation and communication?

122 responses



● Yes
● No

4. Did the active learning method prompt you to think more deeply or critically about the topic?

122 responses



● Yes
● No

M. Sathish 27/11/21
Faculty in-charge

Wadhwa
27/11

HOD/AD