

**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING
VIZIANAGARAM ANDHRA PRADESH**



DESIGN THINKING AND INNOVATION LAB

**S. MOHAN KUMAR
(24VV5A1273)**



**JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Regd.No : 24VV5A1273

CERTIFICATE

This is to certify that this is a bonafide record of practical work done by MR. S. MOHAN KUMAR of IInd B.Tech IInd Semester Class in Design Thinking and Innovation Lab during the year 2024-25.

No.of Tasks Completed and Certified:14

Lecture In-Charge

Head of The Department

Date:



DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM

Website: www.jntugvcev.edu.in

Subject Name: DESIGN THINKING & INNOVATION

Regulation: R23

Subject Code: R2322BSH01

Academic Year: 2025

COURSE OUTCOMES

NBA Subject Code	Course Outcomes						
	CO1	Define concepts of design thinking.					
	CO2	Explain fundamentals of design thinking&innovation.					
	CO3	Apply design thinking to solve problems in various sectors.					
	CO4	Analyse to work in multidisciplinary environment.					
	CO5	Evaluate the value of creativity.					
	CO6	Formulate specific real-time problem statements.					

CO-PO Mapping

Mapping of Course Outcomes (COs) with Program Outcomes (POs)

Course Outcomes	Program Outcomes (POs)														
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	2	2	1	1	1	1	1	1	2	1	1	2	2	1	1
CO2	3	3	2	1	2	2	1	2	2	2	1	2	3	2	2
CO3	3	3	3	2	3	2	2	2	3	3	2	3	3	3	3
CO4	2	2	2	2	2	1	2	1	3	2	2	2	3	3	2
CO5	2	3	3	2	3	2	1	2	2	2	2	3	3	3	3
CO6	3	3	3	3	3	2	2	2	3	2	2	3	3	3	3

Enter correlation levels 1,2 and 3 as defined below:

1:3 Slight (Low) 2: Moderate (Medium) 3: Substantial (High) If there is no correlation, put “-”

Signature of the course instructor

Table of contents:

SNO	DATE	CONCEPT	PAGE NO	MARKS	REMARKS
1	12-12-2024	INTRODUCTION TO DESIGN THINKING	5-7		
2.	13-12-2024	PHASES OF DESIGN THINKING AND INNOVATION	8-9		
3.	20-12-2024	EMPATHY : INTRODUCTION AND THEORY	10-11		
4.	27-12-2024	DEFINE : INTRODUCTION AND THEORY	12-13		
5.	27-12-2024	IDEATE : INTRODUCTION AND THEORY	14-15		
6.	03-01-2025	PROTOTYPE : INTRODUCTION AND THEORY	16-19		
7.	03-01-2025	TEST : INTRODUCTION AND THEORY	20-22		
8.	24-01-2025	EMPATHY-PROJECT COMPARISON AND TOOLS – RESPOND.IO,TYPEFORM,HOTJAR,MIXPANEL,ZOOM	23-31		
9.	31-01-2025	DEFINE-PROJECT COMPARISON AND TOOLS – SMAPLY,ENJOYHQ,USERFORGE,MAKEMYPERSONA	32-38		
10.	17-02-2025	IDEATE-PROJECT COMPARISON AND TOOLS – SESSIONLABLIBRARY,MINDMEISTER,STORMBOARD, MIRO BRAINWRITING	39-46		
11.	21-02-2025	PROTOTYPE-PROJECT COMPARISON AND TOOLS – BOARDS,BALSAMIP,POP,FIGMA,PROTO.IO	47-54		
12.	07-03-2025	TEST-PROJECT COMPARISON AND TOOLS – USERTESTING,PINGPONG,MAZE,VWO	55-62		
13.	27-03-2025	DATA FLOW DIAGRAM	63-66		
14.	27-03-2025	PPT FOR CLASSROOM BOOKING SYSTEM	67-70		
15.	04-04-2025	DESIGN THINKING CERTIFICATE	71		

Date:

signature:



**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri

Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

- | | | |
|---------------------------------|---|------------------------------------|
| 1. Name of the Laboratory | : | Design Thinking and Innovation Lab |
| 2. Name of the Student | : | S. MOHAN KUMAR |
| 3. Roll No | : | 24VV5A1273 |
| 4. Class | : | II B-Tech II Semester |
| 5. Academic Year | : | 2024-25 |
| 6. Name of Experiment | : | Introduction to Design Thinking |
| 7. Date of Experiment | : | 12-12-2024 |
| 8. Date of Submission of Report | : | 13-12-2024 |

S.NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

Signature of Faculty

INTRODUCTION TO DESIGN THINKING

Definition:

Design Thinking is a human-centered approach to problem-solving that focuses on understanding users' needs, redefining problems, and creating innovative solutions. It is widely used in product design, software development, business strategy, and user experience (UX) design.

Why is design thinking important?

- Encourages innovation by focusing on user needs.
- Reduces risk by testing ideas before full implementation.
- Helps create efficient, user-friendly, and scalable solutions.
- Promotes an iterative process to refine solutions based on feedback.

Key principles:

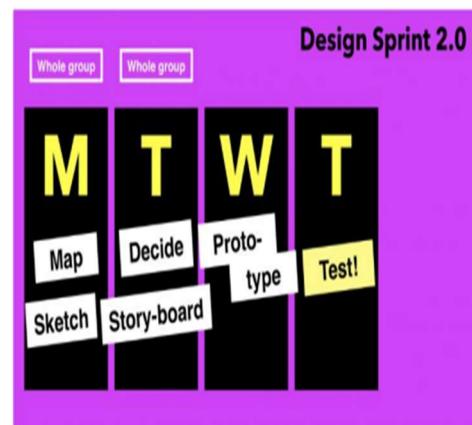
- **User-Centric** – The process revolves around the user's needs.
- **Iterative & Non-Linear** – Phases can be revisited multiple times.
- **Collaborative** – Encourages teamwork across different disciplines.
- **Experimental** – Encourages prototyping and testing new ideas.

Phases:

Design Thinking typically consists of five or six phases, depending on the approach. The most comprehensive model follows six phases:

1. Empathize – Understanding the User
2. Define – Identifying the Problem
3. Ideate – Brainstorming Solutions
4. Prototype – Creating a Model
5. Test – Evaluating the Solution

DESIGN SPINT





**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri
Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

1. Name of the Laboratory	:	Design Thinking and Innovation Lab
2. Name of the Student	:	S. MOHAN KUMAR
3. Roll No	:	24VV5A1273
4. Class	:	II B-Tech II Semester
5. Academic Year	:	2024-25
6. Name of Experiment	:	Phases of Design Thinking and Innovation
7. Date of Experiment	:	13-12-2024
8. Date of Submission of Report	:	20-12-2024

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

Signature of Faculty

PHASES OF DESIGN THINKING AND INNOVATION

DESIGN PHASE



Phases:

Design Thinking typically consists of five or six phases, depending on the approach. The most comprehensive model follows six phases:

1. Empathize – Understanding the User
2. Define – Identifying the Problem
3. Ideate – Brainstorming Solutions
4. Prototype – Creating a Model
5. Test – Evaluating the Solution



**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri

Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

1. Name of the Laboratory	:	Design Thinking and Innovation Lab
2. Name of the Student	:	S. MOHAN KUMAR
3. Roll No	:	24VV5A1273
4. Class	:	II B-Tech II Semester
5. Academic Year	:	2024-25
6. Name of Experiment	:	Empathy Introduction and Theory
7. Date of Experiment	:	20-12-2024
8. Date of Submission of Report	:	27-12-2024

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

Signature of Faculty

Empathize:

Empathy is the ability to understand and share the feelings of others. It is an essential human trait that fosters social connection, emotional support, and effective communication.

Empathy is widely studied in psychology, education, and healthcare due to its role in improving interpersonal relationships.

Explanation of Empathy Theory

Empathy Theory explores how individuals mentally and emotionally relate to others' experiences. It has two main components:

- **Cognitive empathy:** Understanding another person's thoughts or perspective.
- **Emotional empathy:** Feeling what another person feels.
- Key contributors:
 - **Carl Rogers** emphasized empathy in client-centered therapy.
 - **Martin Hoffman** outlined stages of empathy development in children.
 - **Daniel Goleman** included empathy in his model of emotional intelligence.
- Empathy can be both **innate and learned**, influenced by upbringing, experiences, and environment. It is crucial for compassion, social bonding, and resolving conflicts.



**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri

Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

- | | | |
|---------------------------------|---|------------------------------------|
| 1. Name of the Laboratory | : | Design Thinking and Innovation Lab |
| 2. Name of the Student | : | S. MOHAN KUMAR |
| 3. Roll No | : | 24VV5A1273 |
| 4. Class | : | II B-Tech II Semester |
| 5. Academic Year | : | 2024-25 |
| 6. Name of Experiment | : | Define Introduction and Theory |
| 7. Date of Experiment | : | 20-12-2024 |
| 8. Date of Submission of Report | : | 27-12-2024 |

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

Signature of Faculty

Definition – Identifying the Problem (Theory)

Identifying the Problem Theory refers to the process of clearly recognizing, defining, and understanding a problem before attempting to solve it. It is a critical step in various psychological and decision-making models that emphasize the importance of problem clarity for effective solutions.

Key Concepts of the Theory:

- i) A problem must be clearly defined before it can be solved.
- ii) It involves gathering information, analyzing symptoms, and determining root causes.
- iii) Prevents misdiagnosis or focusing on irrelevant issues.

Related Models/Theories:

1. Kepner-Tregoe Problem Analysis Model
 - o Focuses on identifying the true nature of the problem by separating it from symptoms.
 - o Uses structured questions: *What? Where? When? To what extent?*
2. IDEAL Model (Bransford & Stein)
 - o Step 1 is: I – Identify the Problem
 - o Recognizing a challenge or gap between current and desired situations.
3. Kolb's Experiential Learning Theory
 - o Begins with a concrete experience and then reflection, helping individuals understand the real issue through analysis.

Definition Summary:

Identifying the problem is a cognitive and analytical process of determining the actual issue that needs to be addressed. It is the first and most essential step in effective problem-solving, ensuring that time and resources are directed toward solving the right problem.



**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri

Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

- | | | |
|---------------------------------|---|------------------------------------|
| 1. Name of the Laboratory | : | Design Thinking and Innovation Lab |
| 2. Name of the Student | : | S. MOHAN KUMAR |
| 3. Roll No | : | 24VV5A1273 |
| 4. Class | : | II B-Tech II Semester |
| 5. Academic Year | : | 2024-25 |
| 6. Name of Experiment | : | Ideate Introduction and Theory |
| 7. Date of Experiment | : | 27-12-2024 |
| 8. Date of Submission of Report | : | 03-01-2024 |

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

Signature of Faculty

Definition – Ideate: Brainstorming Solutions (Theory)

Ideation or brainstorming solutions is the **third step** in the problem-solving or design thinking process. It refers to the **creative process** of generating a wide range of ideas or potential solutions to a defined problem, without immediately judging or evaluating them.

Key Concepts of the Theory

- Encourages **open-minded thinking** and **creative exploration**
- Aims to produce **multiple ideas**, even if some are unconventional
- Focuses on **quantity over quality** in the initial phase
- Promotes **collaboration**, especially in group settings

Related Theories & Models

1. Design Thinking (IDEO & Stanford d.school)

- **Ideate** is the 3rd stage in the Design Thinking process:
 - Empathize
 - Define
 - **Ideate**
 - Prototype
 - Test
- Encourages **thinking outside the box** to create innovative solutions

2. Osborn's Brainstorming Technique (Alex Osborn)

- Introduced the term "**brainstorming**"
- Four key rules:
 - Defer judgment
 - Go for quantity
 - Encourage wild ideas
 - **Build on others' ideas**

3. Lateral Thinking (Edward de Bono)



**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri

Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

1. Name of the Laboratory	:	Design Thinking and Innovation Lab
2. Name of the Student	:	S. MOHAN KUMAR
3. Roll No	:	24VV5A1273
4. Class	:	II B-Tech II Semester
5. Academic Year	:	2024-25
6. Name of Experiment	:	Prototype Introduction and Theory
7. Date of Experiment	:	03-01-2025
8. Date of Submission of Report	:	03-01-2025

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

Signature of Faculty

Prototype – Creating a Model

Prototyping is a key phase in problem-solving and innovation models, particularly in the Design Thinking process. It involves creating a basic version or model of a proposed solution to test its functionality, design, and usability. The main goal of prototyping is to turn ideas into tangible forms so that they can be evaluated, improved, and tested with real users.

◆ Definition

A prototype is a simple, often low-cost, and scaled-down version of a product or solution. It can be physical (like a paper model or handmade object) or digital (such as a basic app or website mockup). Prototypes help in visualizing ideas and discovering any flaws or improvements before final development.

◆ Purpose of Prototyping

- To explore ideas and make abstract concepts visible
- To identify usability issues or technical problems early
- To get feedback from users and stakeholders
- To support iteration—making improvements through repeated testing

◆ Key Features

- Quick and inexpensive to build
- Focuses on functionality, not perfection
- Used to answer specific design or usability questions
- Encourages creative problem-solving

◆ Related Models and Theories

Design Thinking Model

Prototyping is the fourth stage in the Design Thinking process:

1. Empathize
2. Define
3. Ideate
4. Prototype
5. Test

Test – Evaluating the Solution

solutions is the third step in the problem-solving or design thinking process. It refers to the creative process of generating a wide range of ideas or potential solutions to a defined problem, without immediately judging or evaluating them.

Key Concepts of the Theory

- Encourages open-minded thinking and creative exploration
- Aims to produce multiple ideas, even if some are unconventional
- Focuses on quantity over quality in the initial phase
- Promotes collaboration, especially in group settings

Related Theories & Models

1. Design Thinking (IDEO & Stanford school)

- Ideate is the 3rd stage in the Design Thinking process:
 1. Empathize
 2. Define
 3. Ideate
 4. Prototype
 5. Test
- Encourages **thinking outside the box to create innovative solutions**

2. Osborn's Brainstorming Technique (Alex Osborn)

- Introduced the term "brainstorming"
- Four key rules:
 - Defer judgment
 - Go for quantity
 - Encourage wild ideas
 - Build on others' ideas

3. Lateral Thinking (Edward de Bono)

- Focuses on non-linear, creative approaches to problem-solving
- Helps break out of traditional logical patterns to find novel solutions

Definition Summary

Ideation is the process of generating a broad set of ideas or solutions to a clearly defined problem. It supports creative freedom, group synergy, and innovation. Brainstorming is not about finding the perfect solution immediately, but rather exploring many possibilities before selecting and refining the best one



**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri
Asst. Professor & HOD

Email: hod. it@intugycev.edu.in

- | | | |
|---------------------------------|---|------------------------------------|
| 1. Name of the Laboratory | : | Design Thinking and Innovation Lab |
| 2. Name of the Student | : | S. MOHAN KUMAR |
| 3. Roll No | : | 24VV5A1273 |
| 4. Class | : | II B-Tech II Semester |
| 5. Academic Year | : | 2024-25 |
| 6. Name of Experiment | : | Test Introduction and Theory |
| 7. Date of Experiment | : | 03-01-2025 |
| 8. Date of Submission of Report | : | 24-01-2025 |

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

Signature of Faculty

5. Test – Evaluating the Solution (Theory)

Testing is the fifth and final stage of

developed prototypes are evaluated by real users to gather feedback and refine the solution. It helps determine whether the solution effectively solves the problem and meets user needs.

Key Concepts of the Theory:

- Involves presenting prototypes to users for feedback
- Focuses on validating functionality, usability, and effectiveness
- Encourages observation of user interaction with the solution
- Aims to identify issues, challenges, or improvements needed
- Supports iteration – refining the prototype based on feedback

Related Theories & Models

1. Design Thinking (IDEO & Stanford d.school)

- Test is the 5th stage after:
 1. Empathize
 2. Define
 3. Ideate
 4. Prototype
 5. Test
- Helps refine prototypes and solutions based on real-world use.

2. PDCA Cycle (Deming Cycle)

- Plan → Do → Check → Act
- The “Check” stage aligns with testing—evaluating outcomes before full implementation.

3. User-Centered Design (UCD)

- Emphasizes testing with end-users early and often
- Ensures solutions are tailored to user needs

Definition Summary

Testing is the process of evaluating a solution by observing how real users interact with it. It provides insights into what works, what doesn't, and what needs to be improved. Testing is not the final step but part of a continuous improvement.



**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri

Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

1. Name of the Laboratory	:	Design Thinking and Innovation Lab
2. Name of the Student	:	S. MOHAN KUMAR
3. Roll No	:	24VV5A1273
4. Class	:	II B-Tech II Semester
5. Academic Year	:	2024-25
6. Name of Experiment	:	Empathy- Project Comparison and Tools
7. Date of Experiment	:	24-01-2025
8. Date of Submission of Report	:	31-01-2025

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

Signature of Faculty

1. Empathy – Understanding User Needs (UNIVERSITY CARRIER SERVICE PLATFORM)

The Empathy stage is the first step in the Design Thinking process. It involves deeply understanding the feelings, goals, and challenges of the people interacting with the Django Job Portal System — including Applicants, Companies, and Admins. The goal is to observe, interview, and listen to users to gain meaningful insights into their recruitment experience and platform expectations.

Key Concepts of Empathy (for this system)

- Put yourself in the users' shoes
- Understand daily challenges with applying, posting, and managing job listings
- Gather insights through interviews, surveys, and user interaction
- Identify pain points like:
- Confusing application processes
- Lack of job tracking or status updates
- Delayed notifications or email alerts
- Difficulties in posting or managing job listings
- Lack of a simple and clean UI for admins to view/manage users and jobs

Target Users to Empathize With

Empathy Methods Used

- User Interviews – Talked with teachers and students about past booking problems
- Shadowing – Observed how admins handle manual bookings
- Surveys/Forms – Gathered common frustrations and feature requests

Tools used:

TYPEFORM

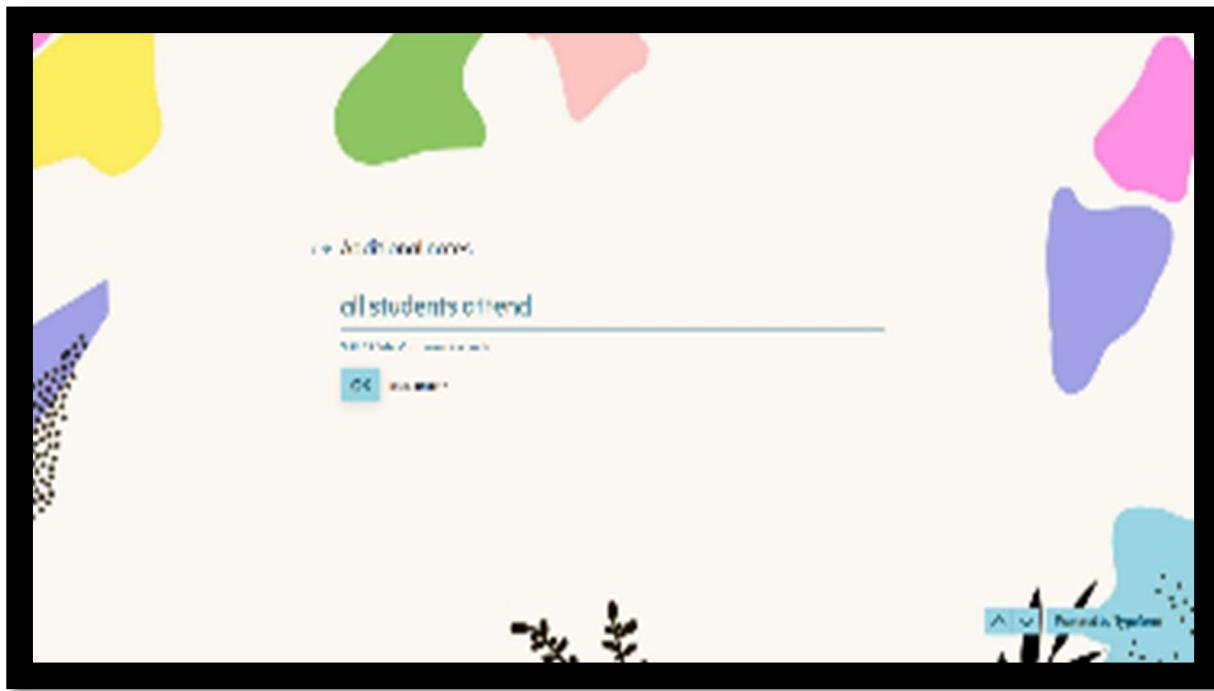
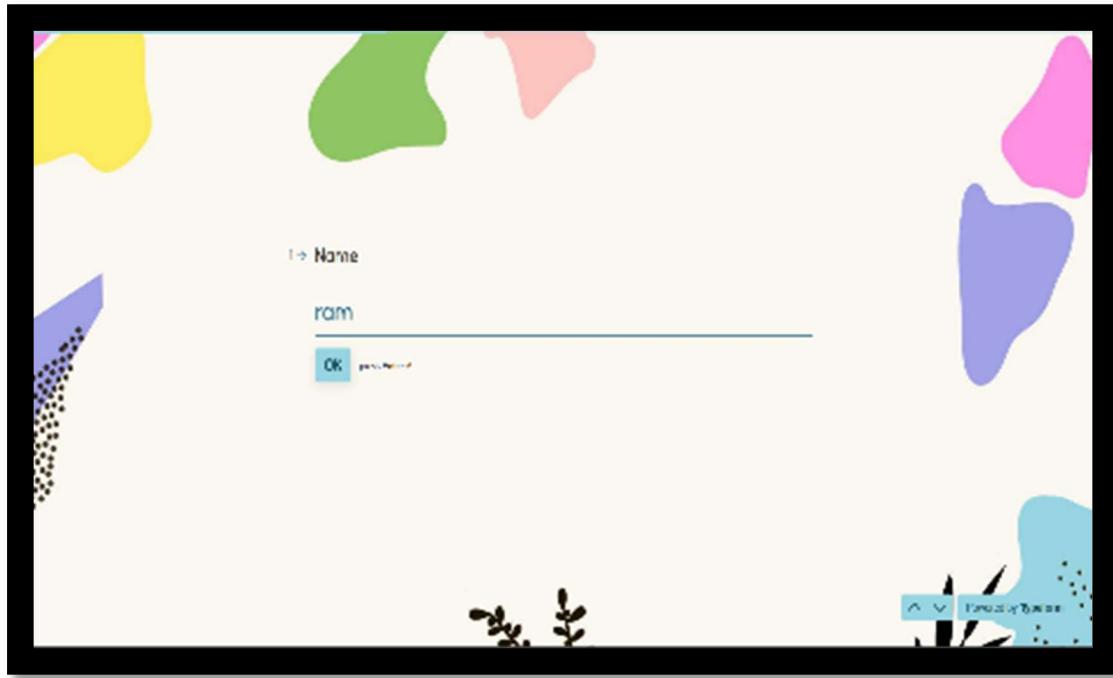
Type form is an online platform that allows users to create interactive and user-friendly forms, surveys, and quizzes. It stands out with its conversational interface, which makes data collection more engaging and personalized.

Key Features of Type form:

- Conversational Forms – Forms feel more like a chat, improving response rates.
- Customizable Design – Offers various themes and branding options.
- Logic Jumps – Enables dynamic question flow based on previous answers.
- Integrations – Connects with tools like Google Sheets, Zapier, and Slack.
- Multi-Device Friendly – Optimized for desktop, tablet, and mobile.
- Analytics & Insights – Provides real-time response tracking and data analysis.

Output:

<https://form.typeform.com/to/k62x3Go0>





Respondent.io

Respondent.io is a user research platform specifically designed to solve these problems. It helps researchers and design teams find qualified participants who exactly match their project needs. With Respondent.io, users can filter candidates based on job roles, industries, demographics, product usage, and other key factors, making it much easier to recruit the right people for interviews, surveys, and usability tests. At SessionLab, Respondent.io has been used successfully in various design projects to gain valuable insights, conduct user journey mapping, and support the overall design process.

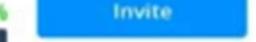
Respondent.io plays a crucial role in the early stages of the Design Thinking process, particularly in the Empathize and Define phases. In the Empathize stage, the focus is on understanding the user's experiences, motivations, and challenges. Respondent.io helps by making it easy to connect with real users remotely, allowing researchers to conduct interviews that form the basis of empathy maps and user personas. By engaging with the right audience, design teams can gather authentic stories and pain points, leading to more human-centered solutions.

During the Define stage, the insights gathered are synthesized to clearly identify the core problems faced by users. Respondent.io contributes to this phase by ensuring that the information used for defining problem statements is grounded in real user feedback. It supports the development of user journey maps and helps teams narrow down design challenges based on accurate, research-driven insights. This leads to better alignment between user needs and design objectives, ultimately enhancing the success of the final product.

Output:

24 responses to your project

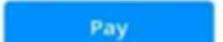
 Nikki J. 
Senior Director of Marketing at Gekko 
New York, NY, USA
linkedin.com/in/nikkija

92%  Invite
[Full profile](#) [Screener responses](#) [3 past ratings](#)

 Anthony T.  SCHEDULED
Engineering Lead at Globex 
Paris, France
linkedin.com/in/anthonyte

Tomorrow 10:00 EST  Message 
[Full profile](#) [Screener responses](#) [2 past ratings](#)

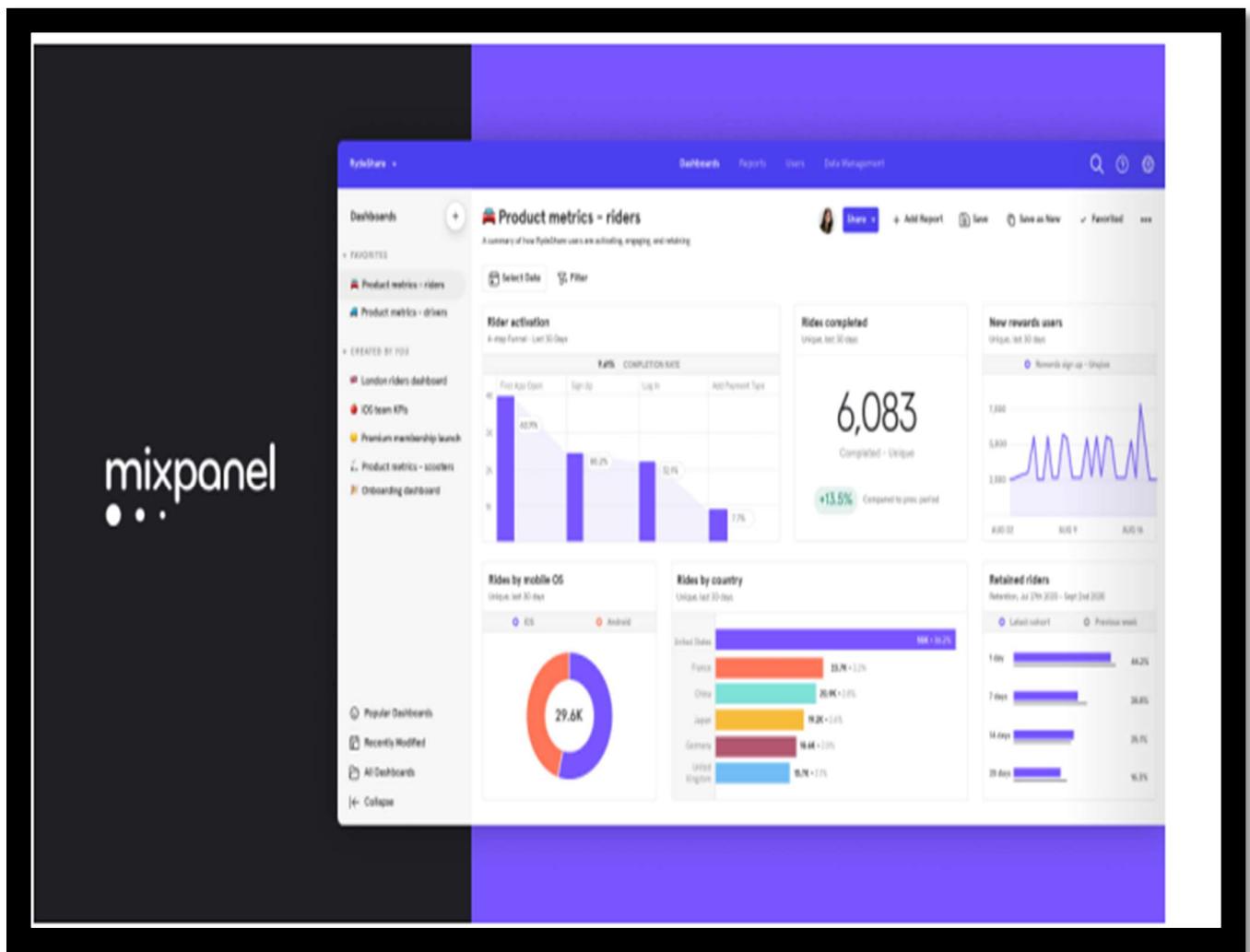
 Michael B.  ATTENDED
Legal Operations Manager at Initech 
Seattle, WA, USA
linkedin.com/in/michaelbee

  Pay
[Full profile](#) [Screener responses](#) [3 past ratings](#)

Mixpanel:

Chances are you already have a product analytics tool but we felt it important to mention that these tools are a key contributor to a successful design process. We use Mixpanel at SessionLab and find that the ability to create cohorts, easily monitor experiments and see how certain features or changes affect activation and retention incredibly useful. • At the empathize stage, these analytic tools can help provide important context and insight into what users are doing (or not doing) and support any hypotheses or customer feedback. In any case, I wouldn't dream of launching a design thinking project without at least some data analysis inhand.

Output:

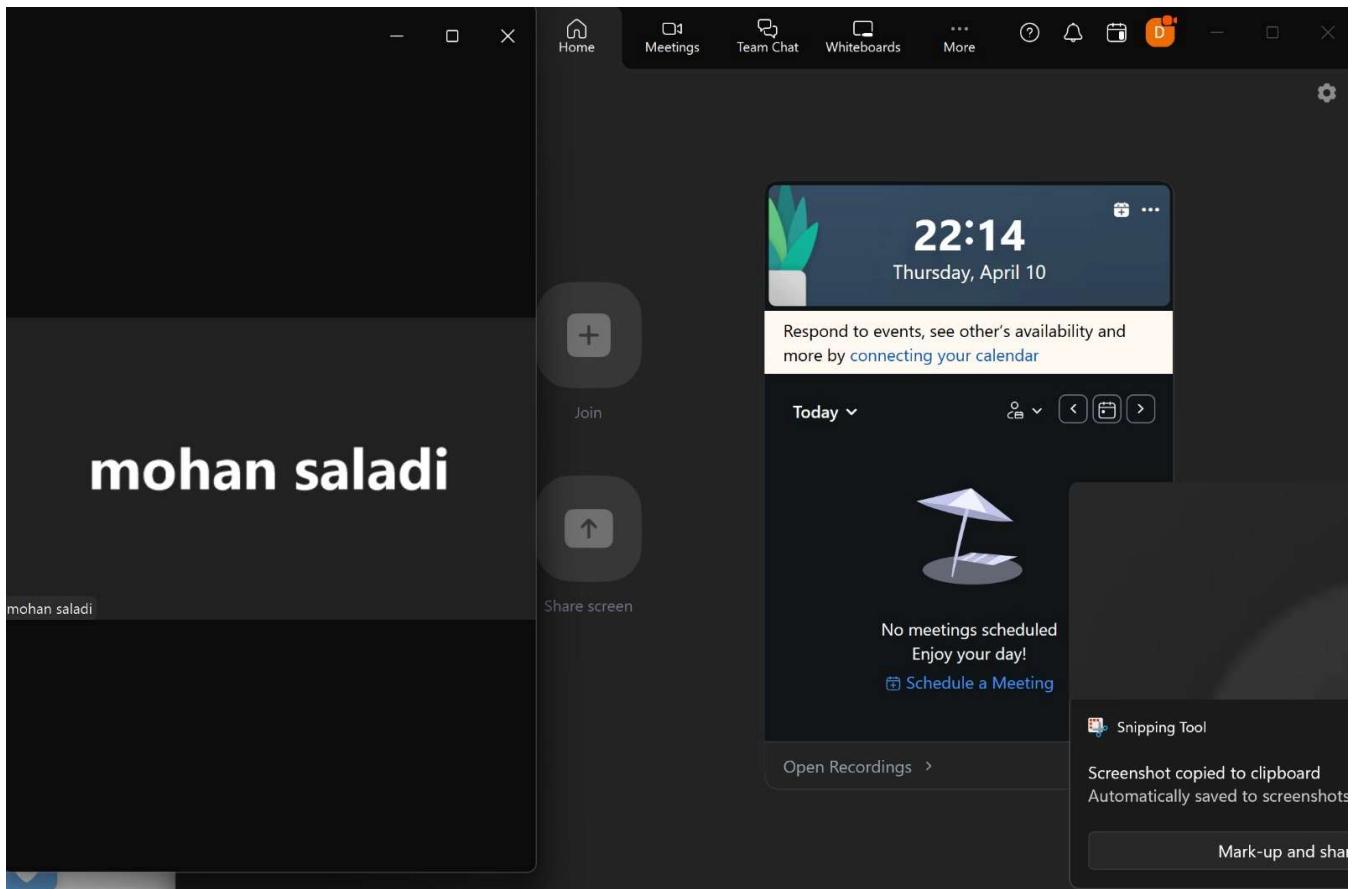


Zoom:

[Zoom](#) is a cloud-based video conferencing platform that allows users to hold virtual meetings, webinars, and online collaboration sessions. It provides features like screen sharing, breakout rooms, recording, and chat, making it useful for businesses, educators, and remote teams.

For a **Classroom Booking System**, Zoom can be integrated to schedule and generate meeting links for virtual classes or discussions. It can also be connected with **Type form** and **Zapier** to automate scheduling based on form submissions.

Output;





**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri

Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

1. Name of the Laboratory	:	Design Thinking and Innovation Lab
2. Name of the Student	:	S. MOHAN KUMAR
3. Roll No	:	24VV5A1273
4. Class	:	II B-Tech II Semester
5. Academic Year	:	2024-25
6. Name of Experiment	:	Define- Project Comparison and Tools
7. Date of Experiment	:	31-01-2025
8. Date of Submission of Report	:	17-01-2025

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

Signature of Faculty

2. Define – Identifying the Problem (Django Job Portal System)

Definition

The Define stage in Design Thinking focuses on clearly articulating the problem based on insights gathered during the Empathy stage. For the Django Job Portal, this step highlights the core challenges experienced by applicants, companies, and admins during the job search, recruitment, and platform management processes.

Purpose of the Define Stage

- To narrow down real user needs into a clear, actionable problem statement
- To avoid assumptions and focus on pain points observed through actual feedback
- To guide the next stages (Ideate, Prototype, Test) using a user-centered approach

Problem Statement Example

“Applicants, companies, and admins using our Django Job Portal face issues with unclear application workflows, inefficient job posting and tracking, delayed feedback/notifications, and lack of proper user-role-specific functionalities — resulting in a frustrating and disconnected experience for all stakeholders.”

Key Insights That Lead to the Problem Definition

- Applicants want a seamless application process with job status tracking and quick feedback.
- Companies need a centralized system to post/edit jobs and manage applicants easily.
- Admins are overwhelmed by manually handling user records, job listings, and application data.
- Lack of email alerts, role-based access, and real-time updates frustrates all users.

Tools used:

Smaply:

Smaply is a **journey mapping tool** that helps teams visualize, analyze, and improve **user experiences**. It allows users to create **customer journey maps, personas, and stakeholder maps** to design better products and services.

Key Features of Smaply

1. **Customer Journey Mapping** – Visualize user interactions step by step.
2. **User Personas** – Define user roles with goals, pain points, and needs.
3. **Stakeholder Mapping** – Identify key people influencing the system.
4. **Touchpoints & Pain Points** – Highlight critical interactions and challenges.
5. **Collaboration Tools** – Work with teams in real time.
6. **Data-Driven Insights** – Add graphs, notes, and images for better analysis.
7. **Export & Share** – Download journey maps as PDFs or images.

Output: <https://surl.li/mplnfy>

New account / Workspace

New journey - Thu 10 Apr late evening

Filter Views

Stage : design thinking madhumita mam jntu gv

Text : innovation collage teacher information technology

Emotion chart : Edit chart New Line

Support & Feedback

Enjoy HQ:

- EnjoyHQ, part of UserTesting's suite of research and analysis tools, is a powerful platform designed for centralizing, organizing, and sharing customer research in a single, accessible space. It acts as a unified hub for all user insights, helping teams make informed decisions faster and more effectively.
- By curating and analyzing customer data in one place, teams can uncover valuable insights that play a critical role in shaping customer stories and user personas. The ability to cross-reference customer feedback, user interviews, survey results, and support data provides a comprehensive understanding of user needs and behaviors—allowing for quicker and more confident decision-making.
- For optimal outcomes, it is essential to continuously integrate insights from your customer support, product, and design teams. Maintaining an archive of past research allows teams to revisit and learn from previous discoveries, thus reducing the need for repetitive user interviews and saving both time and resources.
- This approach aligns well with the Design Thinking methodology, particularly the early stages:
- Empathize: Understand the user's experiences and needs through observation and interaction.
- Define: Clearly articulate the user's problems and pain points, supported by curated insights from EnjoyHQ.

Output:

The screenshot displays the EnjoyHQ platform interface. On the left, a vertical sidebar menu includes options like Plan, Analysis, and Summary. The main area shows a dashboard titled "Understanding online booking and eboarding behavior". Below this, there are sections for "Recording of 2 interviews with ac..." and "User Interview Notes". The "User Interview Notes" section is expanded, showing a conversation between users Laura and John Cappel. The notes are timestamped at Mar 16th 19, 12:27PM. The interface features a clean design with a light blue header and a white background for the main content area.

Make my Persona :

A **Classroom Booking System** designed for students, teachers, and admins to manage classroom reservations efficiently. It offers real-time availability, booking management, and conflict resolution.

Key Features:

- **User Roles:** Students, Teachers, and Admins with role-based access.
- **Real-Time Scheduling:** Calendar view with conflict detection.
- **Notifications:** Automated emails/SMS for confirmations and reminders.
- **Smart Filtering:** Search by capacity, equipment, and availability.

Security:

Authentication and role-based permissions.

Output:

The screenshot shows the 'Make My Persona Overview' page from HubSpot. On the left, there's a sidebar with a profile picture of a dog named 'Charlie Avenir', followed by sections for Name (Teacher), Job Title (CLASSROOM BOOKING SYSTEM), Age (35 to 44 years), Highest Level of Education (Master's degree (e.g. MA, MS, MEd)), Social Networks (Facebook, Twitter, LinkedIn, Pinterest), Industry (Technology), and Organization Size (11-50 employees). The main area is a grid-based persona template with the following data:

Preferred Method of Communication	Tools They Need to Do Their Job
Email	Enter text here
Job Responsibilities	Their Job Is Measured By
Conducting classes	Team productivity
Reports to	Goals or Objectives
Admin	To conduct classes
They Gain Information By	Biggest Challenges
Enter text here	Communication

At the bottom of the grid, there's a button labeled 'Add New Section'.

<https://www.hubspot.com/make-my-persona?persona=-OMrGIH3GMnbq0wvfMB8>

Userforge

- Some of the best design thinking tools are those which are really good at a specific job. Userforge promises to help you create in-depth and realistic personas with less clicks than it takes most design software. You'll find templates and images to help speed up your process and make persona creation easier.
- We love that Userforge is easy to use and that anyone can create usable personas without design skills. It's a great tool to bring to a design sprint where you might invite people from your sales, dev or support teams and want to involve them throughout the process.
- Design thinking stages: Define

Output:

The screenshot shows the Userforge web application interface. At the top, there is a dark header bar with a logo, a 'Go Pro' button, a 'Support' link, and a user profile icon. Below the header, the navigation bar includes 'My Workspaces / design thinking', 'Sharing / Settings', and tabs for 'Personas', 'Stories', 'Flowmap', and 'Organization'. The main content area is titled 'All Personas' and features a large, stylized icon of a person with a speech bubble. Below the icon, the text reads 'Who is our audience? – a library of user personas by role...'. It lists examples: 'Website Visitor, Digital Nomad, Power User, Content Editor, Executive Sponsor'. At the bottom of this section are 'Learn More' and '+ Add Persona' buttons. The overall interface is clean and modern, designed for collaborative workspace management.



**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri

Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

1. Name of the Laboratory	:	Design Thinking and Innovation Lab
2. Name of the Student	:	S. MOHAN KUMAR
3. Roll No	:	24VV5A1273
4. Class	:	II B-Tech II Semester
5. Academic Year	:	2024-25
6. Name of Experiment	:	Ideate- Project Comparison and Tools
7. Date of Experiment	:	17-01-2025
8. Date of Submission of Report	:	21-01-2025

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

Signature of Faculty

3. Ideate – Brainstorming Solutions (Django Job Portal System)

Definition

The Ideate stage is the third phase of Design Thinking. The goal here is to brainstorm a variety of creative solutions to the problems identified in the Define stage. For the Django Job Portal System, this means thinking about how to improve the job application process, streamline job posting for companies, and simplify platform management for admins.

Purpose of the Ideate Stage

- Encourage creative and judgment-free brainstorming
- Explore multiple solutions to platform challenges
- Leverage team insights from applicants, recruiters, and admins
- Discover innovative features beyond standard job boards

Ideation Based on Defined Problems

- | | |
|-----------------------|---|
| 1. Identified Problem | 2. Sample Ideas/Features |
| 3. Double bookings | 4. Add real-time availability checker and calendar view |
| 5. Manual approvals | 6. Implement automated approval system with rules |
| 7. Lack of visibility | 8. Design a room availability dashboard for users |
| 9. Time confusion | 10. Add time-slot selector with warnings for overlaps |
| 11. User confusion | 12. Role-based dashboards for admins, users, companies |

Sample Brainstormed Features

- Role-based login and dashboards (Applicant, Company, Admin)
- Applicant Job Tracker showing application status and history
- Company Panel to manage job posts and view applicants efficiently
- Admin Panel with CRUD functionality for users, jobs, and applications
- Automated email notifications for job applications and updates

Related Creative Techniques:

Osborn's Brainstorming Rules

1. Defer judgment
2. Go for quantity
3. Encourage wild ideas
4. Combine and improve ideas
Used to improve or evolve current ideas.

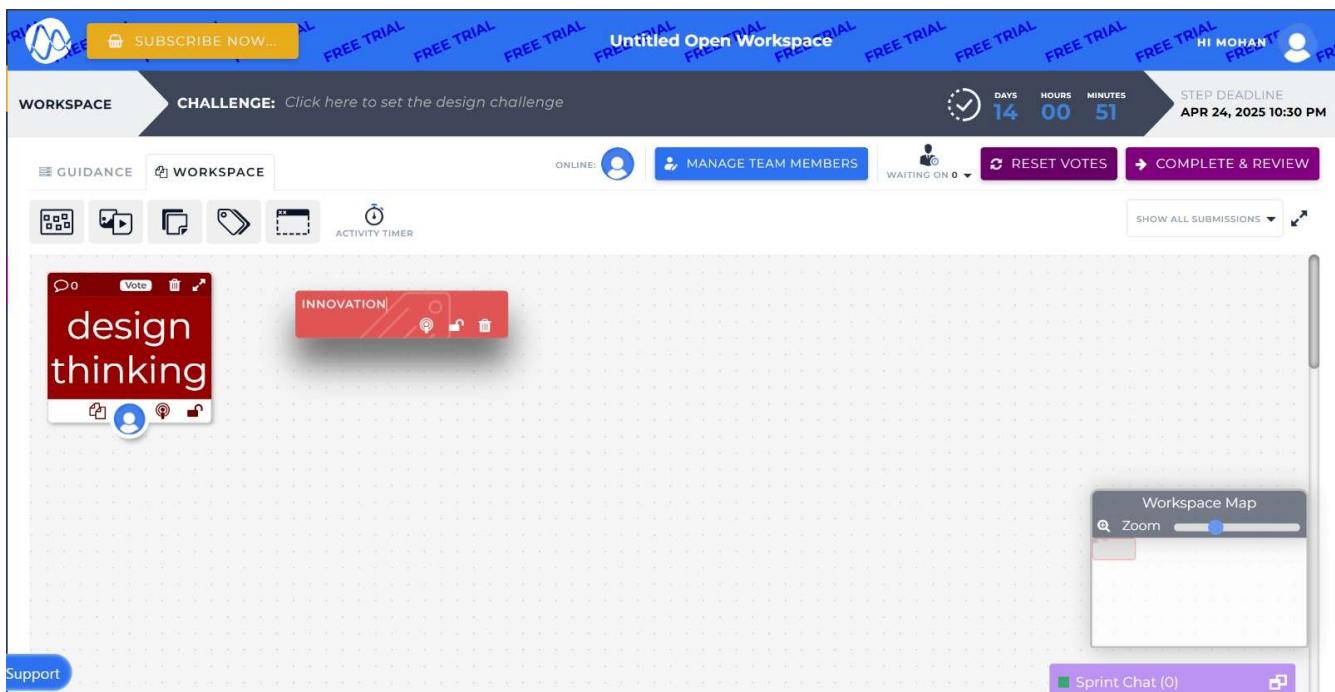
Tools used:

Season lab:

Session Lab is a workshop and session planning tool designed for educators, trainers, and event organizers. It helps users create structured schedules, manage sessions, and collaborate in real time. The drag-and-drop interface makes it easy to design, edit, and share interactive session plans for classrooms, training programs, and conferences.

- Drag-and-Drop Interface – Easily create and adjust sessions with a visual planner.
- Real-Time Collaboration – Work together with teachers, trainers, or admins on the same schedule.
- Time Management – Set precise durations for sessions and automatically adjust timing.
- Template Library – Access pre-made templates for lesson planning, workshops, and meetings.

output



Batterii

Batterii is an open platform for visual thinkers and designers to get on the same page, structure their thoughts and create more visually. You can browse through templates including empathy maps and customer journey maps to stakeholder analysis. • With the Batterii communities feature, you can co-create with users and collect insights easily before collaboratively organising the information collected to support your design process.

Output:

The screenshot displays the Batterii platform's interface. At the top, there is a navigation bar with icons for home, star, file operations (upload, download, move, copy, delete), a smiley face, and a three-dot menu. On the right side of the top bar are status indicators ('2 online'), user profiles, and buttons for 'Share' and 'Export'. Below the top bar, there are two main sections separated by a vertical line. The left section is titled 'Sustainability' and features a grid of images related to green interior design, each accompanied by a yellow sticky note. The right section is titled 'Statement furniture' and shows a yellow armchair and a few other items, also with associated sticky notes. A user profile icon for 'Samuel' is shown near the bottom right of the 'Statement furniture' board. On the far left, there is a sidebar with icons for list view, search, filter, and settings. At the bottom right of the main workspace, there is a zoom control panel with icons for zoom in/out and a percentage indicator set at 100%.

Mind Meister - Key Features & Description

Description

- Online **mind mapping tool** for organizing ideas.
- Used for **brainstorming, planning, and collaboration**.
- Works on **web, mobile, and tablets**.

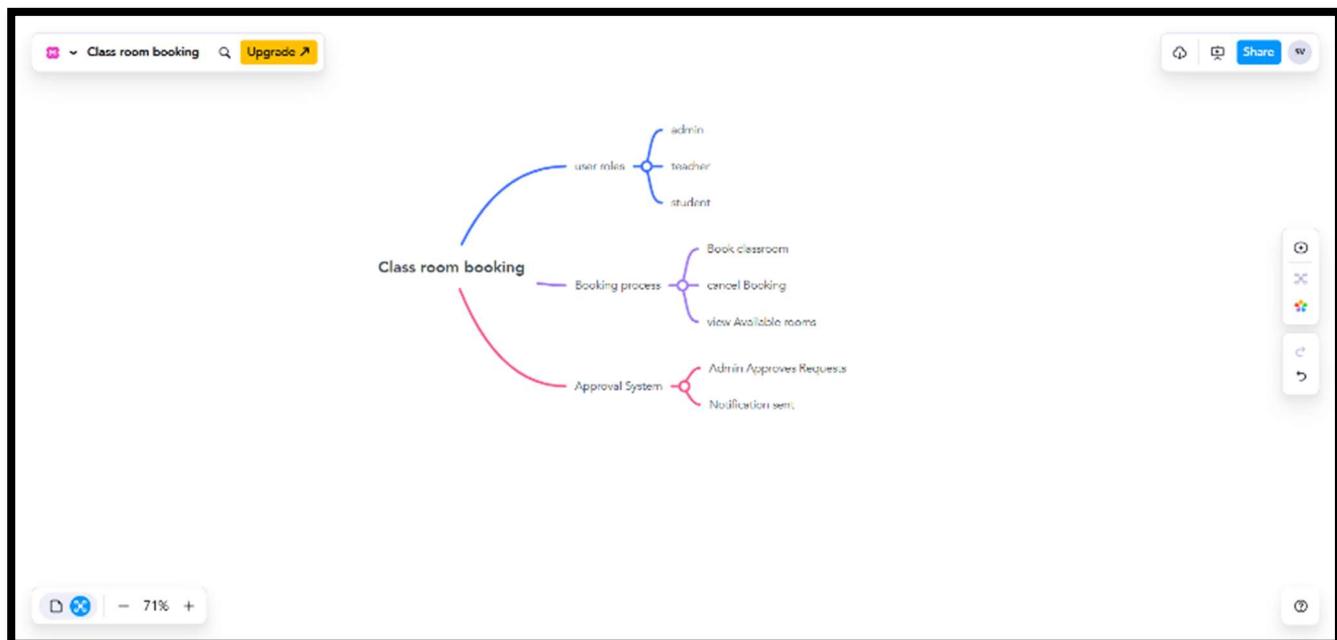
Key Features

- **Visual Mind Mapping** – Create & customize structured diagrams.
- **Real-Time Collaboration** – Multiple users can edit & comment.
- **Task Management** – Assign tasks, set due dates, and track progress.
- **Integrations** – Works with **Google Drive, Microsoft Teams, Trello**.
- **Security** – Auto-save, encrypted storage, and role-based access.

Why do we use MINDMESTER?

- a) Enhances creativity and productivity with structured brainstorming.
- b) Simplifies complex concepts through visual organization.

Output:



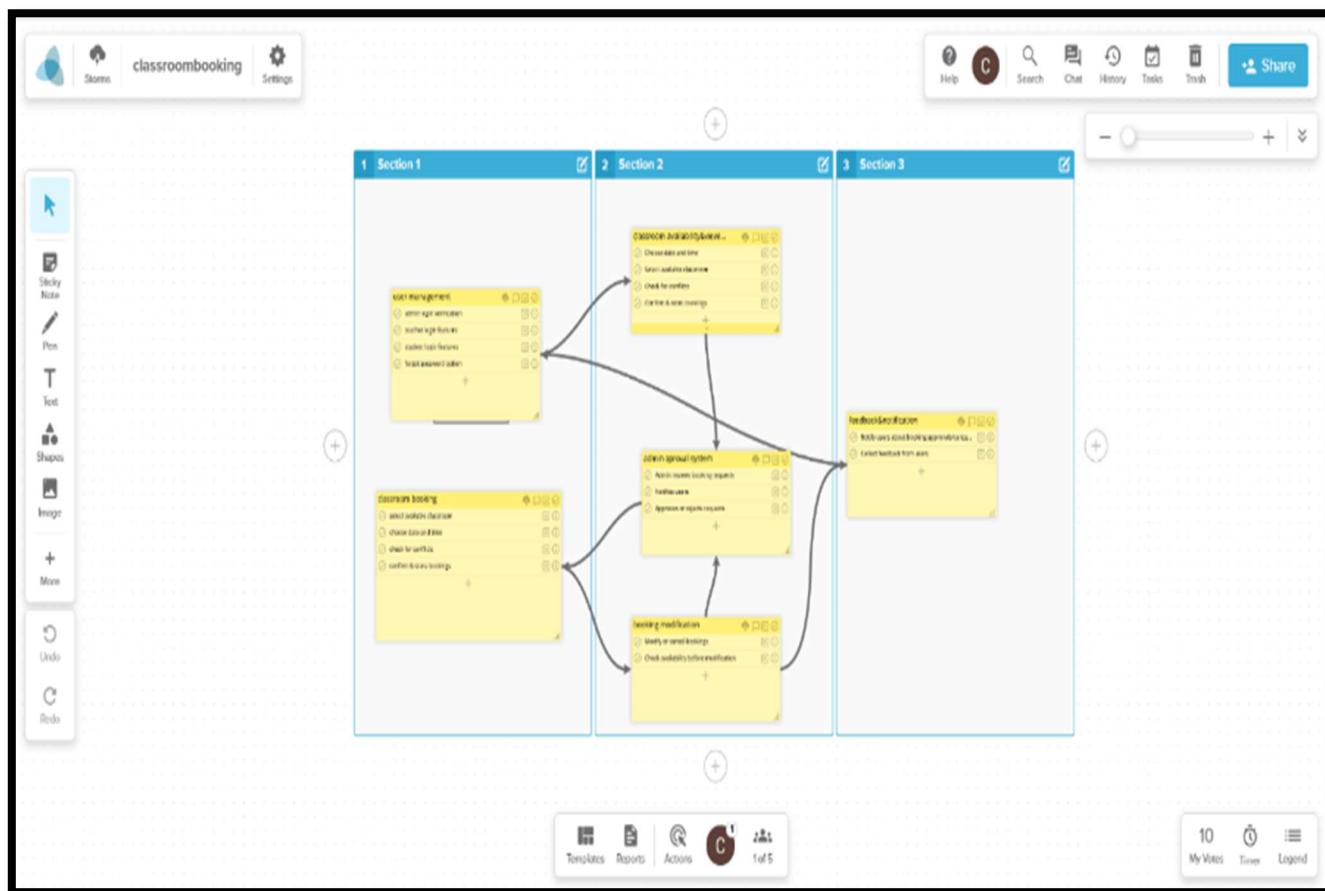
<https://mm.tt/app/map/3666893312?t=6e1pjJfBdF>

STORM BOARD:

Storm board is an online collaboration and brainstorming platform that allows teams to work together using virtual sticky notes, whiteboards, and templates. It helps in organizing ideas, managing workflows, and improving productivity in meetings, workshops, and project planning.

1. Key Features of Storm board
2. Sticky Notes & Index Cards – Add and organize ideas easily.
3. Sections & Templates – Structure your board with predefined frameworks.
4. Collaboration – Work with teams in real time from anywhere.
5. Task Management – Assign tasks and track progress.
6. Integrations – Connect with tools like Jira, Asana, and Trello.
7. Export & Reporting – Save boards in multiple formats for sharing.

Output:



Miro : Description & Keywords

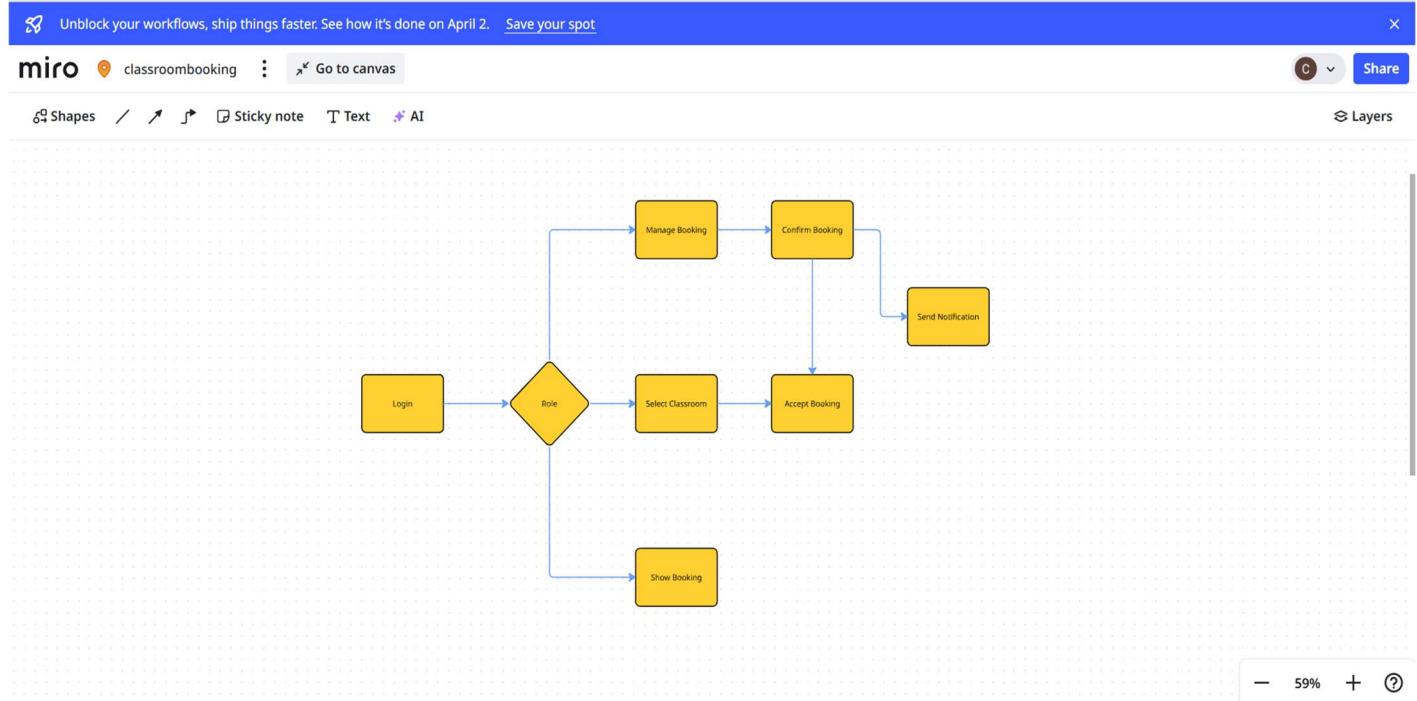
A visual planning board for designing and managing a University carrier service platform. This board includes a process flowchart, wireframes for UI design, and a Kanban board for tracking development progress. It helps visualize user roles (Admin, Teacher, Student) and system workflows such as booking, approval, and notifications.

Key features:

1. Drag & Drop Tools – Sticky notes, text boxes, shapes, and images.
2. Flowchart & Diagramming – Create workflows & system architectures.
3. Real-Time Collaboration – Edit, comment, and brainstorm with teams.
4. Task Management – Kanban boards for tracking project progress.
5. UI/UX Wireframing – Design app layouts before coding.
6. Integration Ready – Works with Jira, Slack, Google Drive, etc.
7. Export & Present – Download as PDF, PNG, or CSV for documentation.
8. AI-Powered Tools – Smart mind mapping, summarization & automation.

Output:

https://miro.com/welcomeonboard/MlkyUDdTMlhCLzIWWWhUMWN4M0VmRkJuTVd1ekpUWFg1U3puRXhLYjMrSXFwbkRoeEg4L3kyNTN0VWZCNGdneE5xc3pTYINUAJQeGtHZmhqWWwvVnVpT1VzYnJ0MED0NlhUQWJPk2M0U3ZSzsrVUhOMmhDUFkxVDMvM0kvQ0lhWWluRVAXeXRuUUgwWDl3Mk1qRGVRPT0hdjE=?share_link_id=324324072104





**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri
Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

- | | | |
|---------------------------------|---|---|
| 1. Name of the Laboratory | : | Design Thinking and Innovation Lab |
| 2. Name of the Student | : | S. MOHAN KUMAR |
| 3. Roll No | : | 24VV5A1273 |
| 4. Class | : | II B-Tech II Semester |
| 5. Academic Year | : | 2024-25 |
| 6. Name of Experiment | : | Prototype- Project Comparison and Tools |
| 7. Date of Experiment | : | 21-02-2025 |
| 8. Date of Submission of Report | : | 07-03-2025 |

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

Signature of Faculty

4. Prototype – Creating a Model (Django Job Portal System)

Definition

The Prototype stage in the Design Thinking process focuses on creating simplified working versions of your Django Job Portal to explore and test ideas. It helps validate how applicants, companies, and admins interact with the platform before full-scale development or deployment.

Purpose of Prototyping

- To visualize core features and workflows of the job portal
- To gather early user feedback from applicants, companies, and admins
- To test usability, accessibility, and system flow
- To identify any flaws, user experience gaps, or missing features

Types of Prototypes You Can Build

Type	Description	Example for Booking System
Low-Fidelity	Sketches, wireframes, or simple mockups	Paper layouts of dashboard or calendar
Mid-Fidelity	Clickable Figma designs or mock UIs	Room selection flow, approval screen
High-Fidelity	Functional demo with code	Django web app or HTML/CSS interface

What to Prototype in the Classroom Booking System

- Login Pages for Role-Based Access
- Applicant Dashboard
- Company Dashboard
- Admin Dashboard
- Application Form

Tools for Prototyping

1. Figma / Adobe XD – Design interactive wireframes
2. Draw.io – Flowcharts or structure
3. HTML/CSS/JS – Build quick frontend mockups
4. Django/Flask – Create working backend + UI models

Tools used:

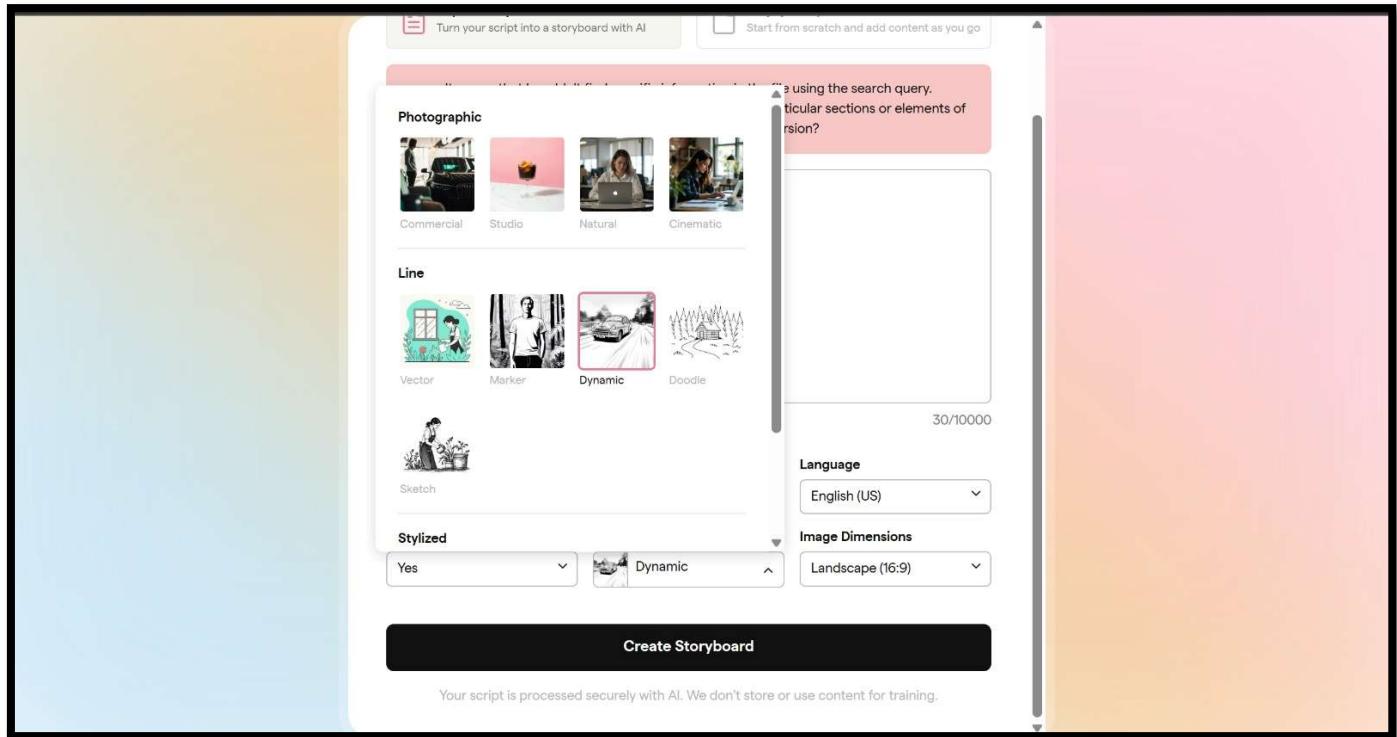
Boards – Storyboarding Made Simple

Boord's is an online storyboarding tool that helps users create, edit, and collaborate on storyboards efficiently. It is widely used by filmmakers, animators, UX designers, and developers for visualizing concepts before production.

Key Features of Boards:

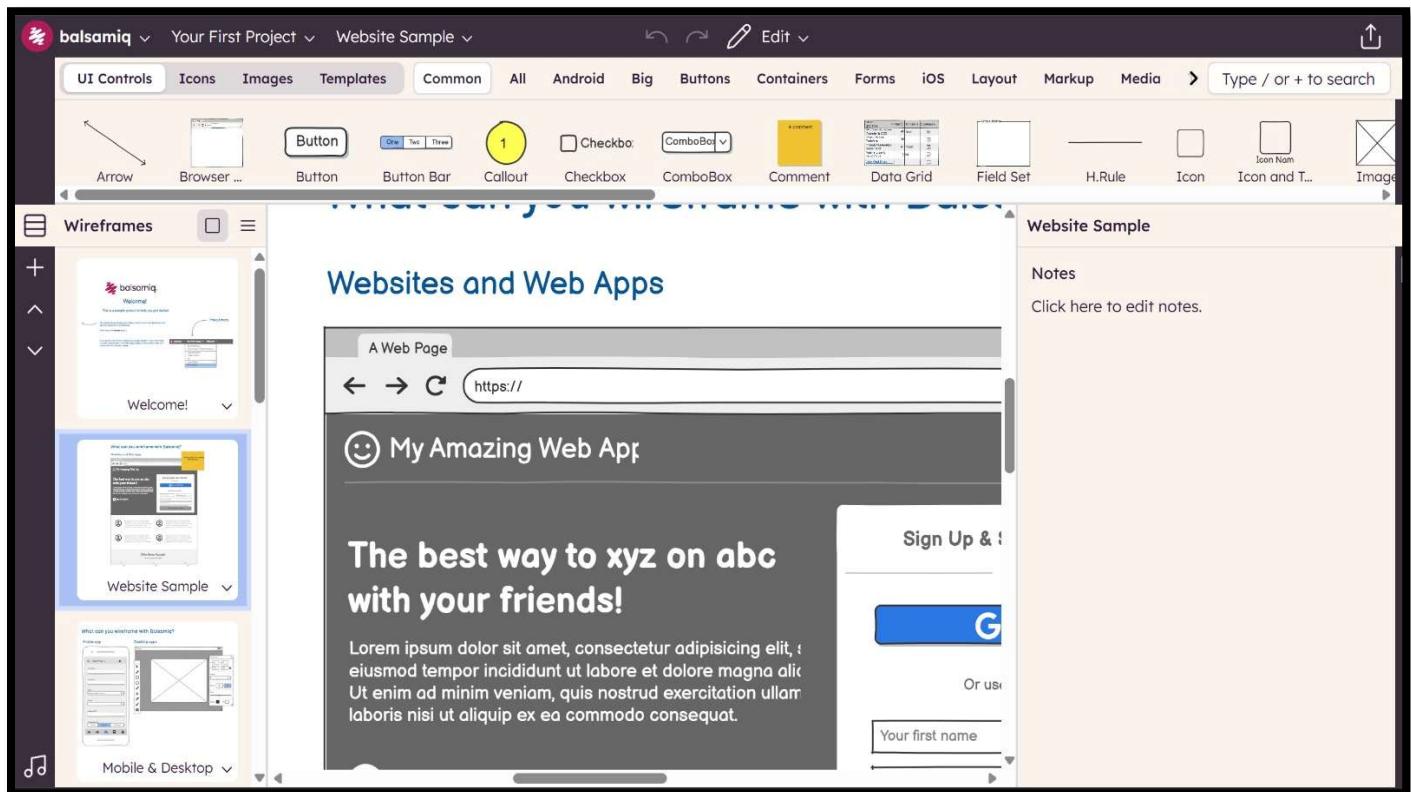
- Drag-and-Drop Interface – Easily add and rearrange frames.
- Pre-built Templates – Ready-to-use layouts for quick storyboarding.
- Collaboration Tools – Share and receive feedback in real-time.
- Script & Notes Integration – Add descriptions, dialogues, and actions to each frame.

output:<https://app.boords.com/s/3on218/frame>



Balsamiq:

Balsamiq is a widely used low-fidelity wireframing and prototyping tool that stands out for its clean, intuitive, and user-friendly interface. It is designed to replicate the speed and simplicity of sketching ideas on paper, making it especially well-suited for brainstorming, ideation, and early-stage design. The tool offers a range of pre-built UI elements and components that can be



Figma:

Description and Overview

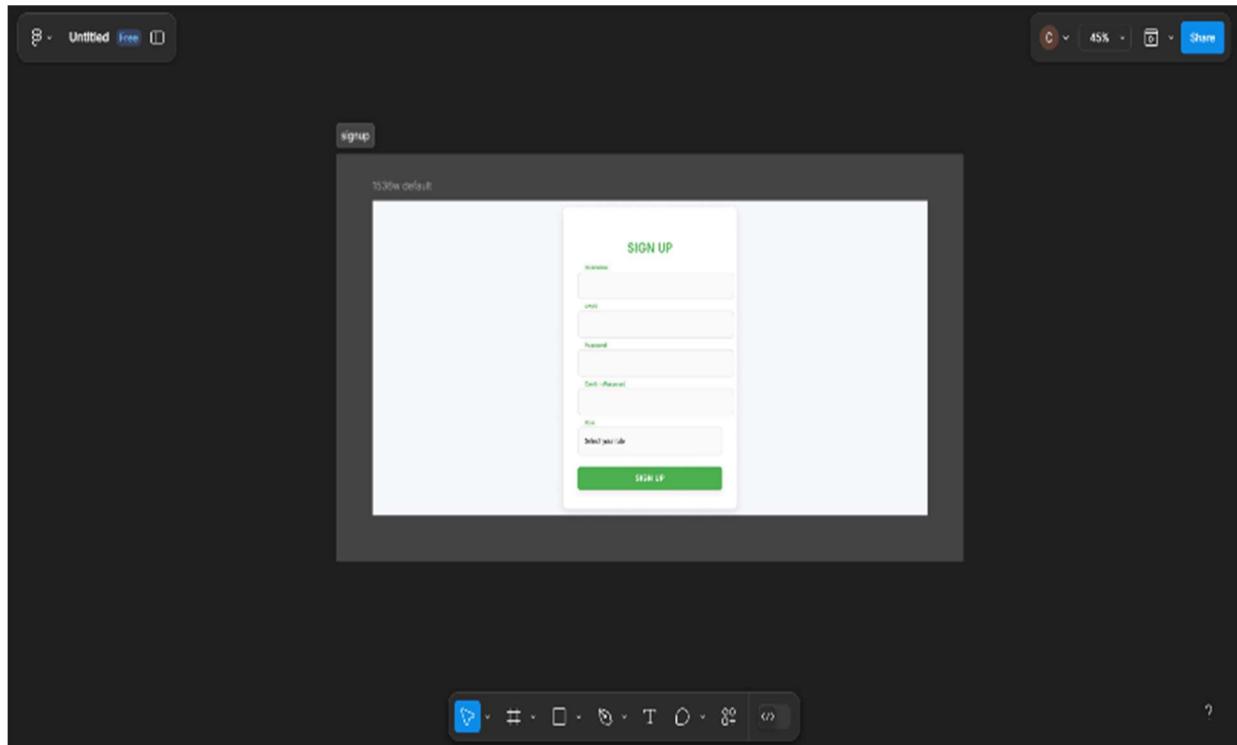
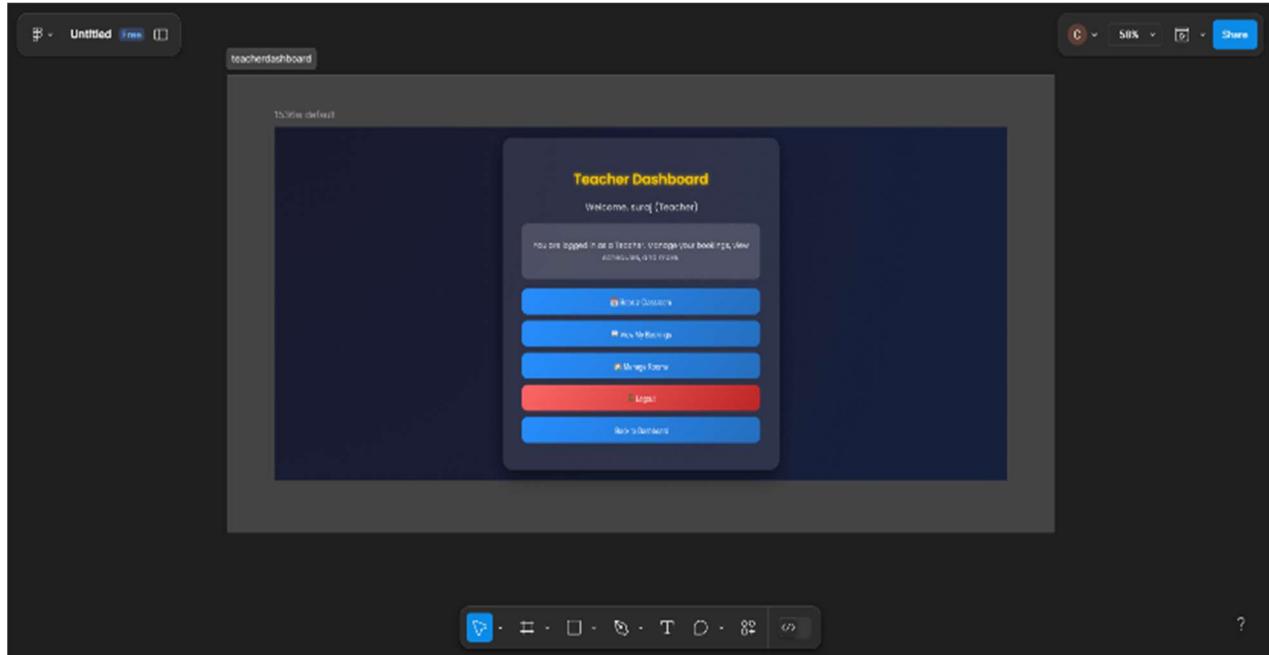
Figma is a cloud-based design and prototyping tool used for UI/UX design, wireframing, and collaboration. It allows designers, developers, and teams to create, test, and share digital designs in real time. Unlike traditional design tools, Figma operates entirely in the browser, making it highly accessible and ideal for remote collaboration.

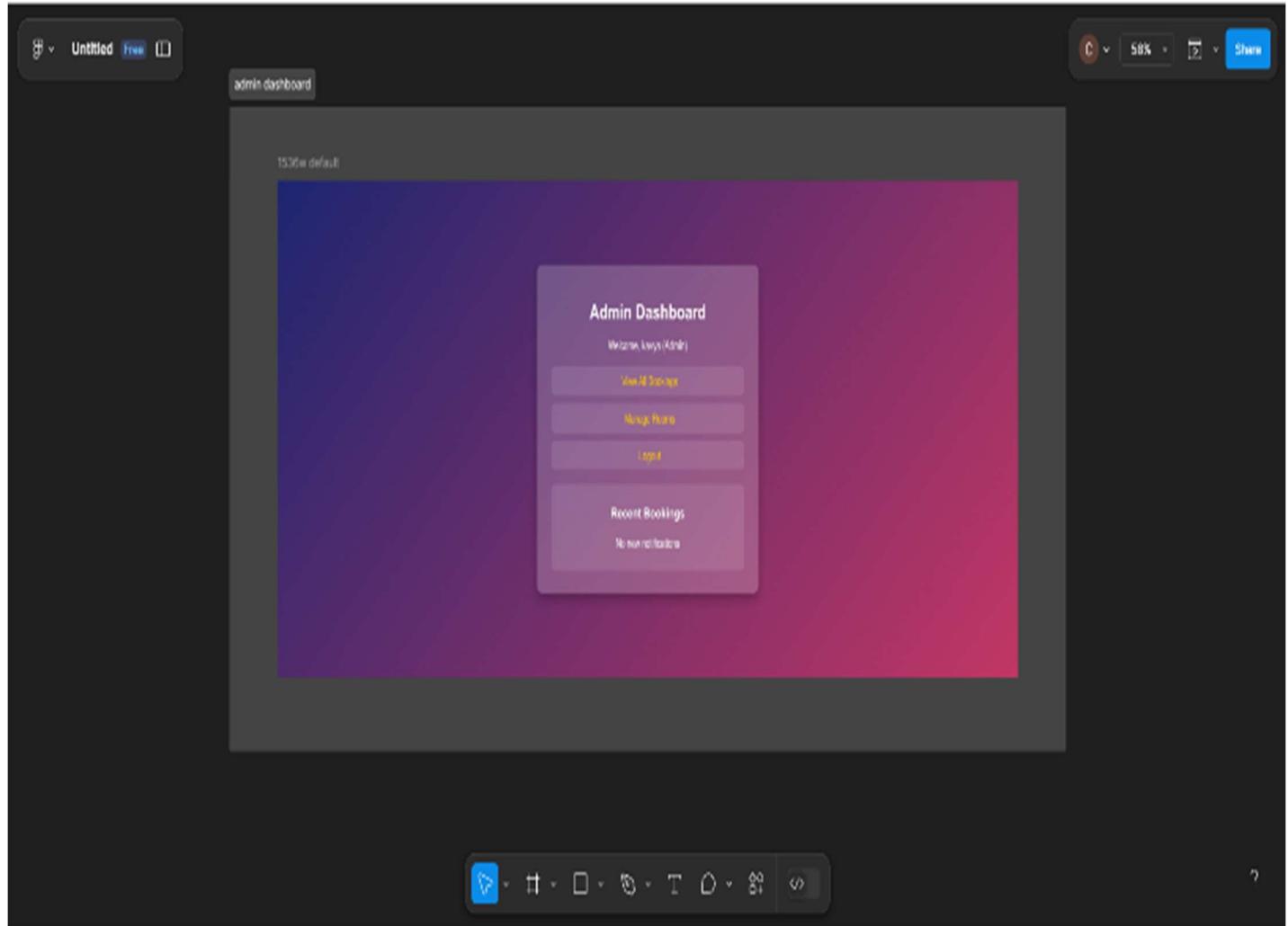
Features of figma:

1. Cloud-Based Design Tool
2. Real-Time Collaboration
3. Advanced UI/UX Design Capabilities

4. Prototyping & User Testing
5. Design System & Component Libraries

Output:





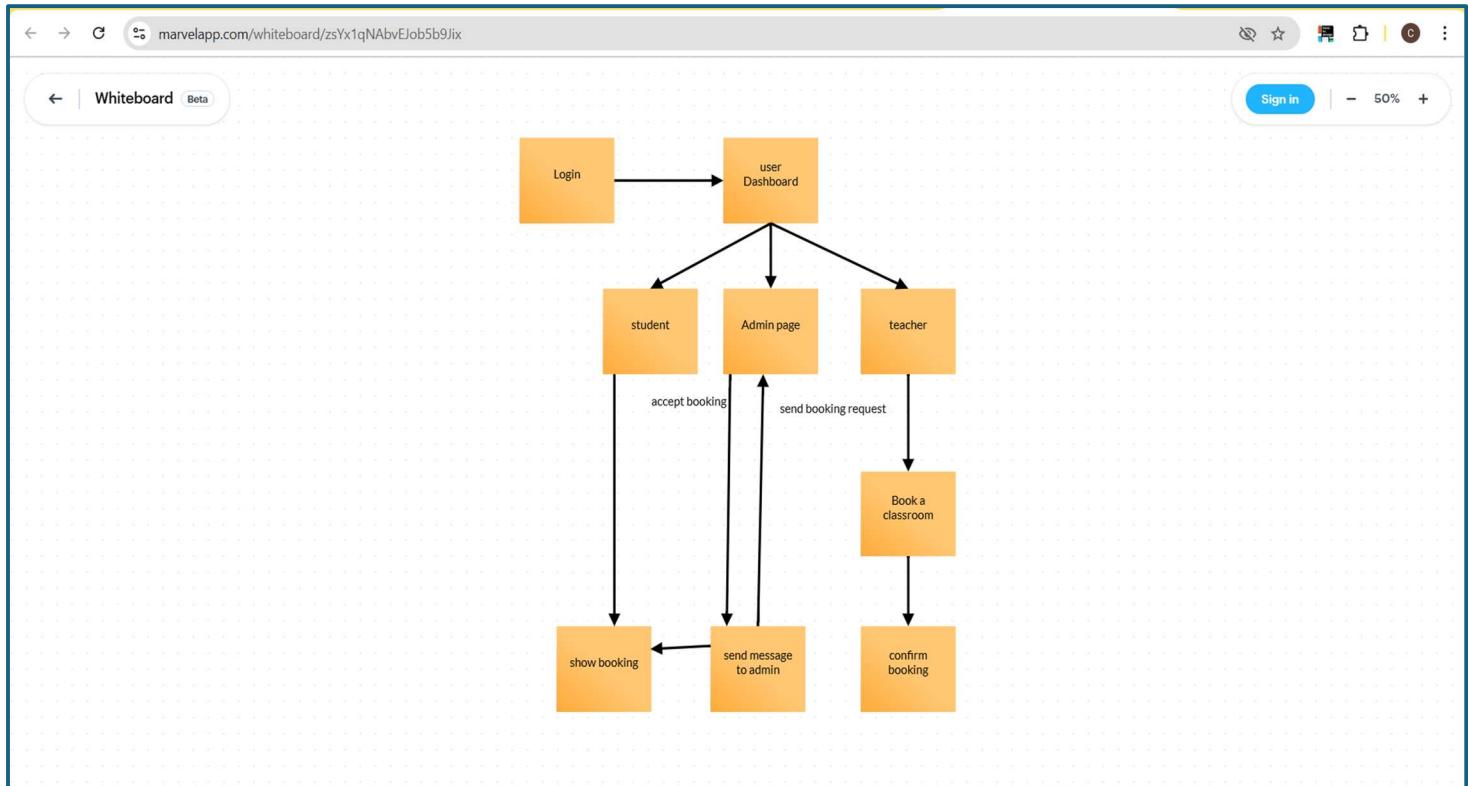
Description of POP :

Point of Presentation (POP) is a concise and structured way to describe a topic, concept, or idea, focusing on its key aspects in a clear and presentable format. POP is commonly used in academic assignments, presentations, and exams to give quick, impactful insights into a subject. It helps in summarizing important points, making the explanation easy to remember and visually appealing.

Key Features of POP:

1. Brief and Clear: Focuses on delivering maximum information in minimal words.
2. Well-Structured: Includes headings, bullet points, or short paragraphs.
3. Highlight-Oriented: Emphasizes definitions, features, applications, and relevance.
4. Presentation-Friendly: Ideal for PowerPoint slides, charts, or oral presentations.
5. Scoring Tool: Widely used in exams and assignments for 5- to 10-mark questions.

Output: <https://marvelapp.com/whiteboard/zsYx1qNAbvEJob5b9Jix>





**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri

Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

1. Name of the Laboratory	:	Design Thinking and Innovation Lab
2. Name of the Student	:	S. MOHAN KUMAR
3. Roll No	:	24VV5A1273
4. Class	:	II B-Tech II Semester
5. Academic Year	:	2024-25
6. Name of Experiment	:	Test- Project Comparison and Tools
7. Date of Experiment	:	07-03-2025
8. Date of Submission of Report	:	27-03-2025

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

Signature of Faculty

5. Test – Evaluating the Prototype (Django Job Portal System)

Definition

The Test stage in Design Thinking is where you evaluate the functionality and usability of your Django Job Portal by testing it with real users—such as applicants, companies, and administrators. It involves collecting feedback, identifying pain points, and making improvements to ensure the system solves the intended problems effectively.

Purpose of the Testing Stage

- Assess usability and core functionality
- Validate if the portal solves user problems like manual job tracking or messy application management
- Identify bugs, confusing UI elements, or broken flows
- Collect feedback for further refinement before launch

What to Test in the Classroom Booking System

Feature	What to Test	Example
Login system	Role-based access	Can users log in as teacher/student/admin correctly?
Room booking form	Simplicity and clarity	Is the form easy to fill? Are errors handled well?
Booking calendar	Availability view	Can users clearly see available and booked slots?
Admin panel	Approval/rejection flow	Does the admin interface help manage requests easily?
Notifications	User alerts	Do users get alerts when their booking is accepted or rejected?

Testing Methods

Usability Testing

- Watch applicants apply for jobs, companies post listings, and admins approve/reject.

Surveys & Feedback Forms

- Ask each user group what they found helpful, difficult, or missing.

Bug Tracking

- Maintain a list of glitches, UI flaws, and backend issues that appear during testing.

A/B Testing

- Try two designs for job listings or dashboards to see which is more user-friendly.

Involving Real Users

Involve representatives of each user group:

Users— Apply for Job

Students – Add jobs

Admins – Manage Job requests

Iterate Based on Feedback

Testing is not the end—it's a chance to **improve the system further**. Feedback helps fix problems, improve usability, and ensure the system is truly solving user needs.

Key Points:

- Test the prototype with users.
- Observe user behavior and reactions.
- Collect feedback.
- Identify what works and what doesn't.
- Make improvements based on results.
- Repeat if necessary.

TOOLS:

UserTesting:

UserTesting is one of the most recognized and widely used platforms in the field of user experience (UX) research. It allows designers and researchers to recruit users based on specific testing needs—whether it's for a mobile app, a website, or a digital product. The platform records user interactions in real-time, capturing every action, click, scroll, and hesitation. This enables researchers to observe how users naturally interact with their design and identify where confusion, friction, or delight occurs. The insights gained are invaluable for understanding real user behavior beyond assumptions.

Output:

The screenshot shows the UserTesting website homepage. At the top, there is a blue header bar with a white speech bubble icon on the left and a bell icon, a search bar, and a user profile icon on the right. Below the header, a main message reads "Set up your test in minutes" and "You'll get feedback in about 1 hour." Three large cards are displayed horizontally below this message:

- Prototype**: Shows a smartphone icon with a wireframe interface. Below it is a list:
 - InVision, Axure, and more
 - Your own prototype URLA blue button at the bottom says "Test a Prototype".
- Website**: Shows a computer monitor icon with a web page. Below it is a list:
 - Computers
 - Smartphones
 - TabletsA blue button at the bottom says "Test a Website".
- App**: Shows a smartphone icon with a mobile app interface. Below it is a list:
 - iOS
 - Android
 - Unreleased appsA blue button at the bottom says "Test an App".

At the bottom center of the page, there is a link that says "Learn about our other capabilities".

Pingpong

PingPong is a user research and usability testing platform that helps designers, developers, and product teams connect with real users for remote interviews and testing sessions. It simplifies the recruitment process by allowing researchers to find participants based on specific demographics, job roles, or behaviors relevant to their product or service. The platform supports live video calls, session recording, note-taking, and collaborative features, making it easy to conduct qualitative research from anywhere. One of PingPong's standout features is its access to a large pool of high-quality, pre-screened participants, which significantly reduces the time needed to source and schedule interviews. With flexible scheduling tools and GDPR-compliant processes, PingPong is especially well-suited for international user research. Whether you're validating a prototype, exploring user needs, or testing final designs, PingPong helps teams gather actionable insights quickly and effectively.

Output:

The screenshot shows a web-based user recruitment form titled "Which type of users would you like to speak to?". The form is divided into sections for "Education and professional background" and "Mobile device".

Education and professional background

- Education: High school graduate, Bachelor's degree, Master's
- Employment status: employed for wages
- Industry: Finance, Internet and Telecoms
- Job title: Any job title

Mobile device

- What mobile device should they use?: iPhone (selected)
- iPhone type: Any iPhone type

Please answer the following questions

Before booking a session, we'd like to know a bit more about you. This ensures we're finding the right people for the research and we're not wasting your time.

Respond honestly. Answering the question(s) inaccurately can result in unpaid session.

How often do you do user interviews?

- (radio button) On a monthly basis
- (radio button) A few times a year
- (radio button) I don't do user interviews

How often do you moderate user tests?

- (radio button) On a monthly basis
- (radio button) A few times a year
- (radio button) I don't moderate user tests

Which of these tools do you use regularly for UX research?

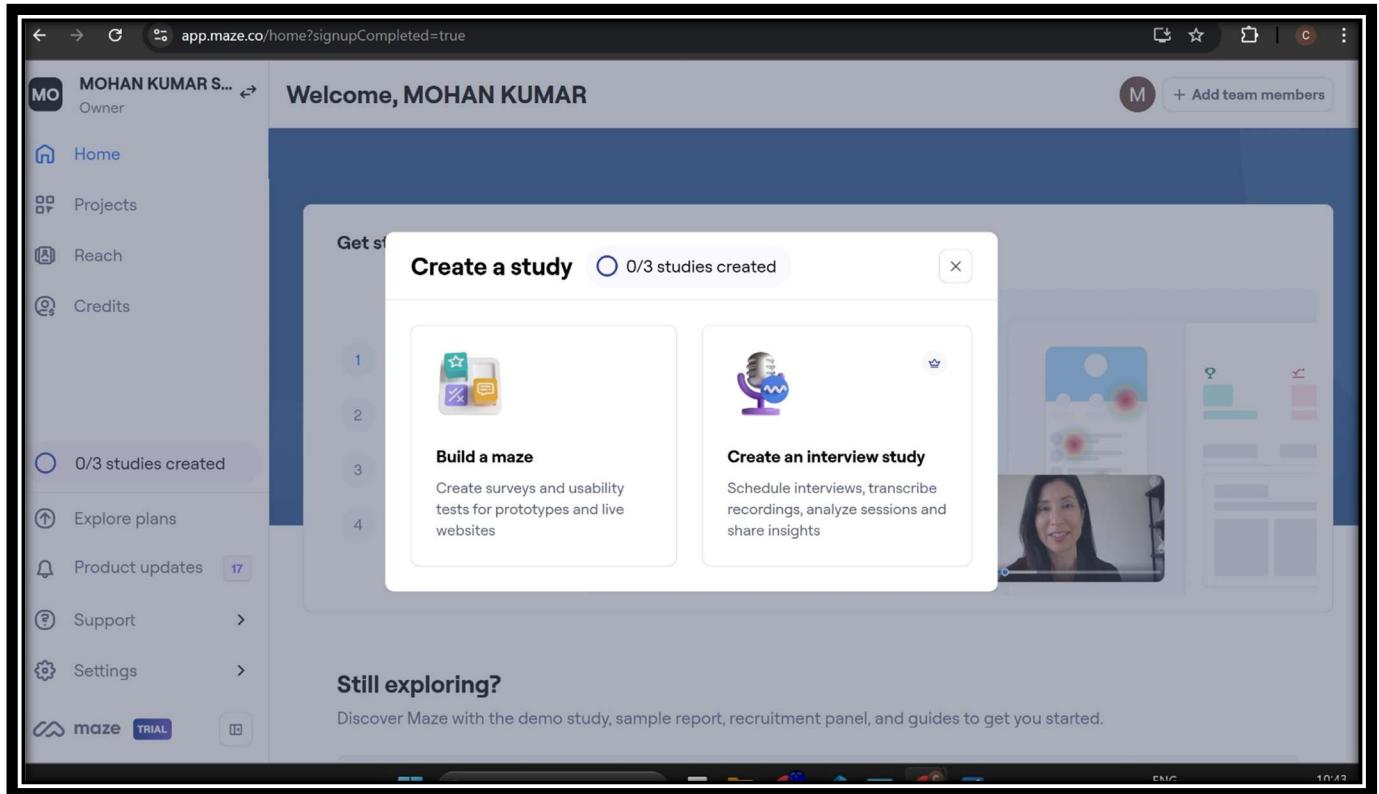
- (radio button) Validately
- (radio button) UserZoom
- (radio button) UserTesting.com
- (radio button) Lookback
- (radio button) UsabilityHub
- (radio button) Respondent/Usertree views / TestingTime
- (radio button) Hopper
- (radio button) Other / None

I agree to share my responses and profile data with Pingpong UX Limited [See what information will be shared](#)

Continue

Maze:

Maze is a modern, user-friendly platform designed for remote user testing and product research, enabling teams to validate design ideas and gather feedback early in the product development process. It integrates seamlessly with leading design tools like Figma, Adobe XD, Sketch, and InVision, allowing designers to import their wireframes or prototypes and turn them into fully interactive usability tests. Without needing to write a single line of code, teams can set up tasks for users, such as clicking through a prototype, answering follow-up survey questions, OUTPUT:



VWO:

- At its heart, VWO is a digital optimisation platform that focuses on A/B testing web-based experiences. If you're testing different solutions on your website or web-based apps, VWO makes it easy to create, run and optimize experiments and test at speed. After it's been implemented, it's possible to run tests based on user feedback without needing to fiddle with server-side code.
- For anyone looking for online tools to replace the now defunct Google Optimize, VWO is a great tool that can help you find the best solution from various experiments and tests. It also has an analytics suite featuring heatmaps and funnel analyses too!
- Design thinking stages: Empathize, Prototype, Test

Output:

Design Thinking Analysis for Classroom Booking System

Empathy – Understanding the User

Users: users, admin, companies

Pain Points: Genuine jobs, no real-time updates, manual approval delays.

Output: User needs documented, personas created, expectations defined.

Define – Identifying the Problem

Problem Statement: Users applying for job, and companies adding jobs were there is a chance of frauds so we need to solve that

Output: List of key features (role-based login, notifications, admin approvals).

Ideate – Brainstorming Solutions

Solutions: Real-time booking calendar, email/SMS notifications, role-based authentication.

Output: Defined tech stack (Django, PostgreSQL, Bootstrap), UI wireframes, possible enhancements.

Prototype – Creating a Model

Features: Basic login, classroom availability view, booking, modification, admin approval.

Output: Functional prototype running on <http://127.0.0.1:8000/>, database setup, basic booking workflow.

Test – Evaluating the Solution

Testing: Users Job applying, feedback collected, bugs fixed.

Output: UI improvements, faster response times, resolved booking conflicts.

Implement – Deploying & Improving

Deployment: Live domain setup, email verification, continuous improvements.

Output: Fully functional, optimized, and secure classroom booking system.



**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri

Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

1. Name of the Laboratory	:	Design Thinking and Innovation Lab
2. Name of the Student	:	S. MOHAN KUMAR
3. Roll No	:	24VV5A1273
4. Class	:	II B-Tech II Semester
5. Academic Year	:	2024-25
6. Name of Experiment	:	Data Flow Diagram
7. Date of Experiment	:	27-03-2025
8. Date of Submission of Report	:	27-03-2025

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

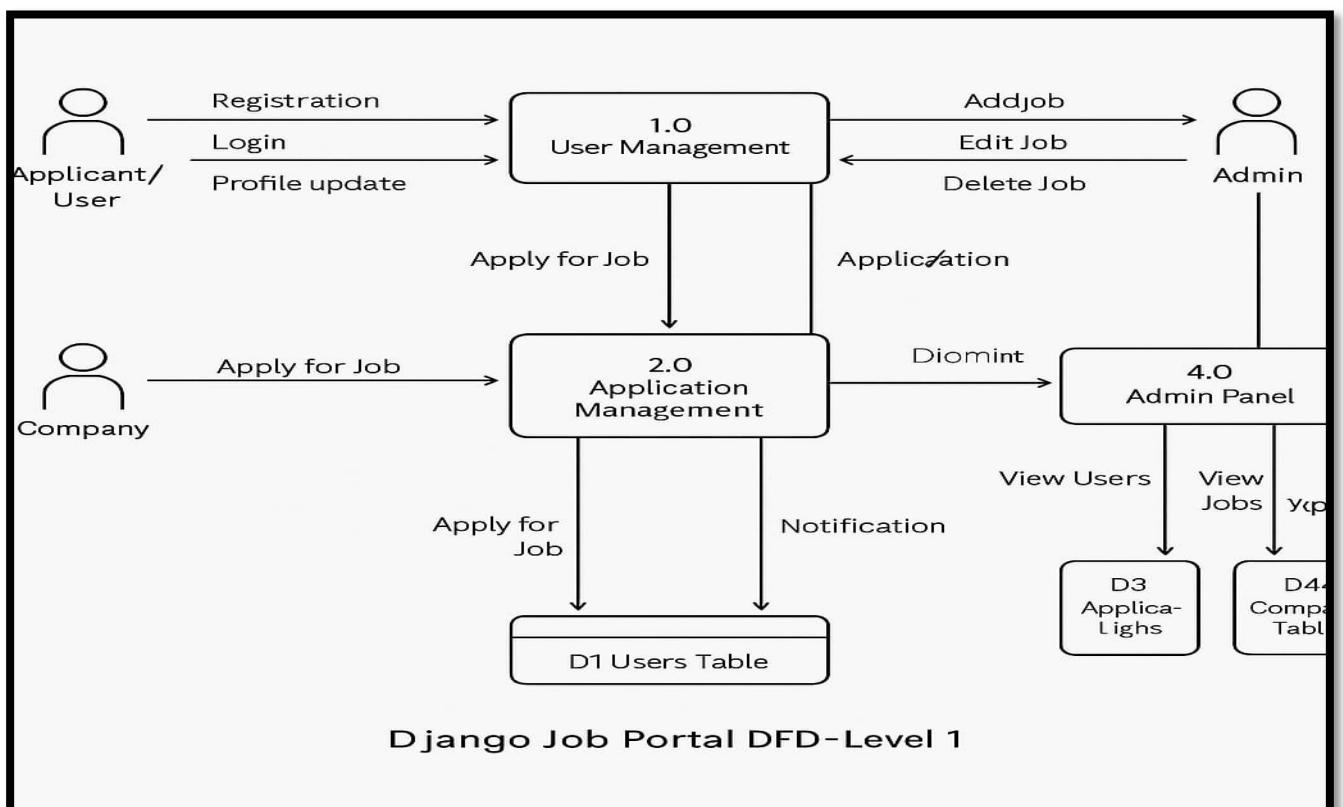
DATE:

Signature of Faculty

Data Flow Diagram (DFD)

A **Data Flow Diagram (DFD)** is a graphical representation of the **flow of data** within a system. It shows **how data moves** between processes, external entities, and data stores without specifying how the system is implemented (such as programming logic or database structures).

DATAFLOW DIAGRAM:



Explanation of the Data Flow Diagram (DFD) for Classroom booking

The diagram represents the flow of data and processes involved in managing the mentorship platform. The key components and their interactions are:

1. Admin (Central Processing Unit)

- The Admin oversees user management, booking approvals, and schedule monitoring.
- Responsible for managing available classrooms and resolving booking conflicts.

2. Login & Authentication

- Users (Admins, users and companies) provide login credentials.
- The system verifies credentials from the **User Database**.
- If valid, users gain access to the platform with their respective permissions.

3. User Registration

- New users (users and companies) sign up with their details.
- The system stores the details in the **User Database**.
- Admin verifies and approves registrations before granting access.

4. Feedback System

- After a booking is completed, users can provide feedback.
- Feedback is stored for analysis and improvement of the booking system.



**DEPARTMENT OF INFORMATION TECHNOLOGY
JNTU-GURAJADA VIZIANAGARAM
COLLEGE OF ENGINEERING VIZIANAGARAM (A)
VIZIANAGARAM**

Dr.Ch. Bindu Madhuri

Asst. Professor & HOD

Email: hod. it@intugvcev.edu.in

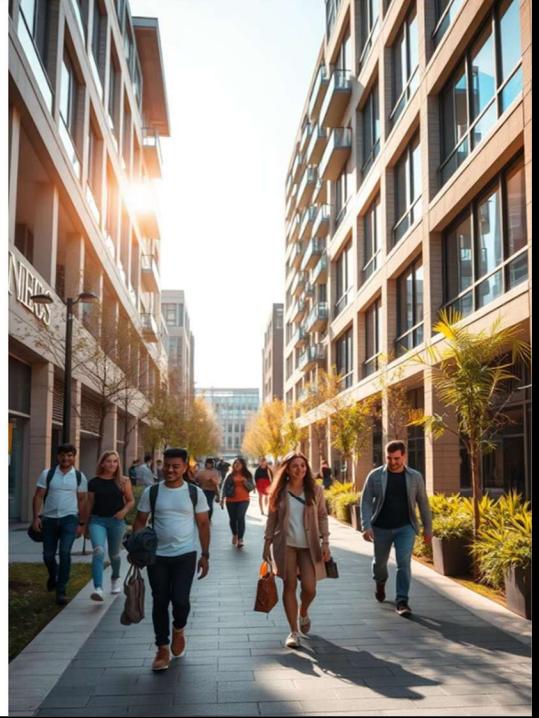
1. Name of the Laboratory	:	Design Thinking and Innovation Lab
2. Name of the Student	:	S. MOHAN KUMAR
3. Roll No	:	24VV5A1273
4. Class	:	II B-Tech II Semester
5. Academic Year	:	2024-25
6. Name of Experiment	:	PPT on Classroom Booking System
7. Date of Experiment	:	27-03-2025
8. Date of Submission of Report	:	04-04-2025

S,NO	ABILITY AND ACTIVITY	WEIGHTAGE OF MARKS	DAY TO DAY EVALUTION SCORE
1	Aim Objective, Tools required	3	
2	Theory, Algorithm and Observations	3	
3	Implementation	3	
4	Schematic diagrams, Architecture, workflow, Flowchart	3	
5	Tidiness of his/her working area, proper maintenance of system during and after experiment.	3	
	Total Score	15	

DATE:

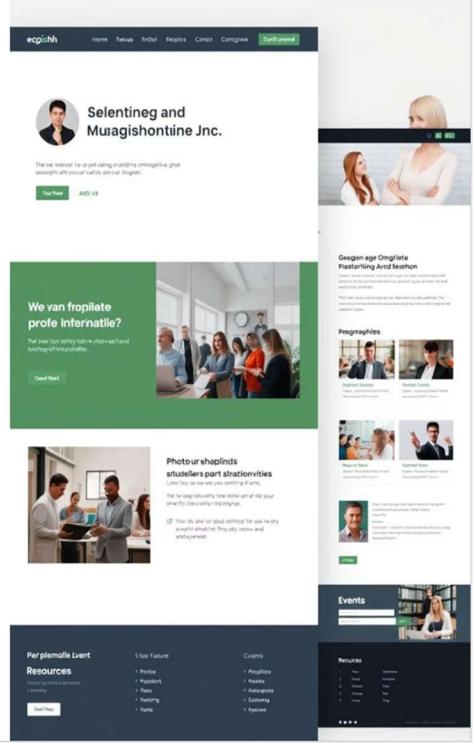
Signature of Faculty

PowerPoint presentation for classroom booking:



University Carrier Building Service Platform

This presentation outlines the development of a comprehensive online platform designed to empower university students in building their careers.



Key Features

- Profile Management**
Users can create and manage profiles, showcase their skills, and highlight relevant experiences.
- Job Board**
Access a curated job board featuring internships, full-time roles, and relevant opportunities.
- Career Resources**
Discover articles, guides, webinars, and other resources to enhance career planning and development.
- Event Calendar**
Stay informed about upcoming career fairs, workshops, and networking events.
- Perpetual Event Resources**
- Photoreshaping**

User Interface Design

Intuitive Navigation

Effortless access to all features and functionalities.

Responsive Design

Optimized for desktop and mobile devices, ensuring a seamless user experience.

Visual Appeal

A visually engaging design that enhances user engagement and promotes brand identity.

Project Management and Collaboration

1 Project Creation

Students can create and manage projects, showcasing their skills and achievements.

2 Collaboration

Connect with peers, mentors, and industry professionals to work on projects together.

3 Feedback & Evaluation

Receive constructive feedback and evaluations on projects, fostering continuous improvement.



Benefits to Students and Universities

1

Increased Opportunities

Access to a wider range of internships, jobs, and networking opportunities.

2

Career Guidance

Personalized guidance, resources, and support to navigate career paths.

3

Enhanced Skills

Develop valuable skills through projects, workshops, and mentorship programs.

4

Stronger Connections

Foster stronger relationships between students, alumni, and employers.

Certificate for Design Thinking



COURSE COMPLETION CERTIFICATE

The certificate is awarded to

9010734621 Mohan kumar

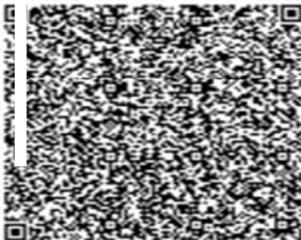
for successfully completing the course

Design Thinking

on December 25, 2024

Infosys | Springboard

Congratulations! You make us proud!



Issued on: Wednesday, December 25, 2024
To verify, scan the QR code at <https://verify.comlogspas.com>


Thirumala Arohi
Executive Vice President and Global Head
Education, Training & Assessment (ETA)
Infosys Limited