



Dr. M.G.R.
EDUCATIONAL AND RESEARCH INSTITUTE
DEEMED TO BE UNIVERSITY



University with Graded Autonomy Status

(An ISO 21001 : 2018 Certified Institution)

Periyar E.V.R. High Road, Maduravoyal, Chennai-95. Tamilnadu, India.

RECORD NOTEBOOK

EBCS22ET5-USER EXPERIENCE DESIGN

2024–2025 (ODD SEMESTER)

DEPARTMENT

OF

COMPUTER SCIENCE AND ENGINEERING

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YEAR/SEM/SEC : III / V/ A



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BONAFIDE CERTIFICATE

Register No : 221061101053

Name of Lab : USER EXPERIENCE DESIGN

Department : COMPUTER SCIENCE AND ENGINEERING

Certified that, this Record note book is a **bonafide** record of work done by
CH PRASANTH KUMAR of III Year B. Tech / CSE, Sec - 'A' in the **USER
EXPERIENCE DESIGN** during the year 2024-2025.

Signature of Lab-in-Charge

Signature of Head of Dept

Submitted for the Practical Examination held on _____

Internal Examiner

External Examiner

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EX.01:

DATE:24-07-2024

DESIGNING A RESPONSIVE LAYOUT FOR A SOCIETAL APPLICATION

Aim:

To design a responsive layout for a societal application.

Algorithm:

1. HTML and CSS Setup:

- Create an HTML5 document with character encoding and viewport settings.
- Use internal CSS to style the layout components.

2. Reset Default Styles:

- Reset margins, padding, and specify a font-family for better control.

3. Style Header, Navigation, Content, and Footer:

- Apply background colors, text colors, and alignment to the header, navigation, and footer.
- Style navigation links as inline elements with spacing.
- Center-align text in header, navigation, and footer.

4. Implement Responsive Design:

- Use a media query for screens up to 768px wide.
- Adjust navigation for mobile display (block-level elements with margin).

5. Add Content:

- Place your application's content within the .container div.

Program:

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Bootstrap Example with Background Image and Responsive Table/Mobile View</title>

  <link href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
rel="stylesheet">


  <style>

    body {

      /* Adding background image */

      background-image:
url('https://content.jdmagicbox.com/comp/chennai/62/044p7001762/catalogue/dr-mgr-educational-
and-research-institute-deemed-to-be-university-faculty-of-hotel-management-and-catering-
technology-adayalampattu-chennai-institutes-for-hotel-management-
mc8bo.jpg?clr=#3a2c3a?w=3840&q=75'); /* Replace this with a direct image URL */

      background-size: cover; /* This will make the image cover the entire background */
      background-position: center; /* Centers the background image */
      background-repeat: no-repeat; /* Prevents image from repeating */
      height: 100vh; /* Ensures the background covers the whole page */
    }


    .jumbotron {

      background-color: rgba(255, 255, 255, 0.8); /* Adding slight opacity tojumbotron */
    }


    /* Adding custom colors to each column */

    .cse {

      background-color: #ff9999; /* Light red for CSE */
      padding: 20px;
    }


    .cse-ai {
```

```

background-color: #99ccff; /* Light blue for CSE-AI */
padding: 20px;
}

.cse-dsai {
background-color: #99ff99; /* Light green for CSE-DS&AI */
padding: 20px;
}

.cse-cfis {
background-color: #ffcc99; /* Light orange for CSE-CFIS */
padding: 20px;
}
</style>
</head>
<body>
<nav class="navbar navbar-expand-lg navbar-light bg-light">
  <a class="navbar-brand" href="#">Navbar</a>
  <button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#navbarNav"
aria-controls="navbarNav" aria-expanded="false" aria-label="Toggle navigation">
    <span class="navbar-toggler-icon"></span>
  </button>
  <div class="collapse navbar-collapse" id="navbarNav">
    <ul class="navbar-nav">
      <li class="nav-item active">
        <a class="nav-link" href="#">Home <span class="sr-only">(current)</span></a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="#">Events</a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="#">Contact</a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="#">Help</a>

```

```
</li>
</ul>
</div>
</nav>
```

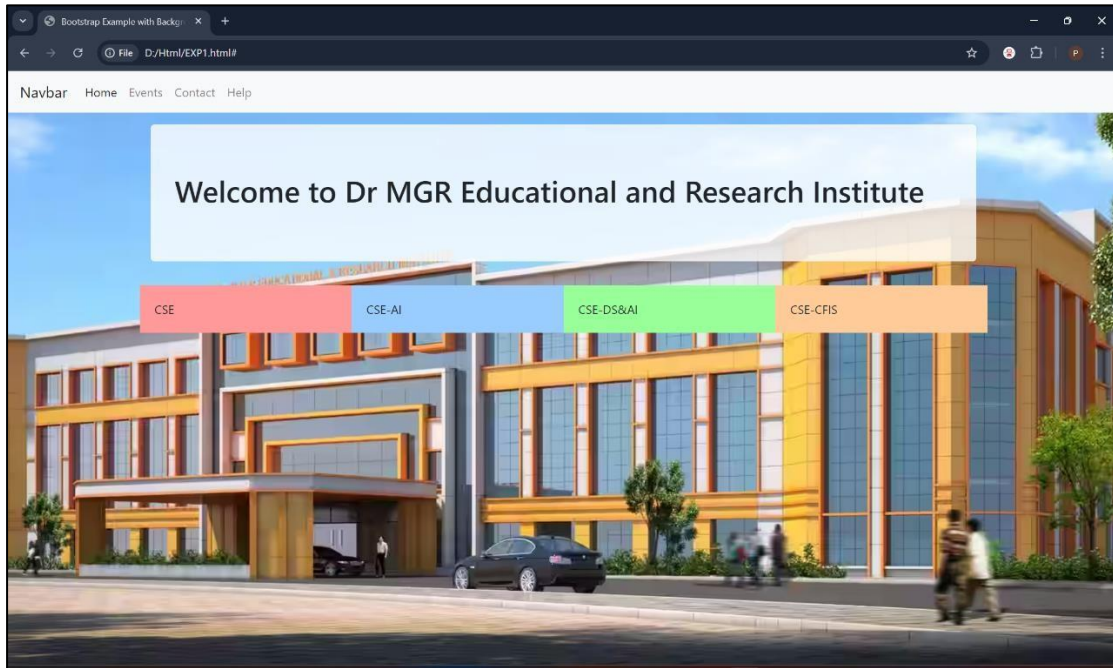
```
<div class="container mt-3">
  <div class="jumbotron">
    <h1>Welcome to Dr MGR Educational and Research Institute</h1>
  </div>
```

```
<div class="row text-center">
  <div class="col-12 col-md-3 cse">CSE</div>
  <div class="col-12 col-md-3 cse-ai">CSE-AI</div>
  <div class="col-12 col-md-3 cse-dsai">CSE-DS&AI</div>
  <div class="col-12 col-md-3 cse-cfis">CSE-CFIS</div>
</div>
</div>
```

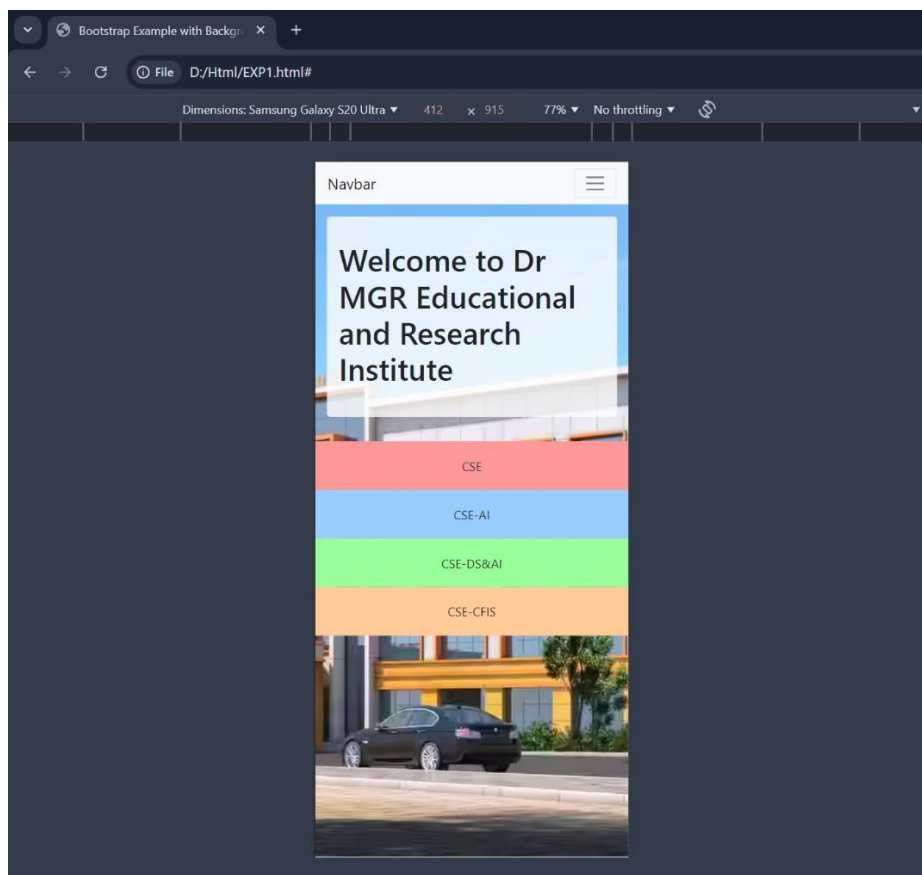
```
<script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>
<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.5.2/dist/umd/popper.min.js"></script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>
</body>
</html>
```

OUTPUT:

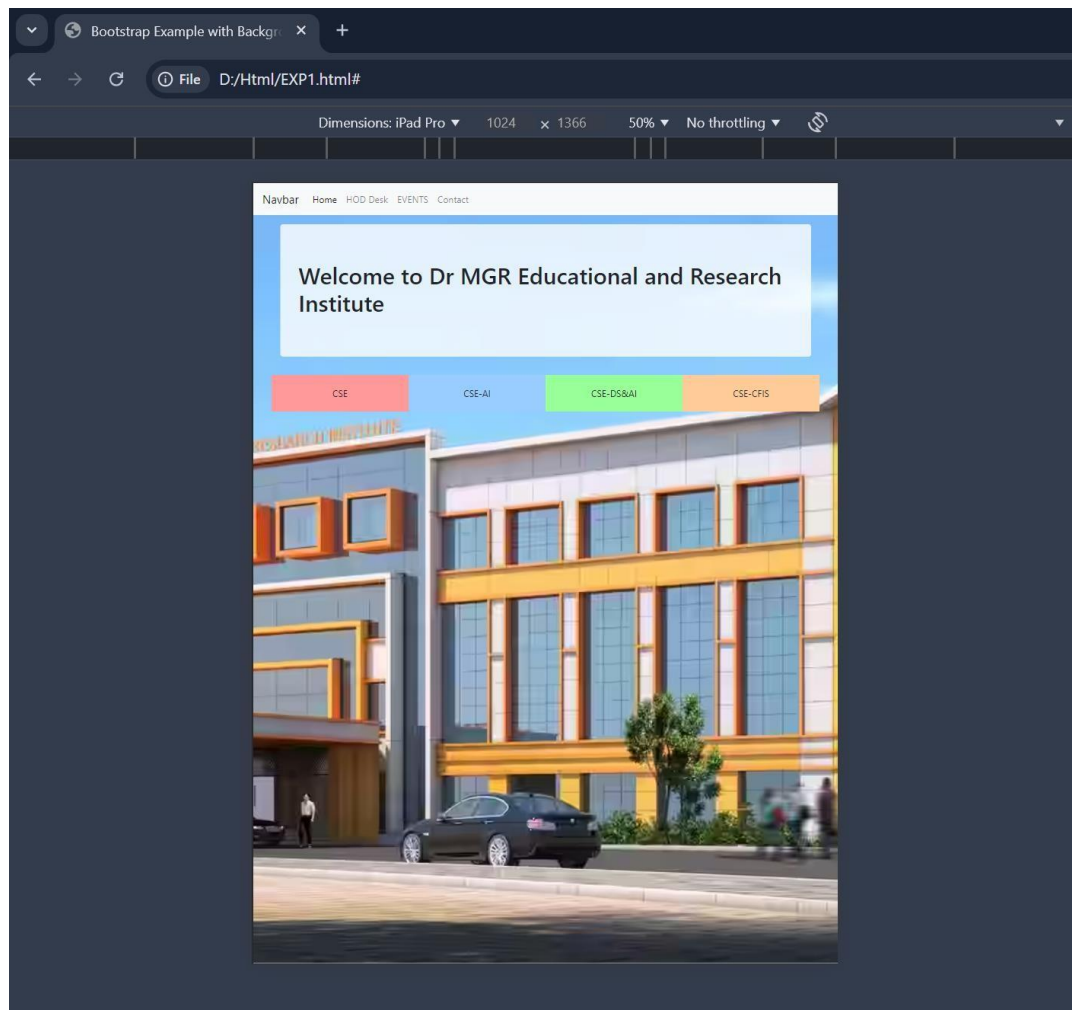
DESKTOP VIEW:



MOBILE VIEW:



TABLET VIEW:



Result:

Thus designing a responsive layout for a societal application have been created successfully.

EX.02:

DATE:27-07-2024

EXPLORING VARIOUS UI INTERACTION PATTERNS

Aim:

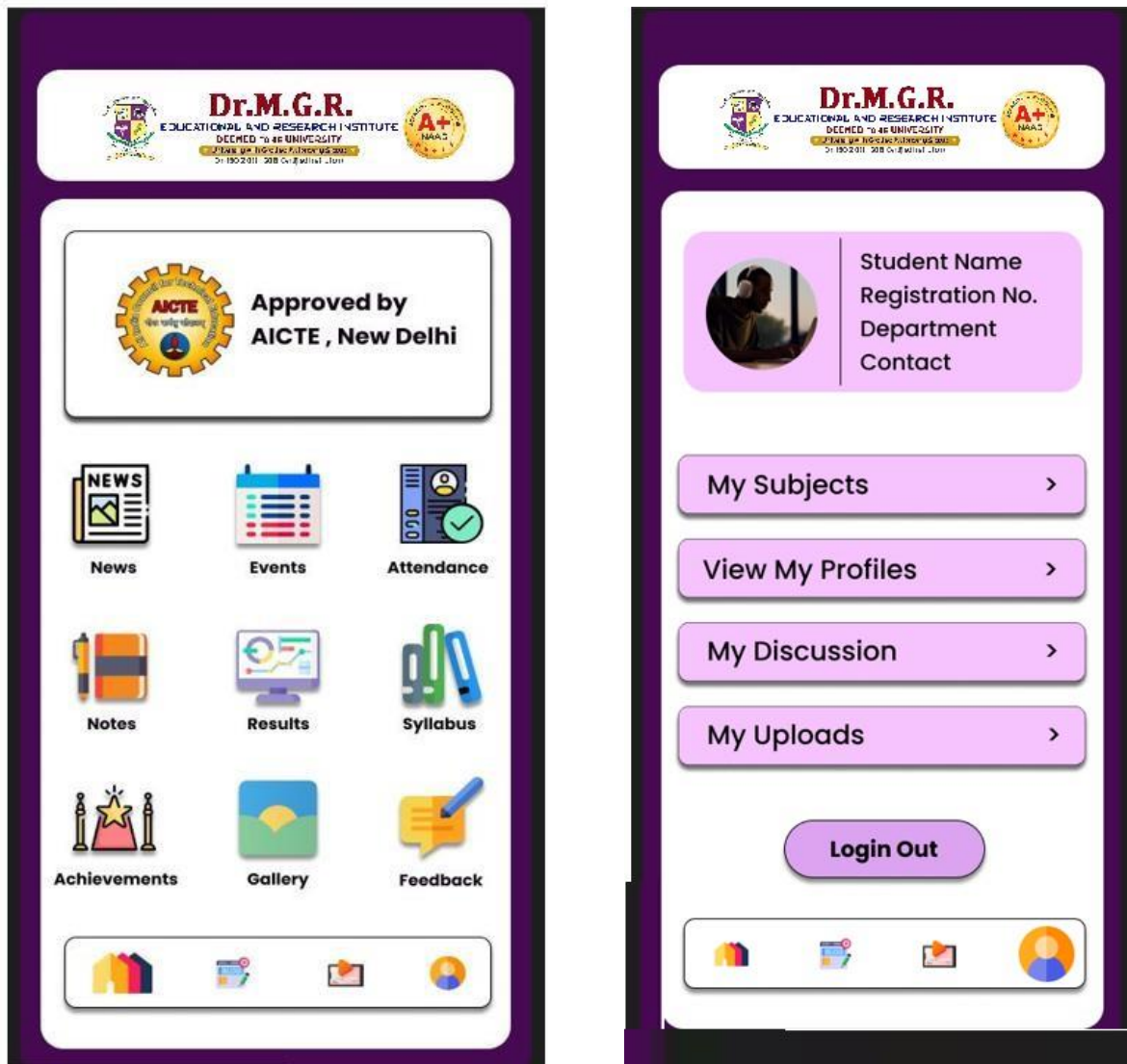
To explore various UI interaction patterns.

Algorithm / Procedure:

- Set objectives and understand user needs.
- Research and gather design inspiration.
- Create wireframes for layout and structure.
- Utilize Figma components and styles.
- Prototype interactions using Figma's features.
- Test your design with users for feedback.
- Iterate and refine based on feedback.
- Document your design decisions.

OUTPUT:

Figma Design:



Result:

Thus various UI interaction patterns have been explored successfully.

EX.03:

DATE:31-07-2024

DEVELOPING WIRE FLOW DIAGRAM FOR APPLICATION USING OPEN-SOURCE SOFTWARE

Aim:

To design a wireflow diagram that maps out the user flow and layout of a simple application using Draw.io.

Materials:

- Computer with internet access
- Browser
- Draw.io

Procedure:

1. Open Draw.io:

- Launch your preferred web browser and go to Draw.io.

2. Create a New Diagram:

- Select "**Create New Diagram**".
- Choose a blank diagram and click "**Create**".

3. Set Up the Canvas:

- Save your diagram to your preferred location (Google Drive, OneDrive, your device, etc.).
- You'll be presented with a blank canvas to start designing your wireflow.

4. Enable Wireframe Shapes:

- Click on "**More Shapes**" at the bottom of the left sidebar.
- Scroll down and select "**Wireframe**".
- Click "**Apply**" to add the wireframe shapes to your toolbox.

5. Design the Home Screen:

- Drag and drop a **rectangle** from the wireframe shapes to represent the Home Screen.
- Add elements like **buttons** for "Login" and "Sign Up".
- Label the screen using the **text** tool.

6. Create the Login Screen:

- Drag and drop another rectangle for the Login Screen.
- Add **input fields** for Username and Password.
- Add a **button** for "Submit".
- Label the screen.

7. Create the Sign-Up Screen:

- Drag and drop another rectangle for the Sign-Up Screen.
- Add input fields for Username, Email, Password, and Confirm Password.
- Add a button for "Register".
- Label the screen.

8. Design the Dashboard:

- Drag and drop another rectangle for the Dashboard.
- Add elements to represent Profile, Settings, and Logout.
- Label the screen.

9. Connect the Screens with Arrows:

- Use the **arrow tool** from the left sidebar.
- Draw arrows from the "Login" button on the Home Screen to the Login Screen.
- Draw arrows from the "Sign Up" button on the Home Screen to the Sign-Up Screen.
- Draw arrows from the "Submit" button on the Login Screen to the Dashboard.
- Draw arrows from the "Register" button on the Sign-Up Screen to the Dashboard.

10. Add Annotations:

- Use the **text tool** to add annotations explaining the flow and interactions (e.g., "On Submit, navigate to Dashboard").

11. Arrange and Style:

- Neatly arrange your wireframes and arrows to ensure clarity.
- Customize the styles (colors, fonts, line styles) using the formatting options in the top toolbar.

12. Review and Finalize:

- Review the entire wireflow to ensure it accurately represents the user journey.
- Make necessary adjustments for clarity and completeness.

13. Save and Export:

- Save your work frequently.
- Once finished, you can export the diagram as a PNG, PDF, or other formats by clicking **File > Export As**.

OUTPUT:

Home Screen

- Buttons: Login, Sign Up

Login Screen

- Fields: Username, Password
- Button: Submit

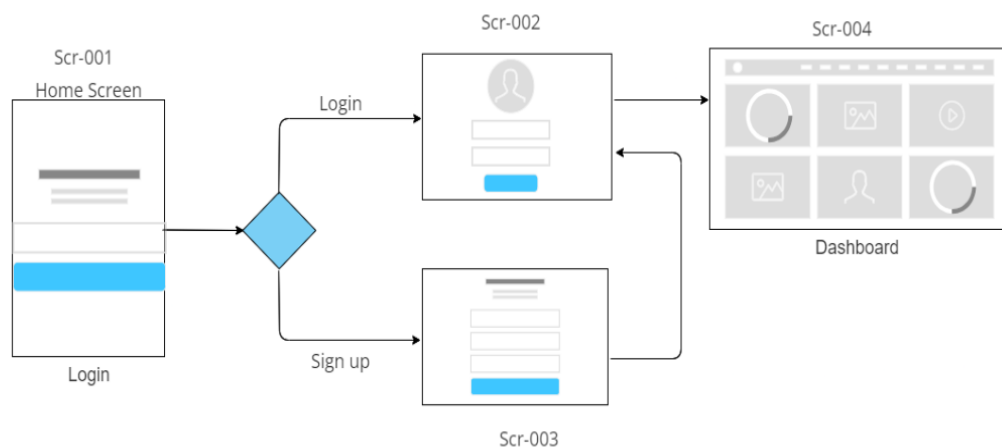
Sign-Up Screen

- Fields: Username, Email, Password, Confirm Password
- Button: Register

Dashboard

- Sections: Profile, Settings, Logout

Design:



Result: Thus Wire flow diagram for application using open-source software has been developed successfully.

EX.04:

DATE:07-08-2024

HANDS ON BRAINSTORMING PROCESS FOR A NEW SMART HOME DEVICE

Aim:

To apply the designs on Brainstorming Process for a New Smart Home Device using mindmeister

Materials:

- Computer with internet access
- Browser
- MindMeister account

Procedure:

1. Sign Up/Login to MindMeister:

- Go to [MindMeister](#).
- Sign up for a new account or log in if you already have one.

2. Create a New Mind Map:

- Click on "**New Mind Map**".
- Choose a blank template or any template that suits your brainstorming needs.

3. Set Up the Main Idea:

- In the central node, type the main idea or product you are brainstorming about.
- Example: "New Smart Home Device"

4. Add Main Categories:

- Add branches for main categories related to the product.
- Categories might include: Features, Target Audience, Market Research, Development, Marketing, and Budget.

5. Brainstorm Features:

- Under the **Features** category, add sub-branches for potential features of the product.
- Example features for a smart home device might include: Voice Control, Energy Efficiency, Security Integration, and User-Friendly Interface.

6. Identify Target Audience:

- Under the **Target Audience** category, add sub-branches for different potential users.
- Example sub-branches might include: Tech Enthusiasts, Homeowners, Elderly, and Renters.

7. Conduct Market Research:

- Under the **Market Research** category, add sub-branches for research areas.

8. **Plan Development:**

- Under the **Development** category, add sub-branches for development stages.
- Example sub-branches might include: Prototype Design, Testing, Manufacturing, and Quality Assurance.

9. **Create Marketing Strategy:**

- Under the **Marketing** category, add sub-branches for marketing strategies.
- Example sub-branches might include: Social Media Campaigns, Influencer Partnerships, Online Advertising, and Trade Shows.

10. **Estimate Budget:**

- Under the **Budget** category, add sub-branches for different cost components.
- Example sub-branches might include: Development Costs, Marketing Costs, Distribution Costs, and Maintenance Costs.

11. **Use Collaboration Features:**

- Invite team members to collaborate by clicking the **Share** button.
- Team members can add their own ideas, comments, and edits in real-time.

12. **Refine and Organize Ideas:**

- Use MindMeister's features to rearrange and organize ideas for clarity.
- Utilize colors, icons, and notes to highlight important points.

13. **Present and Discuss:**

- Once the mind map is complete, present it to your team or class.
- Discuss the ideas and refine the mind map based on feedback.

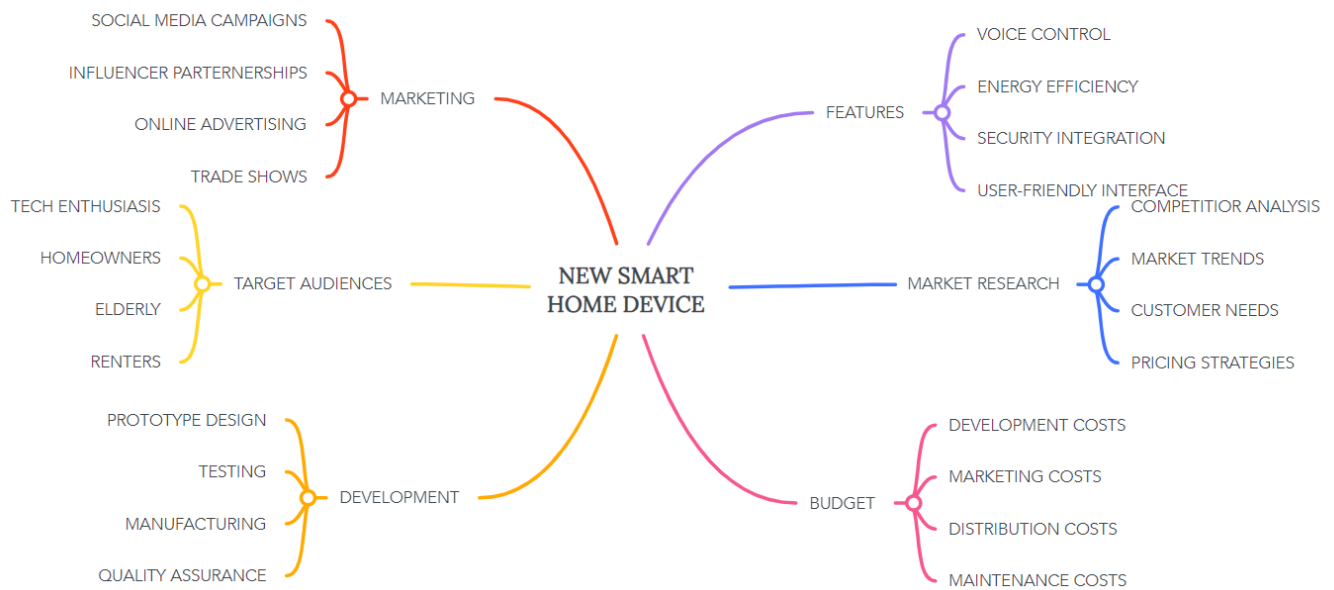
14. **Save and Export:**

- Save your mind map frequently.
- Export the mind map as a PDF, image, or other formats by clicking the **Export** option in the menu.

OUTPUT :

New Smart Home Device

- Features
 - Voice Control
 - Energy Efficiency
 - Security Integration
 - User-Friendly Interface
- Target Audience
 - Tech Enthusiasts
 - Homeowners
 - Elderly
 - Renters
- Market Research
 - Competitor Analysis
 - Market Trends
 - Customer Needs
 - Pricing Strategies
- Development
 - Prototype Design
 - Testing
 - Manufacturing
 - Quality Assurance
- Marketing
 - Social Media Campaigns
 - Influencer Partnerships
 - Online Advertising
 - Trade Shows
- Budget
 - Development Costs
 - Marketing Costs
 - Distribution Costs
 - Maintenance Costs



Result:

Thus the designs on Brainstorming Process for a New Smart Home Device using mindmeister has been studied.

EX.05:

DATE:21-08-2024

DEFINING THE LOOK AND FEEL OF THE NEW PROJECT

Aim:

To create a look and feel of the new mobile apps project using thinkable

Procedure:

Step 1: Set Up Your Thinkable Project

1. Log in to Thinkable:

- Go to Thinkable and log in or sign up for a new account.

2. Create a New Project:

- Click on the "Create New App" button.
- Name your project (e.g., "LoginApp").

Step 2: Design the Login Screen

1. Add a New Screen:

- By default, a new screen (Screen1) will be created. This will be your login screen.

2. Add Components for Login:

- Drag and drop two Text Input components from the left sidebar to the screen. Rename them to usernameInput and passwordInput.
- Drag and drop a Button component. Rename it to submitButton and change its text to "Submit".

3. Style the Components:

- Customize the appearance of the text inputs and button (optional).

Step 3: Add a Second Screen

1. Create a New Screen:

- Click the "+" icon next to "Screen1" to add a new screen. Name it webViewScreen.

2. Add a Web Viewer Component:

- Drag and drop a Web Viewer component onto the new screen.
- Set the URL of the Web Viewer to <https://www.drmgrdu.ac.in>.

Step 4: Add Navigation Logic

1. Navigate Back to Screen1:

- Go back to Screen1.

2. Add Blocks for Button Click:

- Click on the "Blocks" tab to switch to the blocks view.

3. Add Navigation Logic:

- From the Control category, drag a navigate to webViewScreen block and place it inside the when submit Button Click block.

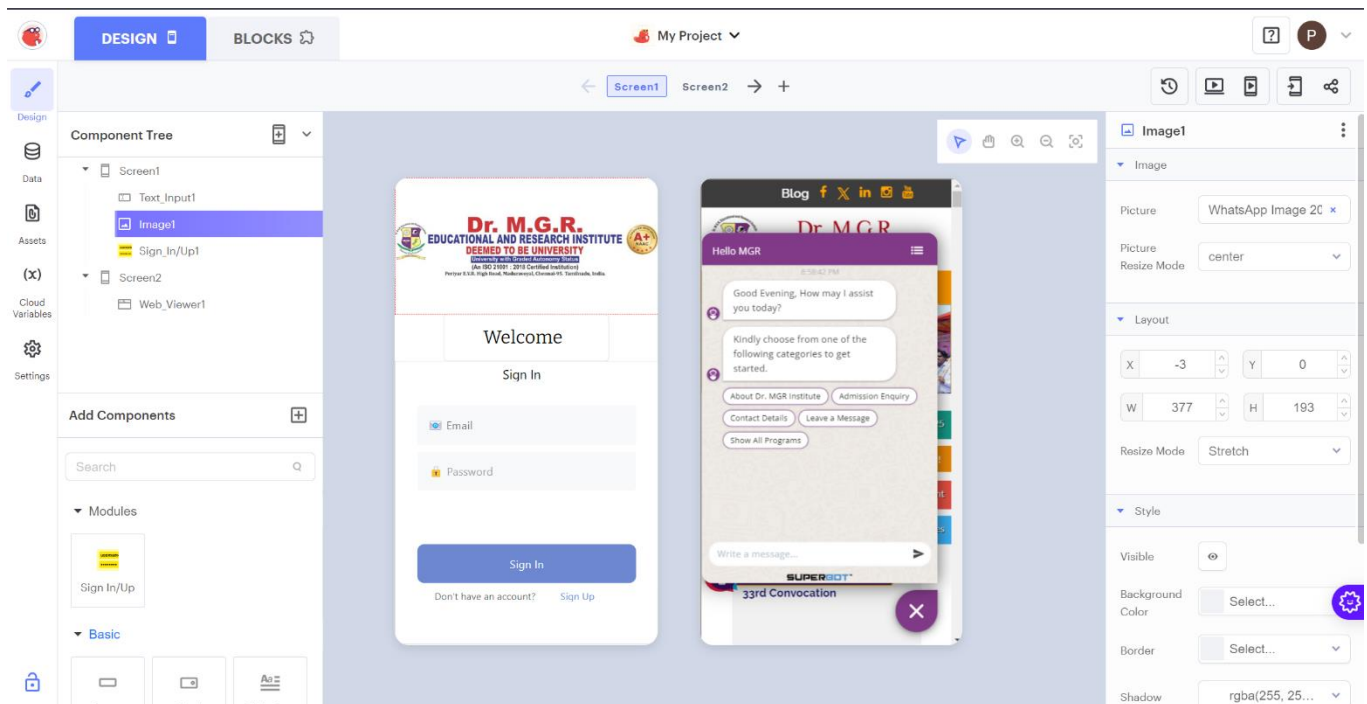
Step 5: Test the Application

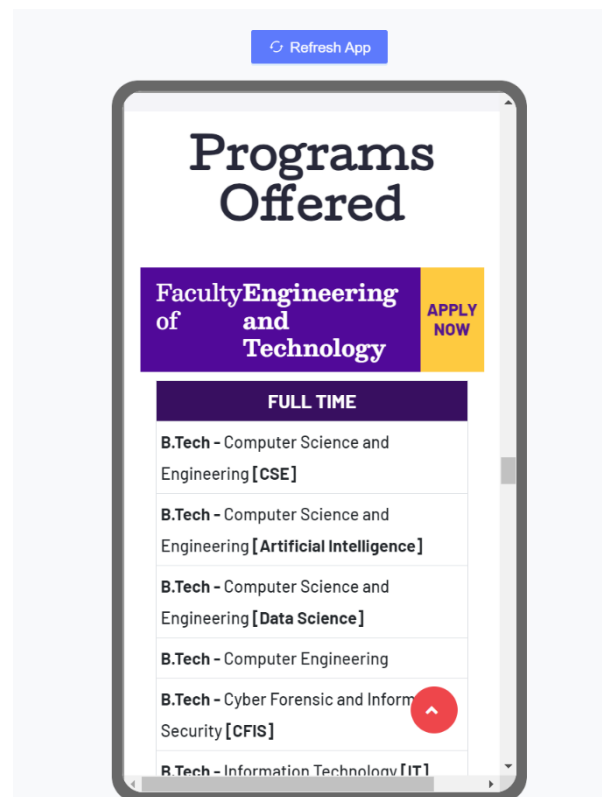
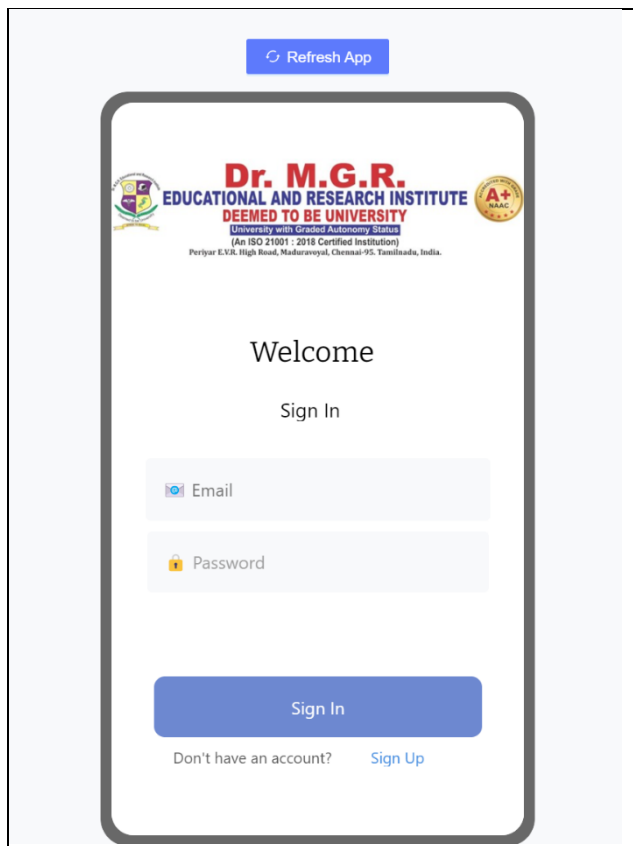
1. Live Test:

- Click on the "Live Test" button on the top right corner to test the app on your device or Thunkable Live app.
- Enter a username and password, then click the "Submit" button to see if it navigates to the web viewer screen displaying the college website.

OUTPUT :

1. Create a new project in Thunkable.
2. Design the login screen with two text inputs and a submit button.
3. Create a second screen with a web viewer displaying Offered programs in E&T in Dr Mgr university.
4. Add navigation logic to the sign in button.
5. Test the application to ensure it works as expected.





Result:

Thus to create a look and feel of the new mobile apps project using thinkable has been created and executed successfully.

EX.6:

DATE:18-09-2024

CONDUCT END-TO-END USER RESEARCH - USER RESEARCH, CREATING PERSONAL, IDEATION PROCESS(USER STORIES, SCENARIOS), FLOW DIAGRAMS, FLOW MAPPING.

Aim:

To Create a User research, Scenarios, Flow diagrams and Flow Mapping Using Xtensio

Procedure :

1. Sign Up/Log In to Xtensio:

- Visit [Xtensio](https://xtensio.com).
- Create a free account or log in if you already have one.

2. Create a New Document:

- On your Xtensio dashboard, click on “Create New.”
- Choose “Document” from the available options.

3. Select a Template:

- Browse through the templates provided by Xtensio.
- Select a template related to “Usability Testing” or “User Research” if available. If not, choose a general “Report” or “Business Document” or “User Persona” template.

4. Customize the Document:

- **Title Page:**
 - Add a title for your report, e.g., “Personal information.”
 - Include the date, your name, and any relevant information.
- **Introduction:**
 - Briefly describe the purpose of the usability testing.
 - Explain the product or application being tested.
- **Objectives:**
 - Define the objectives of the usability test. What were you trying to achieve or find out?
- **Methodology:**
 - Describe the testing methods used (e.g., user testing, heuristic evaluation).
 - Include details about participant demographics, testing environment, and procedures.
- **User Persons:**
 - Create and add personas based on the target users. Use Xtensio’s persona template or design your own.

- **Flow Diagrams:**

- Insert flow diagrams to show the user journey through the application.
- Use tools like Lucidchart or Draw.io to create flow diagrams if needed and upload them to Xtensio.

- **Findings:**

- Present the findings from the usability testing. Include observations, issues identified, and user feedback.

- **Recommendations:**

- Based on the findings, provide recommendations for improvements.

- **Conclusion:**

- Summarize the key points of the usability testing and its impact on the project.

5. Add Visuals and Data:

- Enhance your report by adding visuals such as screenshots, graphs, and charts.
- Use Xtensio's built-in tools to add and format these elements.

6. Review and Edit:

- Carefully review the document for any errors or missing information.
- Make sure the layout is clear and professional.

7. Share or Export the Report:

- Xtensio allows you to share the document via a link or export it as a PDF.
- Choose the option that best suits your needs.

8. Submit or Present:

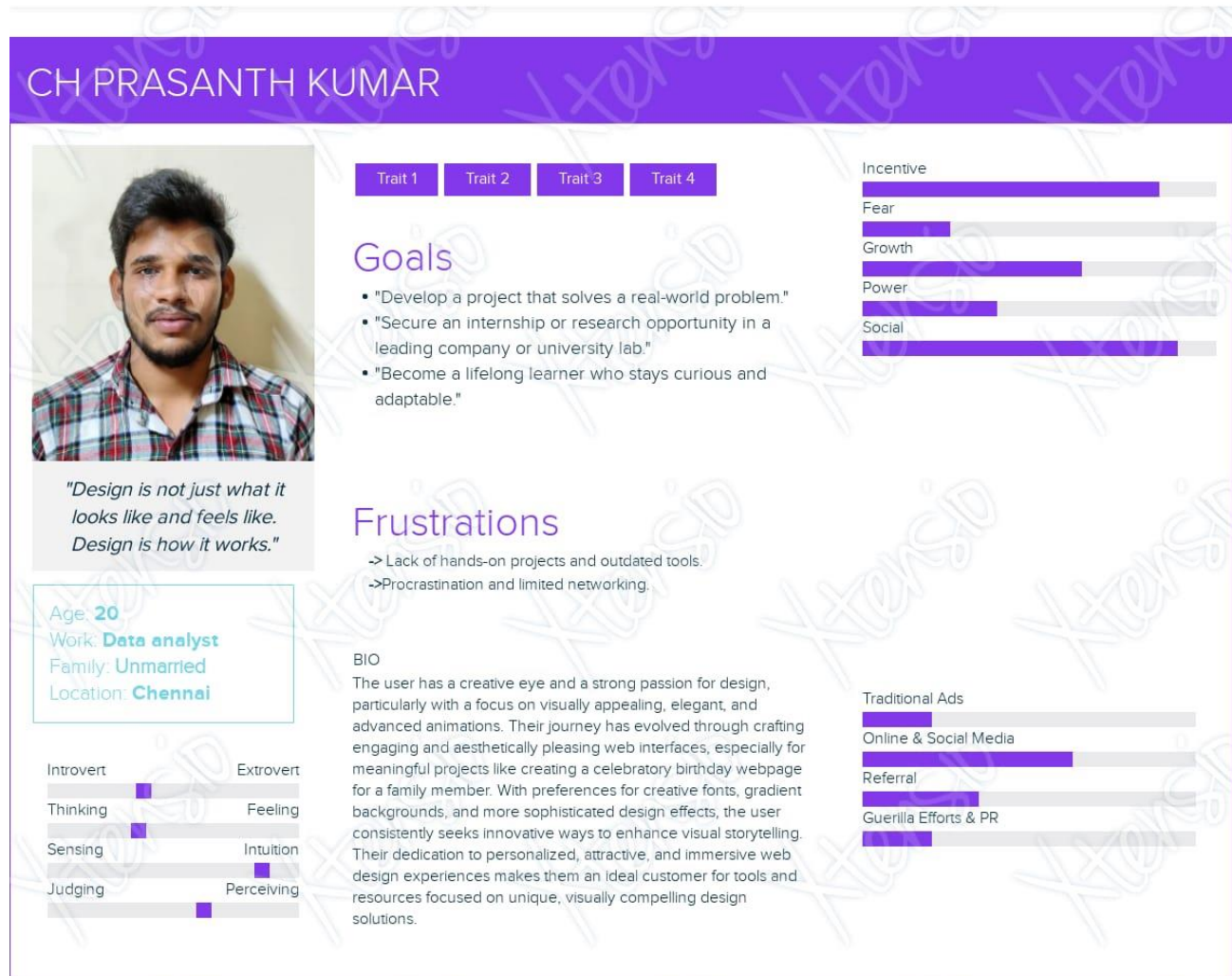
- If this is for an experiment or assignment, ensure you follow any submission guidelines provided by your instructor.

OUTPUT :

Design:

Xtensio

Upgrade your account to remove Xtensio branding and access premium features.



Result:

Thus a User research, Scenarios, Flow diagrams and Flow Mapping Using Xtensio has been created and executed successfully.

EX.7:

DATE:09-10-2024

**CREATE A SAMPLE PATTERN LIBRARY FOR THAT
PRODUCT (MOOD BOARD, FONTS, COLORS BASED
ON UI PRINCIPLES)**

Aim:

The aim of this experiment is to sample pattern product library using a user-friendly Milanote

Algorithm/Procedure:

1. Sign Up and Set Up

1. Sign Up:

- Go to [Milanote](#).
- Create a free account or log in if you already have one.

2. Create a New Board:

- Once logged in, click on the “+ New Board” button or use the “Create Board” option from the dashboard.

2. Create a Mood Board

1. Add a Title:

- Click on the title area at the top of the board and name it “Mood Board.”

2. Upload Images:

- Click on the “Upload” button or drag and drop images that represent the visual style you envision for your product. These could be photos, illustrations, or inspirational images.

3. Add Notes:

- Use the “Text” tool to add notes and explanations about why you chose each image or how they relate to the design principles. You can add descriptions or comments to explain the design direction.

4. Organize the Layout:

- Arrange the images and notes in a way that visually communicates your design vision. Use Milanote’s drag-and-drop interface to reposition and resize elements as needed.

3. Define Fonts

1. Create a New Section:

- Add a new section to your board and title it “Fonts.”

2. Add Font Samples:

- Use the “Text” tool to add samples of the fonts you plan to use. Write out sample text using each font to show how they look in different sizes and weights.

3. Include Font Details:

- Add notes about each font, such as its name, style, and usage guidelines. You can also provide links to where the fonts can be downloaded or purchased.

4. Organize Fonts:

- Arrange the font samples and notes in a clear and organized manner so that it's easy to see and compare different fonts.

4. Create a Color Palette

1. Add a New Section:

- Create another section on your board titled "Colors."

2. Add Color Swatches:

- Use the "Color" tool to create and display color swatches. You can add color blocks by selecting colors from the color picker or entering hex color codes.

3. Label Colors:

- Add labels to each color swatch to indicate its use in your design. For example, label colors as "Primary," "Secondary," "Background," "Text," etc.

4. Include Color Codes:

- Add text notes with the hex codes or RGB values for each color to ensure consistency in your design.

5. Organize and Share

1. Review and Adjust:

- Review the entire pattern library to ensure it accurately reflects the design principles and is well-organized. Make any necessary adjustments.

2. Share the Board:

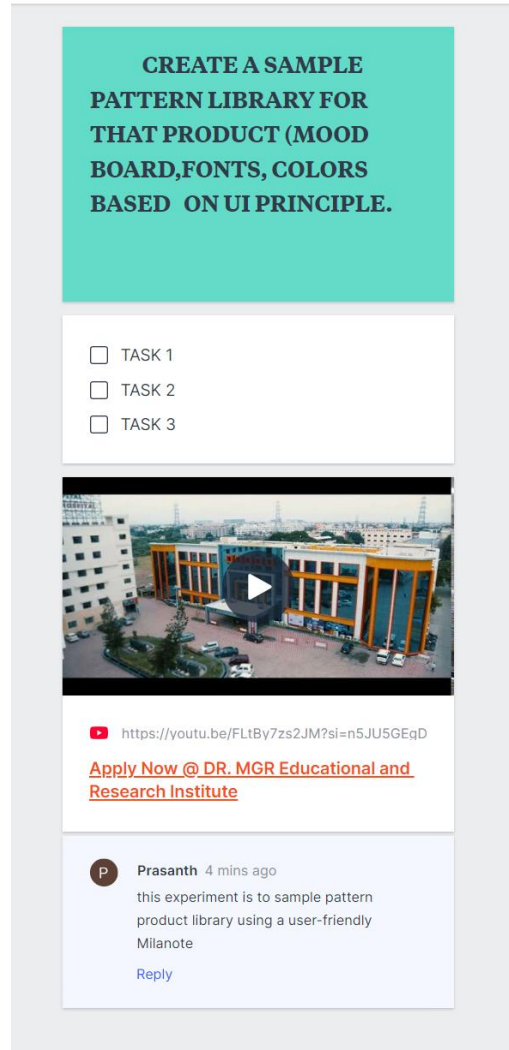
- Click on the "Share" button in the top right corner of the Milanote interface to generate a shareable link. You can also invite collaborators by entering their email addresses.

3. Export (Optional):

- If you need a physical or offline copy, you can export the board as a PDF or image file. Click on the "Export" option in the menu.

OUTPUT :

Mood Board



Result:

Thus a sample pattern library for that product has been created and executed successfully.