SAMPLE TEST PROJECT

IndiaSkills State Competition

Mobile Applications Development

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Introduction

In the hustle and bustle of modern life, finding moments to reconnect with nature often takes a back seat. Yet, the innate human longing for greenery, tranquillity, and the simple joy of nurturing life persists. Picture a world where anyone, regardless of their familiarity with plants, can seamlessly embrace the art of plant care and savour the rewards of lush indoor and outdoor spaces. For this, you would be creating a Plant Care App.

Urban living often leaves little time for individuals to engage with nature. The Plant Care App aims to address this by providing a user-friendly and informative platform for plant lovers, whether they are beginners or seasoned enthusiasts. The app aims to be a one-stop solution for all things related to plant care. You will design and build this app.

General Guidelines

1. You will need to complete both the modules within the specified time limit.
2. Read the requirements for both modules carefully before you start.
3. In Module A, you are tasked with designing the user interface from the given wireframes.
4. In Module B, you'll be putting the provided designs into action by implementing their functionality.

Module	Time	Device
Module A - Design	1.5h	Adobe XD (Simulator)
Module B - Functionality	2.5h	Pixel 2 or iPhone 8 Plus (Emulator)

Module A - Design

Description (Module A)

The Plant Care App is designed to evoke a sense of tranquillity, simplicity, and natural beauty. The overall aesthetic reflects a harmonious blend of modern design principles and botanical elements, creating an immersive and delightful user experience. The app features a harmonious design with a soothing colour palette inspired by nature, clean and readable fonts for clarity, and intuitive, minimalistic UI elements ensuring a cohesive and user-friendly experience.

The Product Manager has provided you with the product wireframes. You need to redesign the wireframes and provide the Development Team with an XD file. The requirements for the overall look and feel of the design are as follows -

Colour Palette

- **Dominant Greens:** A range of soothing green tones dominates the colour palette, mirroring the diverse shades found in nature.
- **Accents of Earthy Tones:** Subtle earthy tones such as browns and muted greens complement the design, conveying a grounded and organic feel.
- **Soft Neutrals:** Neutral backgrounds and soft greys provide balance and enhance visual clarity.

Typography

- **Clean and Readable Fonts:** Sans-serif fonts with a clean and modern aesthetic ensure readability across different device screens.
- **Header Emphasis:** Bold and slightly larger font for headers, creating hierarchy and easy navigation.

UI Elements

- **Clean UI Elements:** Minimalistic buttons, checkboxes, and input fields for a clean and uncluttered interface.
- **Consistent Design Language:** Consistency in design elements across different sections of the app for a cohesive user experience.

General Requirements (Module A)

1. The wireframes are just guidelines. Feel free to change the look and feel of the designs according to your preference.
2. Design screens should be linked to each other properly.
3. **EVERY** screen needs a design improvement.
4. You can write your own text for the copy or use the ones provided in the wireframes.
5. You do not need to use all the assets in the media folder.
6. You can change the text in the wireframes.
7. Use a consistent Style Guide across the application.
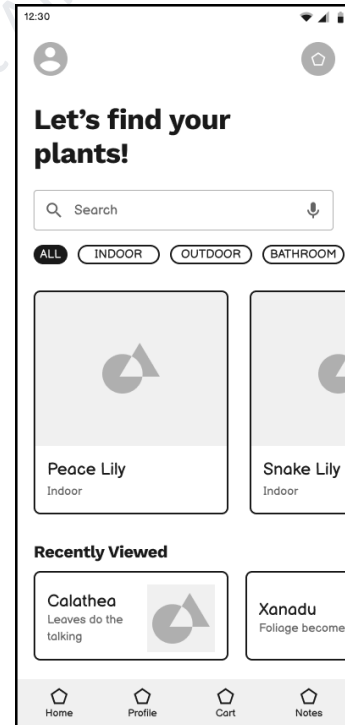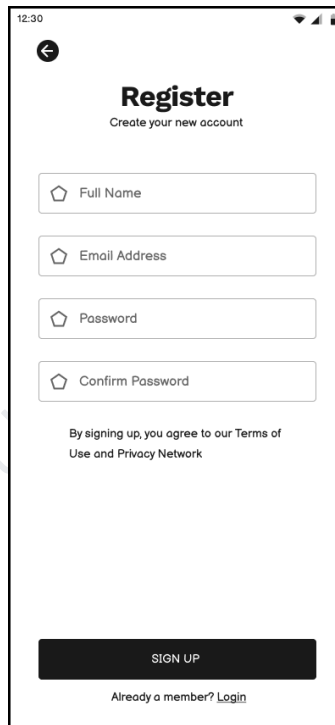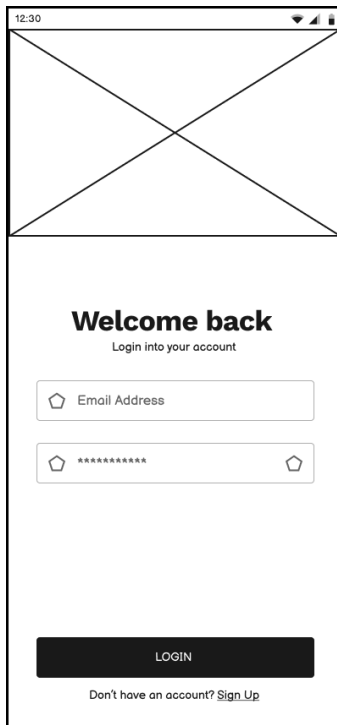
Screen-specific Requirements (Module A)

Login Screen

The Login Screen should have **AT LEAST** the following design
elements -

1. Top
    a. Banner Image
2. Main Area
    a. Welcome Header
    b. Welcome Subtitle
    c. Email Input Field
    d. Password Input Field
    e. Show/Hide Icon in Password Field
    f. Login Button
3. Bottom
    a. Sign Up Link (to navigate to Sign Up Screen)

Design Requirements

1. Make the Login Screen aesthetically pleasing.
2. There should be a show/hide toggle in the Password Input
   Field. On tapping the icon, the password text's visibility
   should toggle.
3. On tapping the Sign Up link, the design should navigate to
   the Sign Up Screen.
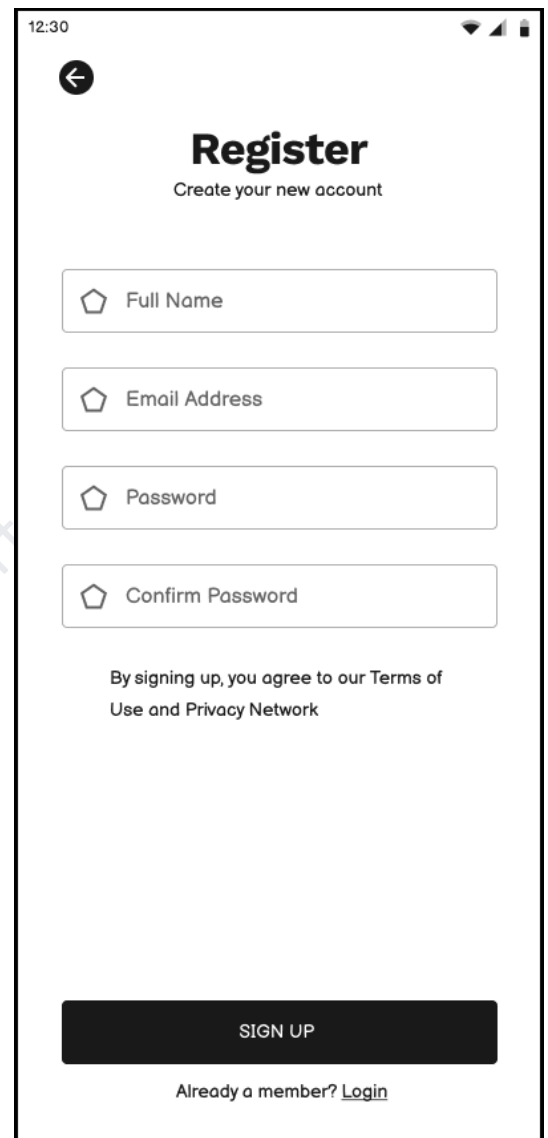4. On tapping the Login Button, navigate to the Home Screen.

Sign Up Screen

The Sign Up Screen should have **AT LEAST** the following design elements -

1. Top
    a. Back Button (to navigate to Login Screen)
2. Main Area
    a. Name Input Field
    b. Email Input Field
    c. Password Input Field
    d. Confirm Password Input Field
    e. Disclaimer Text
3. Bottom
    a. Sign Up Button
    b. Login Page Navigation Link

Design Requirements

1. Improve the design as per the theme of the application.
2. Use images or illustrations to enhance the look and feel.
3. When the Name Input Field is tapped, its state should change from "inactive" to "focus".
4. On tapping the back button, navigate back to the Login Screen.

Home Screen

The Home Screen should have **AT LEAST** the following design elements -

1. Top
   a. User Profile Icon (Left)
   b. Cart Icon (Right)
2. Main Area
   a. Screen Title
   b. Search Bar
   c. Filter Chips
   d. Plant Cards
   e. Recently Viewed Subtitle
   f. Recently Viewed Plant Cards
3. Bottom
   a. Navigation Tab

Design Requirements

1. The "Home" tab in the navigation tab should be in "focus".
2. The Plant Cards are the focal point of the design. Make them as aesthetically as possible.
3. The Plant Cards should be horizontally scrollable.
4. Design at least 3 Plant Cards.
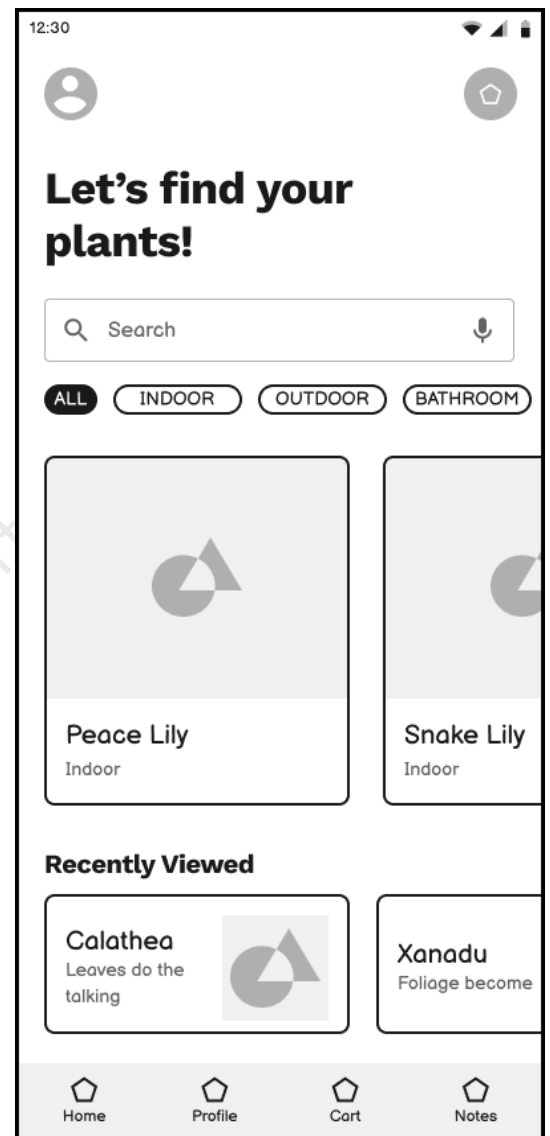
Module B - Functionality

Description (Module B)

As a mobile applications developer, your responsibility is to create mobile apps for a phone using the wireframes provided by the Product Manager. This involves tailoring the apps to meet specific development requirements outlined in the provided wireframes. You have already designed the High-fidelity mockups. Now, you have to add functionality to the designs.

General Requirements (Module B)

You are not required to focus on the aesthetics of the program interface and the positioning of elements. While the work may deviate from the provided wireframes, it is crucial for you to prioritise and ensure optimal ease of use in the application.

1. The application should have the following functionality -
    a. The user can log into the application using the correct credentials.
    b. The user can create a new account.
    c. The user can navigate to the Sign Up Screen from the Login Screen.
    d. When transitioning between different screens, animations should be present.
    e. If the credentials are incorrect, an appropriate message is shown to the user.
    f. The user can filter Plants according to their category.
    g. The user can search for Plants using the search bar.
    h. The user should be able to use speech-to-text to search for plants. (End-to-end functionality not required but the mic should open for input)
2. Finish the function of this application according to the **Functional Requirements** for each screen.
3. The application should show the application icon on the system launcher. You can find some sample icons in the media folder. You can directly use it or modify them to suit your design needs.
4. Add **animations** to make the interactions feel natural.

Screen-specific Requirements (Module B)

Login Screen

The Login Screen has the following elements -

1. Top
    a. Banner Image
2. Main Area
    a. Welcome Header
    b. Welcome Subtitle
    c. Email Input Field
    d. Password Input Field
    e. Show/Hide Icon in Password Field
    f. Login Button
3. Bottom
    a. Sign Up Link (to navigate to Sign Up Screen)

Functional Requirements

1. The user can log in using the correct credentials.
2. If the credentials are incorrect, display an appropriate message.
3. Navigate to the Home Screen after successful login.
4. Navigate to the Sign Up Screen if the user wants to create an account.
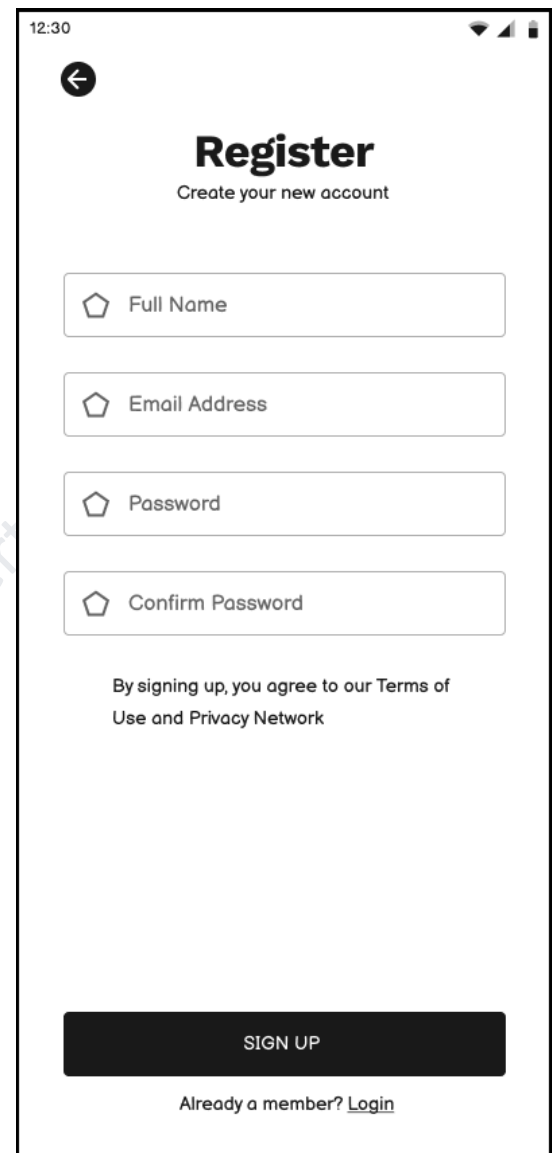5. The input box should come into focus during typing.

Sign Up Screen

The Sign Up Screen includes the following elements -

1. Top
    a. Back Button (to navigate to Login Screen)
2. Main Area
    a. Name Input Field
    b. Email Input Field
    c. Password Input Field
    d. Confirm Password Input Field
    e. Disclaimer Text
3. Bottom
    a. Sign Up Button
    b. Login Page Navigation Link

Functional Requirements

1. The password should be 8-16 characters in length. Display appropriate messages if the requirements are not met.
2. Apply basic validations to all the input fields.
    a. Full Name - **REQUIRED**
    b. Email Address - **REQUIRED**
    c. Password - **8-16 characters**
3. After successful account creation, navigate to the Login Screen.

Home Screen

The Home Screen have the following elements -

1. Top
    a. User Profile Icon (Left)
    b. Cart Icon (Right)
2. Main Area
    a. Screen Title
    b. Search Bar
    c. Filter Chips
    d. Plant Cards
    e. Recently Viewed Subtitle
    f. Recently Viewed Plant Cards
3. Bottom
    a. Navigation Tab

Functional Requirements

1. The "Home" tab in the navigation tab should be in "focus".
2. The view should change when the user taps on Profile, Cart or Notes. You don't need to design the Screens but a simple layout is enough.
3. Display only the searched plant when the user searches by name.
4. The user should be able to filter plants using the Category chips.
5. The mic should open for input when the user taps on the mic icon.
6. Use the **plants.json** file to load the data for all of the plants.
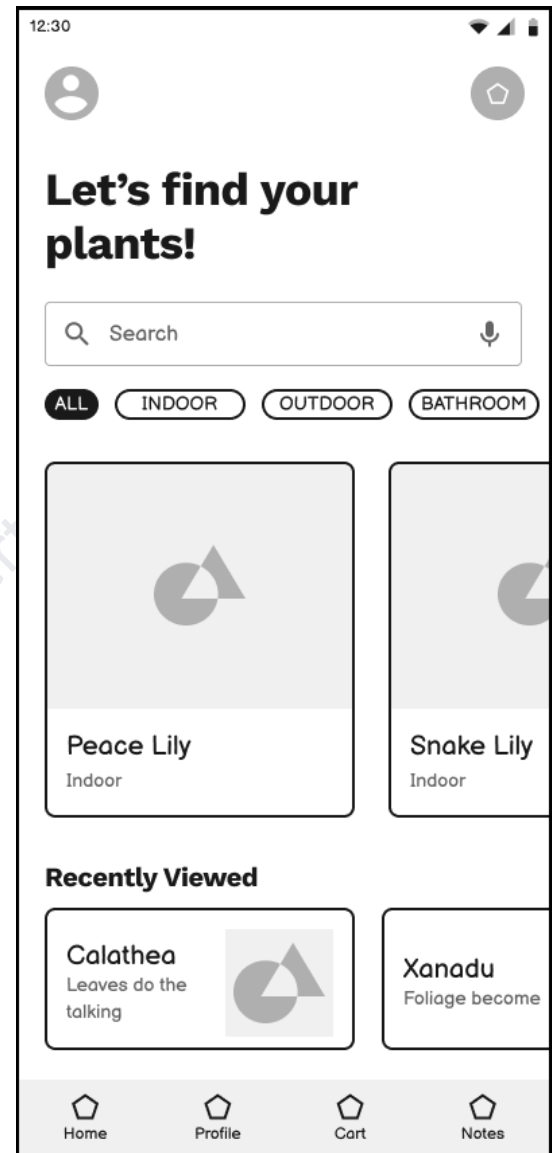
Instructions to Competitor

1. Create a folder XX_Module_A to store the .xd file and a folder XX_Module_B to store the .apk/app
2. You should rename the generated apk (Android)/ app (iOS) file as XX_Module_B.apk (Android)/ XX_Module_B.app (iOS), and save it in the root of the XX_Module_B folder.
3. The whole XX_Module_B folder should be pushed to the provided remote Git repository.

Infrastructure List

Hardware

Requirement	Recommended
OS	Latest 64-bit Windows
RAM	16 GB or more
CPU	Core i7
Disk Space	512 GB SSD
Screen Resolution	1920 x 1080

Software

- Android Studio
- Java Development Kit
- Flutter SDK
- XCode
- Emulators (Android and iOS)
- Postman
- Git
- Sourcetree
- Adobe Photoshop
- Deepfreeze (Mac)
- AdobeXD
- Microsoft Office

Marking Scheme

The Assessment is done by awarding points by adopting two methods, Measurement and Judgments

1. Measurement - One which is measurable
2. Judgement - Based on Industry expectations

Measurement

This method involves assessing performance based on quantifiable and objective criteria. The assessment is conducted using metrics, benchmarks, or predefined standards. It focuses on tangible and measurable aspects of performance, allowing for a more structured and consistent evaluation.

Examples of measurable criteria may include completion of tasks within a specified timeframe, achieving specific numeric targets, or meeting predefined quality standards.

Points are awarded based on the extent to which individuals or entities meet or exceed these measurable criteria. The more aligned with the set standards, the higher the points awarded.

Judgement

In this method, assessment relies on subjective evaluation, often based on the judgement of experts or individuals with industry experience. It involves considering qualities that may not be easily quantifiable and relies on the evaluator's expertise and industry knowledge.

The assessment is influenced by industry expectations, norms, and best practices. This method allows for a more holistic evaluation of performance, taking into account factors such as creativity, innovation, adaptability, and qualitative aspects that may not be easily measured.

Points are assigned based on the perceived alignment with industry expectations. The judgement marks are awarded as followed -

- 0: performance below industry standard
- 1: performance meets industry standard
- 2: performance mostly meets industry standard and exceeds industry standards sometimes
- 3: excellent or outstanding performance

The weightage for each module is as follows -

- Module A - 40%
- Module B - 60%

Module	Criteria	Marks
A	Design	20
B	Functionality	30

Important Note:

1. The Experts (and Jury members) will determine the Test Projects and Marking Scheme before the competition, taking into account the actual resources utilised during the event.
2. The following marking scheme is for reference purposes only. The detailed criteria and aspects for each test project will differ from the ones mentioned in the sample below.

Marking Scheme Link - 📊 IndiaSkills2024_Sample_Marking_Scheme_08_EN