SOFTWARE REQUIREMENT SPECIFICATIONS

PERSONAL FINANCE MANAGEMENT APPLICATION: URBAN ASSETS

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1. Introduction

1.1 Purpose

In today's era, subscription services are common. Also you have the usual array of rent and utilities to pay. Plus, money these days is a little tighter than it used to be comparatively speaking.

Therefore, we decided to find an easier way to get rid of this problem. So as the name itself suggests, this project is an attempt to manage our daily expenses in a more efficient and manageable way. Sometimes we can't remember where our money goes. And we can't handle our cash flow.

Our application allows people to eliminate any unnecessary expenses and figure out if they are able to survive themselves or do they really need to ask help. Typically people are able to optimise their spending by making some correct decisions.

Instead of keeping a diary or a log of the expenses, this application enables the user to not just keep the control on the expenses but also to generate and save reports. So, this application attempts to free the user with as much as possible the burden of manual calculation and to keep track of the expenditure.

1.2 Intended Audience and Reading Suggestions

Ø For Domestic purposes.

Ø Retailers.

1.3 Project Scope

Our application is for domestic use and for small retailers only. Our application does not meet all the requirements of higher-level businesses. Our application can take advantage of a good market as it is usable by anyone who is willing to manage their expenses and aims to save for future investments and many more.

2. Overall Description

2.1 Product Perspective

· Our product will play a vital role in budget management. Our product solves the problem of managing the budget on pen and paper and can help users to manage their future savings.

2.2 Product Features

- Login
- Registration
- Insert and retrieve income data
- Insert and retrieve expense data
- Update data
- Search income/expense data by date
- Calculation of total income data
- Calculation of total expenses data
- Graphical representation of expense data
- Change password and delete account

- Tax and EMI calculator
- About us and Rate us
- Logout

2.3 Operating Environment

	Development Environment	Operational Environment
HARDWARE REQUIREMENTS	Processor: intel core i5 RAM: 8 GB or more Hard disk: 80 GB or more	RAM: 1 GB or more ROM: 4 GB or more Processor: 1 Ghz Dual Core or Higher

SOFTWARE REQUIREMENTS	Android Studio 4.1.2 or higher	Network connectivity
	Android Application Package (.apk)	Android 4.0 or higher

3. System Features

3.1 User Registration Feature

3.1.1 Description and Priority

· This feature will collect and manage information of users like Email and Password.

· Priority of this feature is High.

3.1.2 Stimulus/Response Sequences

Stimulus: User requests to enter their email and password.

Response: account verification link sent to their registered e-mail. (users need to verify their email account for login to the application.)

3.1.3 Functional Requirements

Feature ID	Feature Name	Description
FR-UR-1	Insert User email and set a password	The application shall allow users to insert a new user email and password details. Password should be at least 6 characters long
FR-UR-2	Email verification	The application shall allow users to verify their email account for security purposes.

3.2 Login Feature

3.2.1 Description and Priority

· This feature will let the users login into the application by checking their credentials.

· Priority of this feature is High.

3.2.2 Stimulus/Response Sequences

Stimulus: User requests to enter their registered email and password.

Response: if correct credentials then login successful otherwise login failed.

Stimulus: Users have a choice for the "Remember Me" option.

Response: If the option is checked then the user need not to enter credentials again when entering the app.

3.2.3 Functional Requirements

Feature ID	Feature Name	Description
FR-LF-1	Insert Credential Details of user.	The application shall allow users to insert their credentials for login.
FR-LF-2	Remember me	If the option is checked then the user need not to enter credentials again when entering the app.

3.3 Forgot Password Feature

3.3.1   Description and Priority

- ·   This feature will provide a facility to set a password again to the user if they forgot their password.

- ·   An email will be sent to their registered mail account and then they can change their password.

- ·   Priority of this feature is High.

3.3.2   Stimulus/Response Sequences

Stimulus: User is requested to enter their registered email for sending the reset password link

Response: password successfully changed.

3.3.3   Functional Requirements

Feature ID	Feature Name	Description
FR-FP-1	Reset password	The application shall allow user to reset their password through link sent to their registered mail id in case they forgot their password.

3.4 Dashboard

3.4.1   Description and Priority

· This feature will display the total income, expense, navigation drawer, navigation toolbar, history of income and expenses and floating button for entering data in income and expense.

· Priority of this feature is High.

3.4.2 Stimulus/Response Sequences

Stimulus: User requests to add a new income information.

Response: System provides a layout to enter amount, Type and note of income to add it in income fragment layout.

Stimulus: User requests to add a new expense information.

Response: System provides a layout to enter amount, Type and note of income to add it in income fragment layout.

3.4.3   Functional Requirements

Feature ID	Feature Name	Description
FR-DB-1	"+" floating button	Allow users to select if they want to enter income or expense details.
FR-DB-2	Add Income details	Application provides a layout to enter amount, Type and note of income to add it in the income fragment layout.
FR-DB-3	Add Expense details	Application provides a layout to enter amount, Type and note of expense to add it in expense fragment layout.

FR- DB -4	Navigation toolbar	The application shall allow user to navigate through different fragments like income, expense and dashboard by bottom toolbar
FR- DB -5	Navigation drawer	The application shall allow users to navigate through different fragments like income, expense and dashboard by drawer.
FR- DB -6	Income scroll view	The application shall display a scroll view of all previous income details.
FR- DB -7	Expense scroll view	The application shall display a scroll view of all previous expense details.

3.5 Income Management

3.5.1   Description and Priority

· This feature will collect and manage all information of income and display total income. Users can also update and delete their income data.

· Priority of this feature is High.

3.5.2   Stimulus/Response Sequences

Stimulus: User requests to modify income details.

Response: System provides a dialog box for users to modify the details.

Stimulus: User requests to delete income details.

Response: System provides a dialog box for users to delete the details and system will remove details from .

3.5.3   Functional Requirements

Feature ID	Feature Name	Description
FR-IM-1	Update income details	The application shall allow users to make changes to an existing income detail.
FR-IM-2	Delete income details	The application shall allow users to delete an existing income detail.

3.6 Expense Management

3.6.1 Description and Priority

· This feature will collect and manage all information of expense and display total expense. Users can also update and delete their expense data.

· Priority of this feature is High.

3.6.2   Stimulus/Response Sequences

Stimulus: User requests to modify expense details.

Response: System provides a dialog box for users to modify the details.

Stimulus: User requests to delete expense details.

Response: System provides a dialog box for users to delete the details and system will remove details from .

3.6.3   Functional Requirements

Feature ID	Feature Name	Description
FR-EM-1	Update expense details	The application shall allow users to make changes to an existing expense detail.
FR-EM-2	Delete expense details	The application shall allow users to delete an existing expense detail.

3.7 Search Income/Expense

3.7.1 Description and Priority

- This feature will search information of income/expense and display all details of income/expense.

- Priority of this feature is High.

3.7.2   Stimulus/Response Sequences

Stimulus: User requests to search income/expense details by date.

Response: System provides the details of income/expense on the provided date.

Stimulus: User requests to search income/expense details by month (first three letters of that month ie. "mar" for march).

Response: System provides the details of income/expense on the provided month

Stimulus: User requests to search income/expense details by year.

Response: System provides the details of income/expense on the provided year.

3.7.3 Functional Requirements

Feature ID	Feature Name	Description

FR-SIE-1	Search Income/Expense	The application shall allow users to search existing income/expense details.

3.8 Tax Calculator

3.8.1 Description and Priority

· This feature will calculate income tax and display gross taxable and deductions.

· Priority of this feature is medium.

3.8.2 Stimulus/Response Sequences

Stimulus: User requests to calculate income tax.

Response: System provides the layout to enter basic information to calculate total tax i.e. basic salary, HRA, allowances, deductions etc. and displays total tax.

3.8.3 Functional Requirements

Feature ID	Feature Name	Description

FR-TC-1	Tax Calculator	The application shall allow users to calculate the total tax of their basic income.

3.9 EMI Calculator

3.9.1 Description and Priority

- This feature will calculate EMI and display total interest.

- Priority of this feature is medium.

3.9.2   Stimulus/Response Sequences

Stimulus: User requests to calculate total interest.

Response: System provides the layout to enter principle amount, interest rate and year and displays EMI and total interest.

3.9.3   Functional Requirements

Feature ID	Feature Name	Description
FR-EC-1	EMI Calculator	The application shall allow users to insert principle amount, rate and year and should display total interest.

3.10 Alert of Low balance

3.10.1 Description and Priority

- This feature will alert the user with a message if balance is less than 10% or 5% of total income.

- Priority of this feature is High.

3.10.2 Stimulus/Response Sequences

Stimulus: User has exceeded the limit of expense (balance<10% or 5% of income).

Response: System alerts the user with a dialog box that he/she has exceeded the limit of expense and displays a message that the user needs to control their expenses.

3.10.3 Functional Requirements
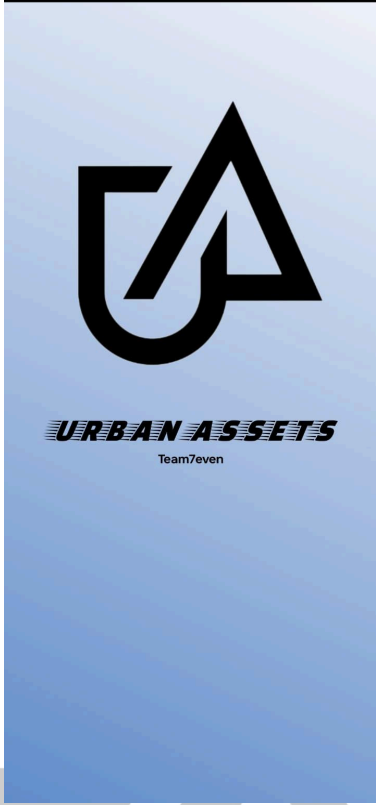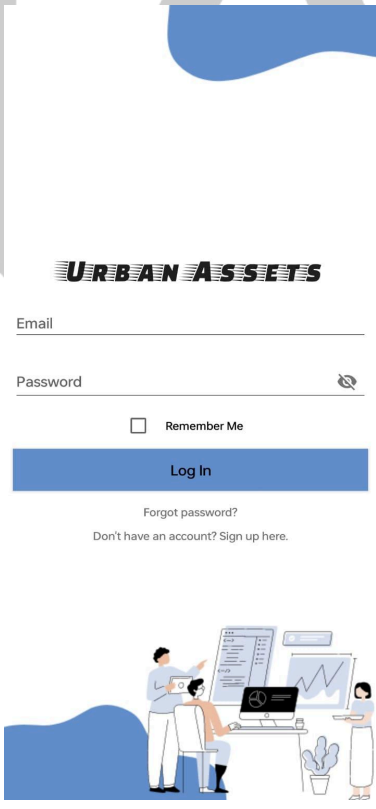
Feature ID	Feature Name	Description
FR-ALB-1	Alert of Low balance	The application shall alert the user if he/she exceeded the limit for expenses.
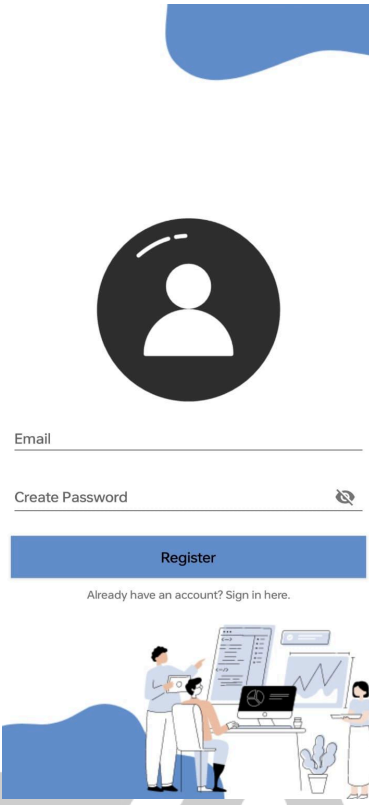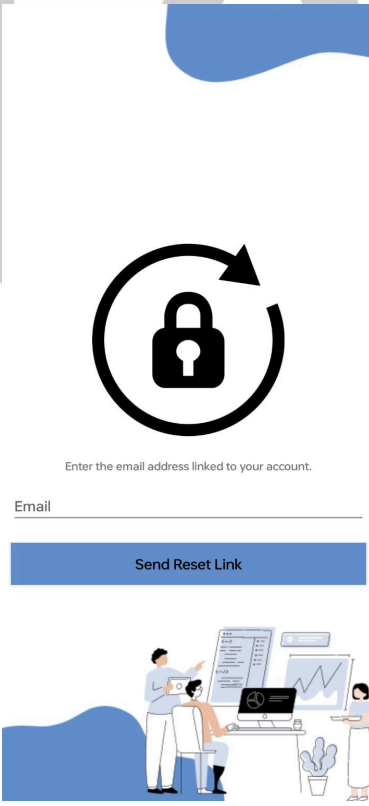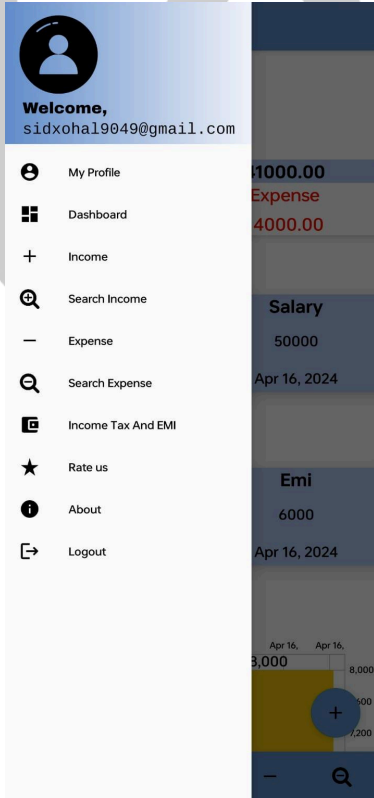
4. External Interface Requirements
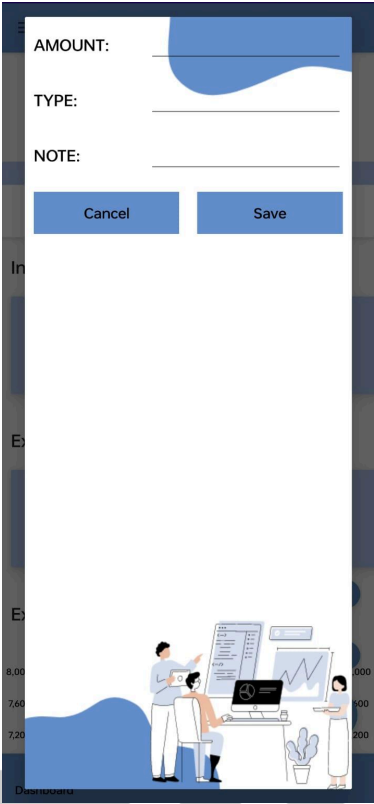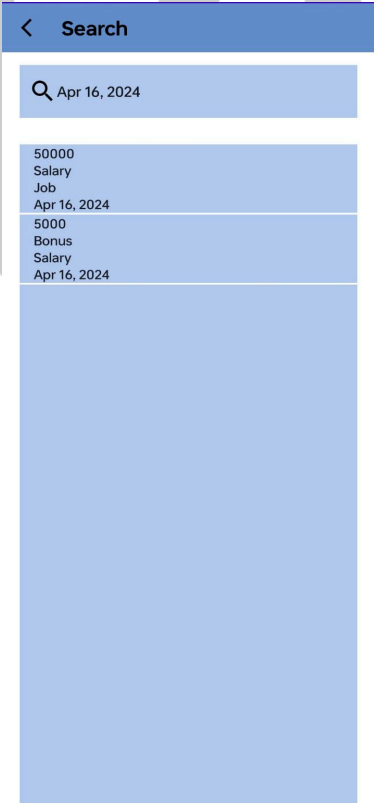
4.1 User Interfaces
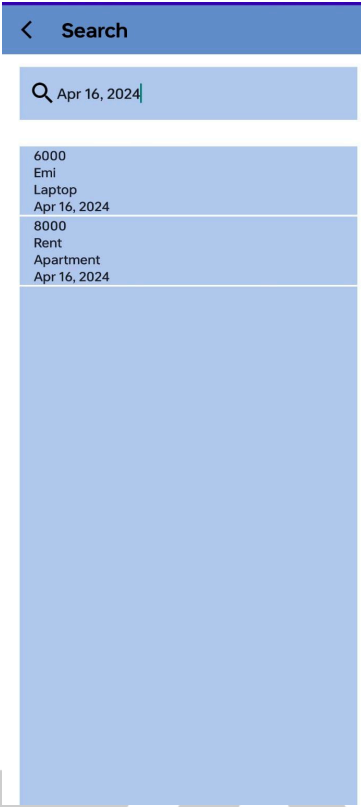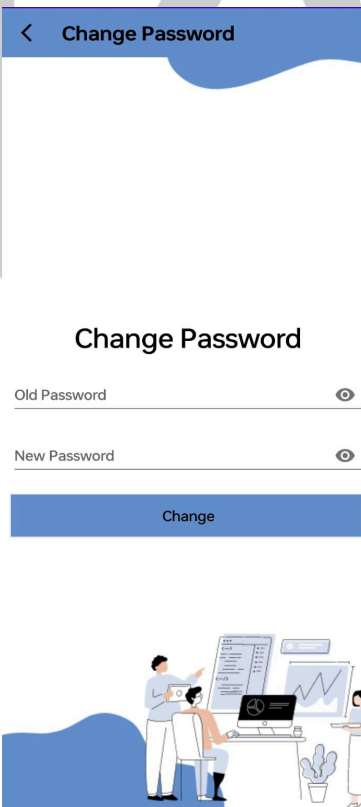
UI name	UI image	Description
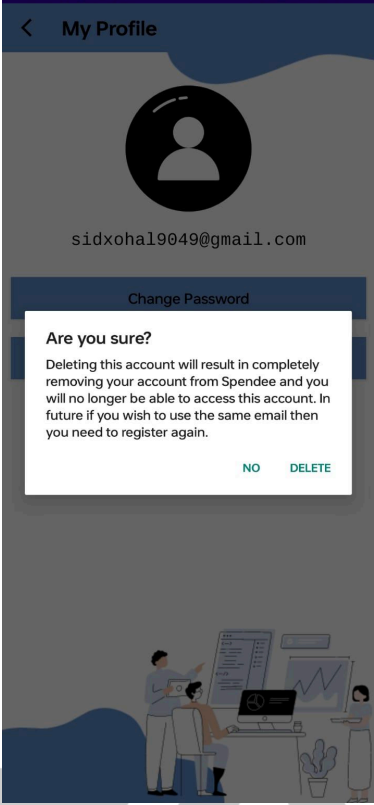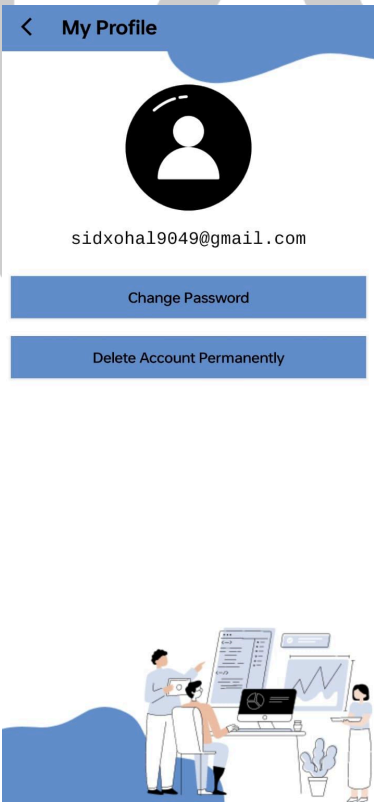
Splash screen		Introduction screen of our application
Login	URBAN ASSETS Email Password ☐ Remember Me Log In Forgot password? Don't have an account? Sign up here.	Users may enter the credentials for login and also have the facility of "remember me".

Registration		Users may register and set a password.
Forgot password		Users may reset their password in case they forgot their password.
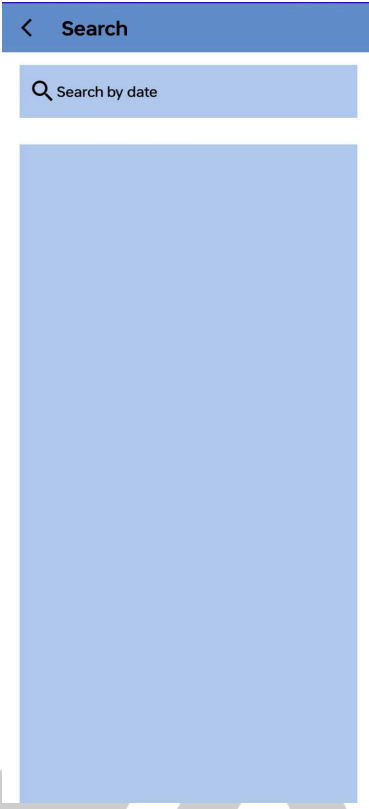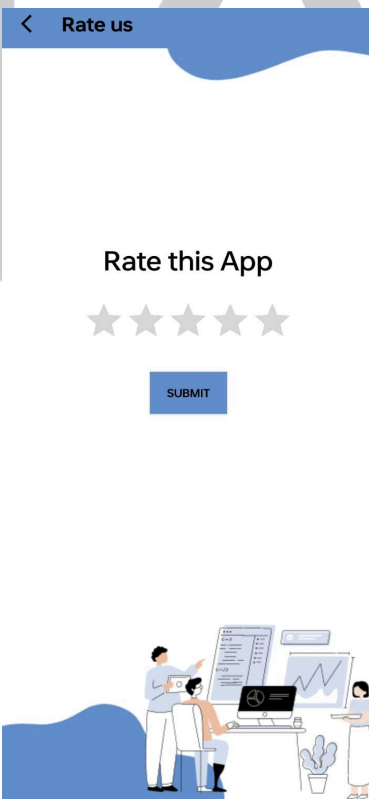
Dashboard		In the dashboard, users can navigate through the dashboard, income and expense fragments. Displays total income and expenses. Users can add details of new income and expenses through clicking on the floating button.
Drawer layout		Drawer layout has options to navigate through income, expense and dashboard fragments.
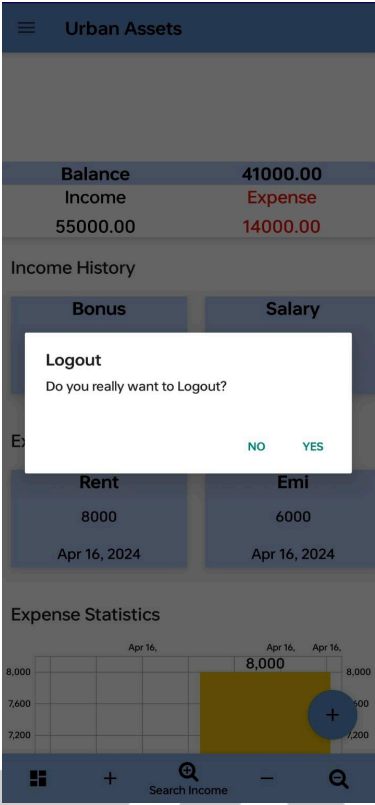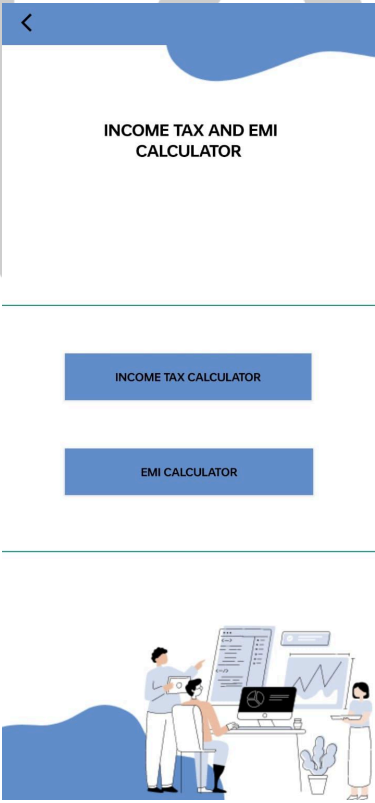
Insert data layout		Users can insert details of new income and expenses like amount, type and note.
	AMOUNT: _____ TYPE: _____ NOTE: _____ Cancel / Save	
Income fragment	Search Apr 16, 2024 50000 Salary Job Apr 16, 2024 5000 Bonus Salary Apr 16, 2024	Displays data of total income and separate details of each income.
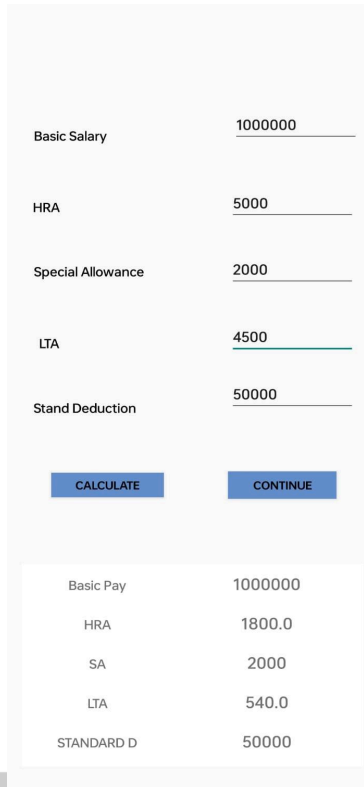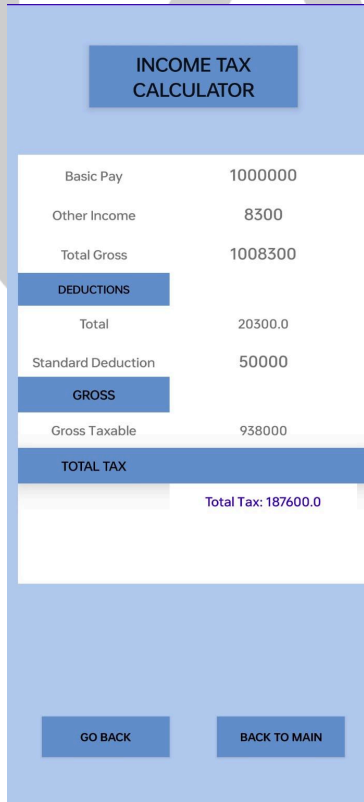
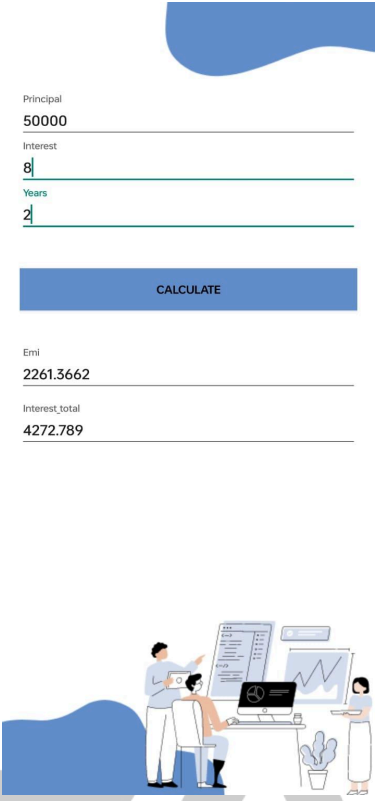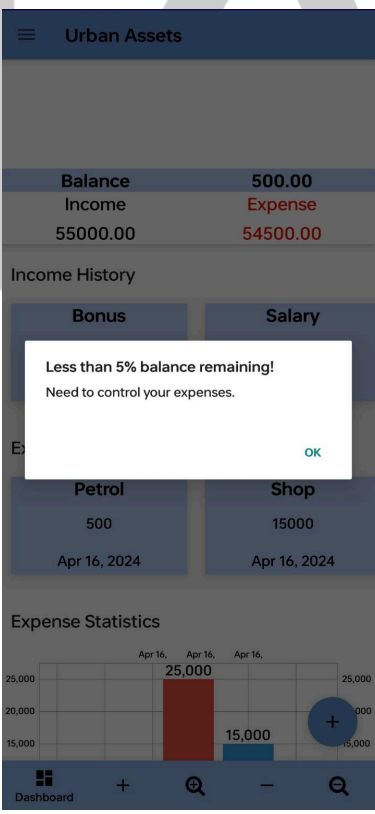| Expense fragment		Displays data of total expense and separate details of each expense.
	Search Apr 16, 2024 6000 Emi Laptop Apr 16, 2024 8000 Rent Apartment Apr 16, 2024	
Change Password layout	**Change Password** Change Password Old Password New Password Change	Layout of Change Password: This feature provides the user to Change Password. If a user wants to change a password he can do it using this function.

| Delete Account Alert | | This displays the App's current version and the names of the developers of this Application. |
| Profile | | This feature helps the user to change his login password and also helps in deleting account from Spendee permanently |

Search layout	**‹ Search** 🔍 Search by date	This feature helps the user to find a particular income/expense data modified by date(i.e either Day, Month or Year).
Rate Us Layout	**‹ Rate us** **Rate this App** ★ ★ ★ ★ ★ **SUBMIT**	This feature allows the user to give rating to this application based on their liking and interest.

| Logout Alert | | This displays the App's current version and the names of the developers of this Application. |
| Income Tax and Calculator | | Users may choose if they want to calculate their income tax or EMI/total interest. |

Tax details form	**Basic Salary** 1000000 **HRA** 5000 **Special Allowance** 2000 **LTA** 4500 **Stand Deduction** 50000 [CALCULATE] [CONTINUE] Basic Pay 1000000 HRA 1800.0 SA 2000 LTA 540.0 STANDARD D 50000	Users may insert details like basic salary and allowances. Then may choose to calculate total tax or continue.
Layout of Tax Calculation	**INCOME TAX CALCULATOR** Basic Pay 1000000 Other Income 8300 Total Gross 1008300 **DEDUCTIONS** Total 20300.0 Standard Deduction 50000 **GROSS** Gross Taxable 938000 **TOTAL TAX** Total Tax: 187600.0 [GO BACK] [BACK TO MAIN]	This layout displays the information that was inserted by the user and displays total tax.

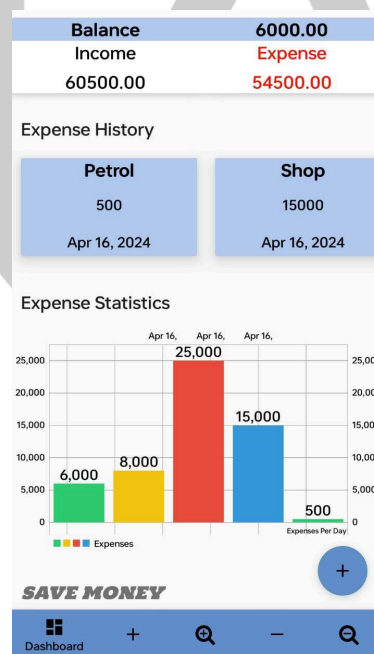| Layout of EMI Calculator		Users may insert details like Principal amount, interest rate and duration. Then display total interest and EMI.
Low Balance alert of 5% balance		This feature alerts users that, user has less than 5% balance remaining, which means the user has a very high expense compared with his income. the user has to control his expenses.

Low Balance alert of 10% balance		This feature alerts the user that, user has less than 10% balance remaining that means the user has a high expense compared with his income. the user should control his expenses.
Statistical Dashboard		This displays the bar chart of per day expenses on Dashboard Fragment that is expensed by the user. Viewing it, the user comes to know how much he is expensing and now how he needs to control his expenses.
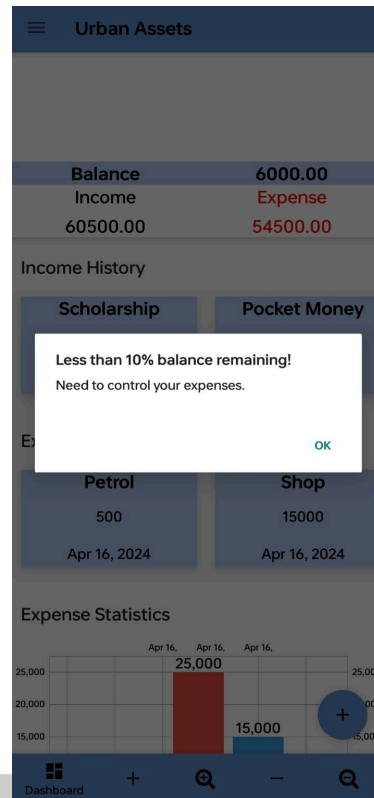
5. Other Nonfunctional Requirements

5.1 Software Quality Attributes

The quality attributes of the software are as follows:

- **Availability**: Our application is operational, functional and usable for completing or fulfilling a user's requirements.

- **Maintainability**: Our application is understandable, repairable, or enhanced.

- **Reliability**: Our Application is completely defect free, does not create downtime, and performs correctly in every scenario.

- **Usability**: Our application is effective, efficient and satisfactory for all the users.

- **Portability**: Our application is portably installed, deployed, accessed and managed - regardless of delivery model, when used on multiple platforms or instantly accessed.

- **Correctness**: When our application is used correctly, users are able to interact with the system.

Appendix A: Glossary

TBD – To Be Done

UI – User Interface

FR – Functional Requirements

UR – User Registration

LF – Login Feature

FP – Forgot Password

DB – DashBoard

IM– Income Management

EM– Expense Management

SIE– Search Income/Expense

TC– Tax Calculator

EC– EMI Calculator

ALB– Alert of Low Balance