

A
PROJECT REPORT ON

AN ANDROID APPLICATION **FOR EXPENSE MANAGEMENT**

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CERTIFICATE

This is to certify that the practical / term work carried out in the subject
of

System Design Practice and recorded in this journal is

the bonafide work of

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Abstract

Now a days there is everything on internet. People usually want to save the expense so that they can't forget it. So, we have developed an android application for Expense management. User can add the expense in the application wherever he/she spent the money. They will have different options for choosing categories for the particular expense. So, user can see all the expenses on just click and can see category wise summary for the expenses.

Introduction

The objective of the project is to develop a system that automates the process and activities of Expense Management. The purpose of the system is to provide basic facility for adding, updating and viewing the expense summary.

User can Add & Update category wise expense. User can see the list of expenses in the decreasing order of date. He/She can also see the summary where he/she spent the money and can back up expense list as PDF file.

Technology used:

- Java
- SQLite Database

Platform used:

- Android Studio

Software Requirement Specification

1) End User:

R1 - Add Expense

Description: In this, user can add expense details and amount.

R1.1 Select Category

Input: Select category from the list.

Output: Category selected.

R1.2 Enter Subject

Input: User will have to enter the subject details.

Output: Subject name.

R1.3 Enter date.

Input: Double tap to select a date.

Output: Selected date.

Exception: If date is invalid, then exception msg will be shown.

R2 – Update Expense

Description: User can update expense details if required.

Input: Update detail which you required.

Output: Updated expense.

R3 – Delete Expense

Description: User can delete expense details if required.

Input: Delete expense which you required.

Output:Expense deleted .

R4 – View Expense list

Description: User can view expense details if required.

Input: Show expense list .

Output:Expense list.

R5 – View Expense summary

Description: User can view expense summary if required.

Input: Show expense summary .

Output:Expense summary in percentage.

R6 – Make PDF file

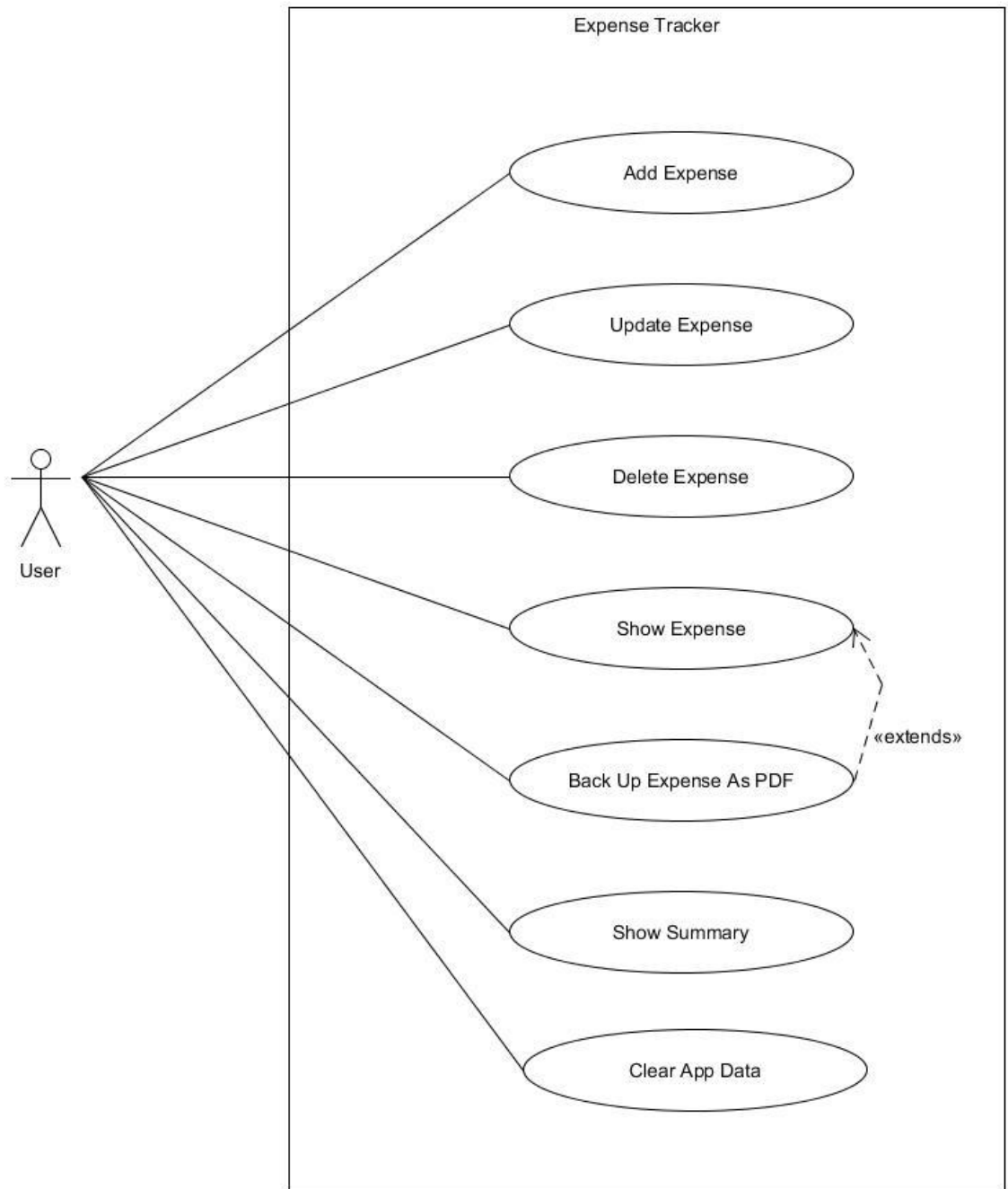
Description: User can store expense list as PDF file

Input: Convert to PDF.

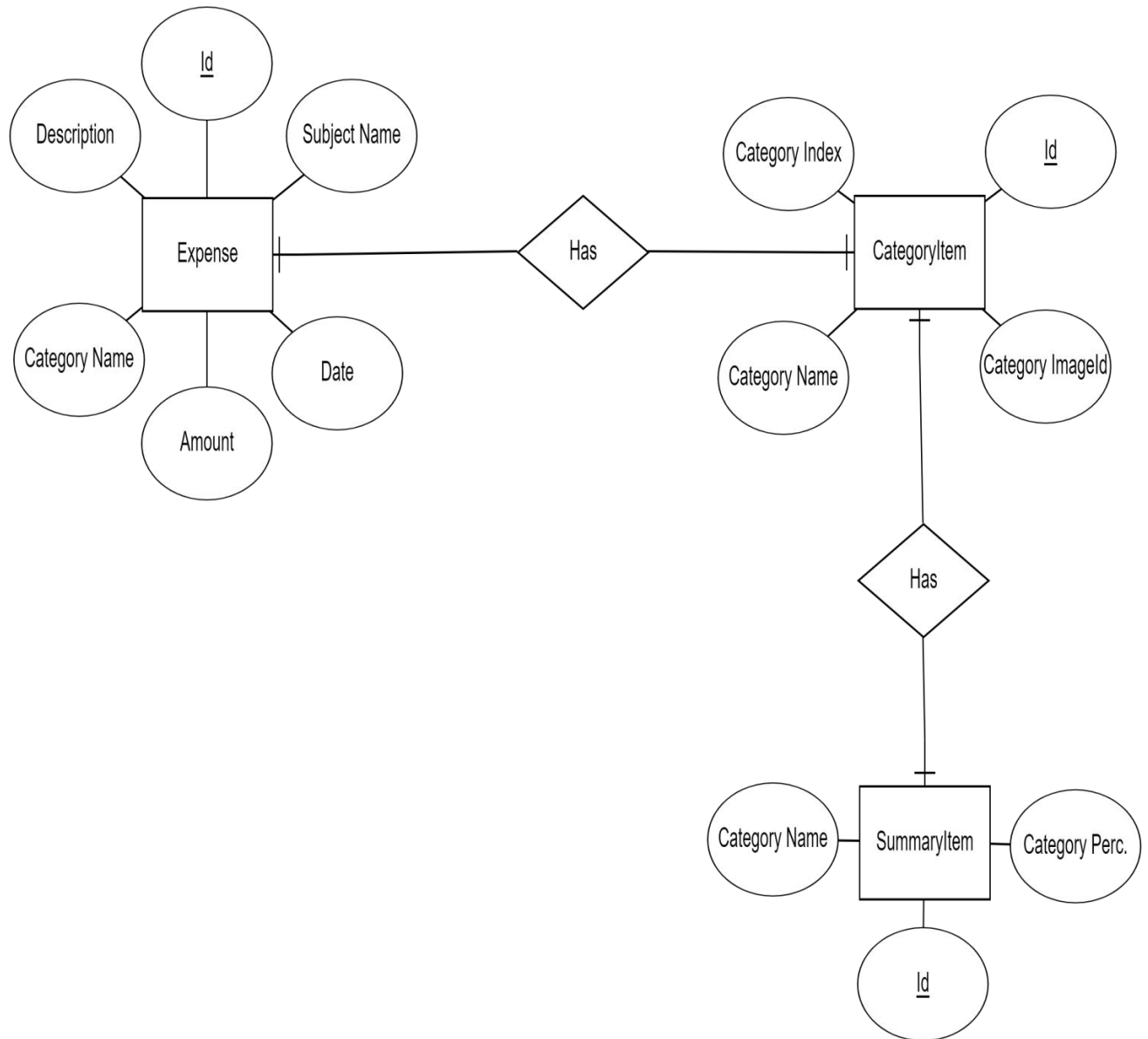
Output:PDF will be stored in external storage.

Design

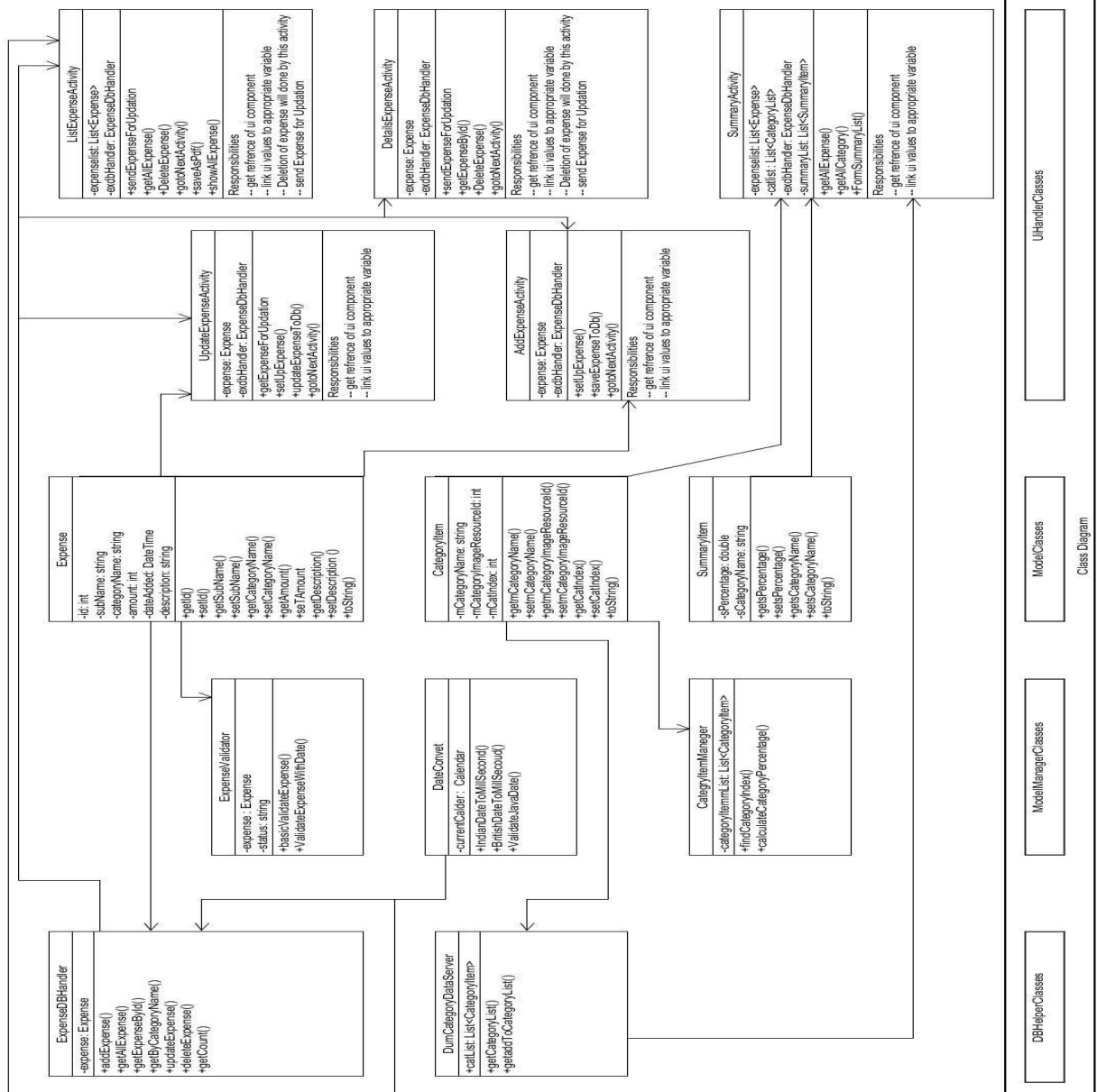
1. Use case Diagram



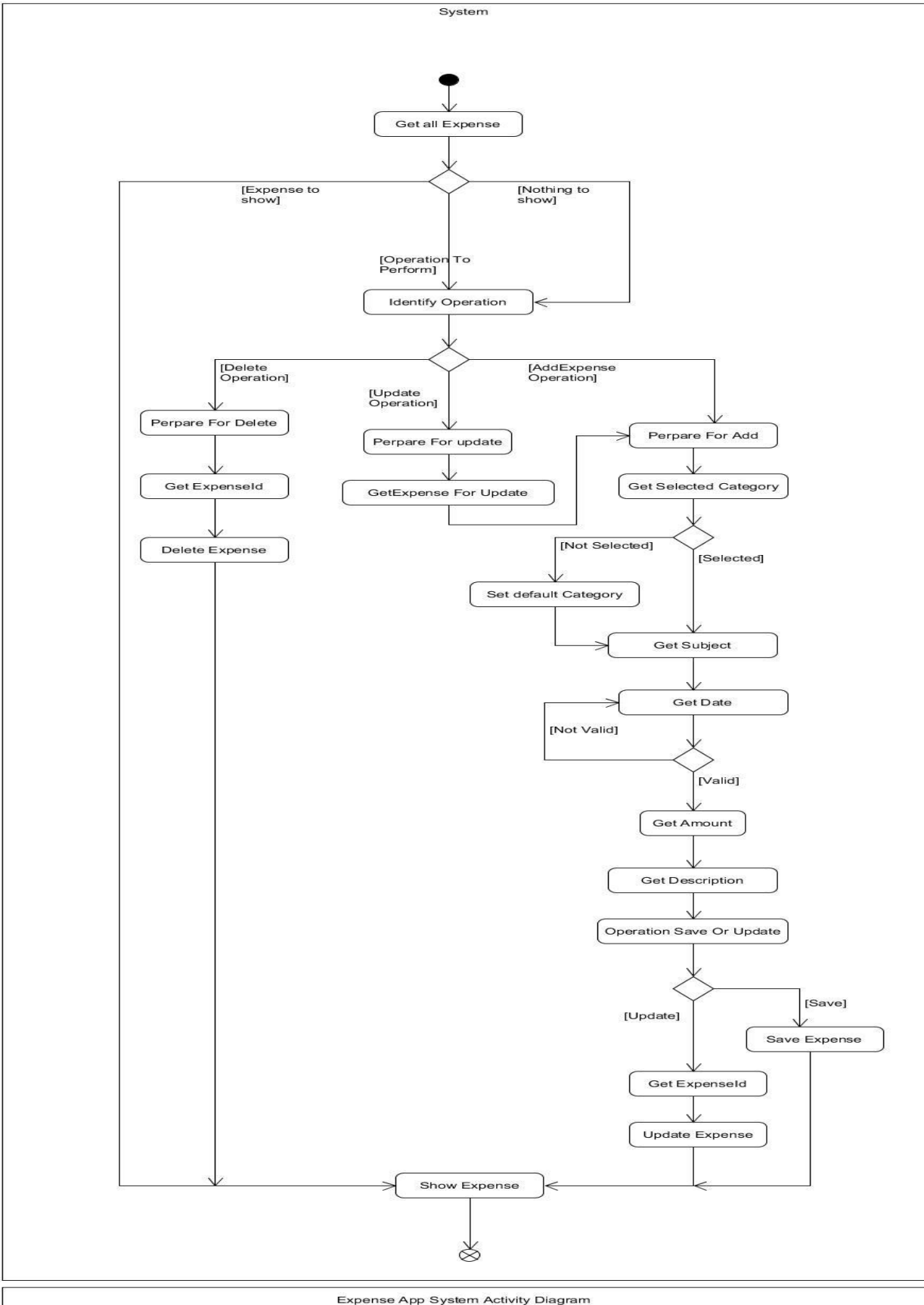
2. ER Diagram



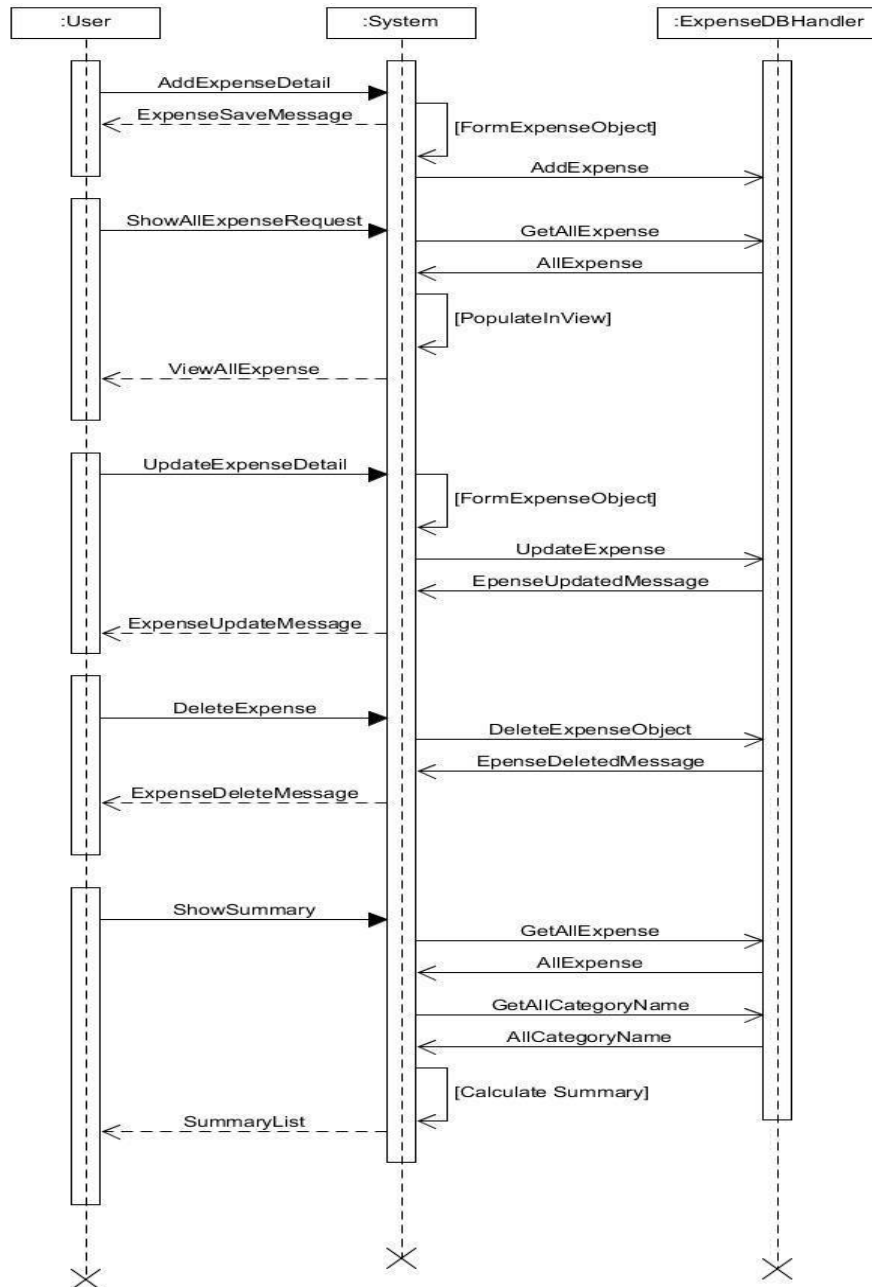
3. Class Diagram



4. Activity Diagram



5. Sequence Diagram



Expense App System Sequence Diagram

6.DTD:

Expense								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1	Id	Number	10	Yes	Yes	PK		Primary Key for the Expense table
2	Subject Name	Varchar2	50	Yes				Subject of Expense
3	Date	Date Time		Yes				By default, current Date Is provided User can change it also.
4	Amount	Number	10	Yes	Yes			Amount for the expense.
5	Category Name	Varchar2	10	Yes	Yes			Category Name select from drop – down list.
6	Description	Varchar2	50	No				User can add short description of expense.

Category Item								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1	Category Name	Varchar2	10	Yes	Yes	PK		Category Name is primary key for category table.
2	Category Image Resource Id	Number	10	Yes				Id number for Image Resource of Category
3	Category Index	Number	10	Yes				Index number for displaying category list in dropdown list

Summary Item								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1	Category Name	Varchar2	10	Yes	Yes			Category Name is for calculate summary for that category.
2	Percentage	Number	10	Yes				Represent percentage of category.

Implementation detail

Expense Module:

In the home page, there is shown Show Expense and Add expense button. By which, User can show the expense history and add new expense respectively. User can also update the expense details and delete specific expense.

Summary Module:

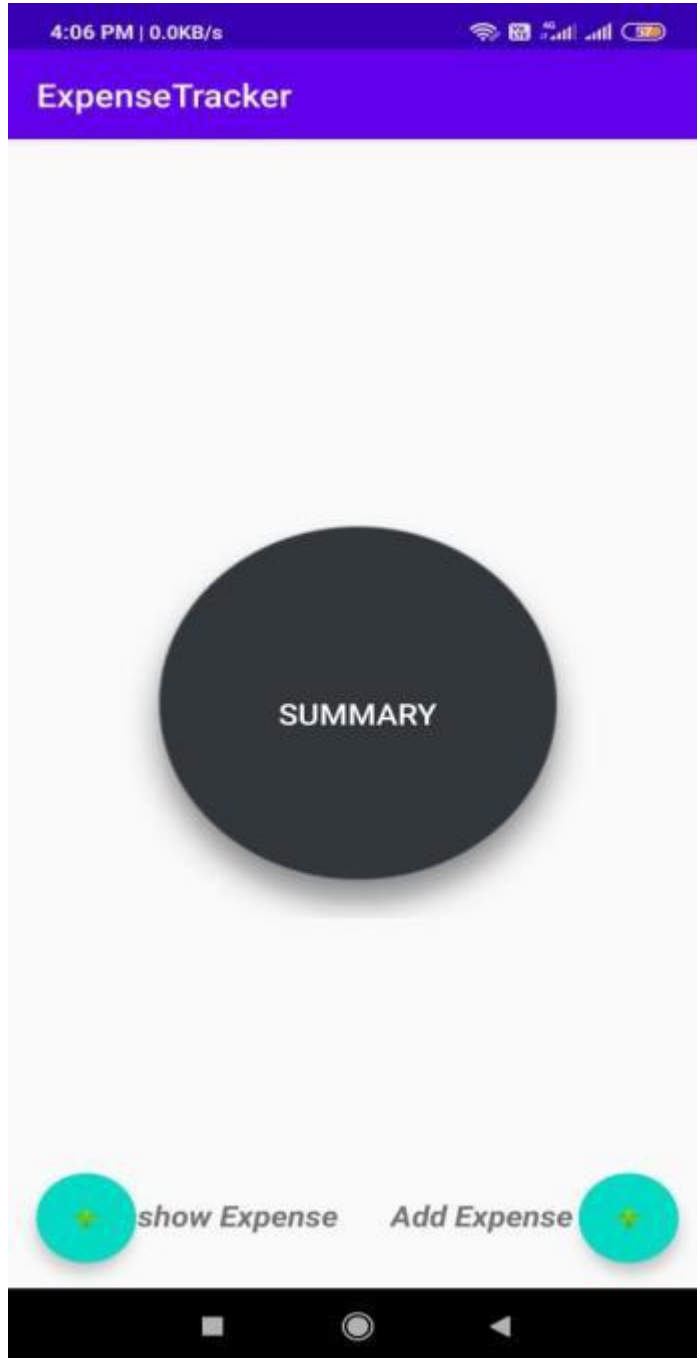
In Summary module, User can see category wise expense summary in percentage also. So, user can keep track of his/her expenses like where he/she spends more money.

Testing & Screen shots

- Test table

No.	Test Scenarios	Expected Result	Actual Result	Pass/Fail
1.	While entering Expense by default first category of expense selected.	Food (first category name) selected toast appear	Food(first category name) selected toast appear	Pass
2.	Try to save or update Expense without inserting subject	Enter required field error message should be display	"enter required field " toast message appear	Pass
3.	Try to save or update Expense without providing date	Enter required field error message should be display	"enter required field " toast message appear	Pass
4.	Try to save or update Expense without providing amount in integer	Enter required filed error message should be display	"enter required filed" Toast message appear	Pass
5.	Try to save or update Expense without providing description	Expense should be saved	"Save !!" toast message appear	Pass
6.	Try to save Expense with date in dd/MM/yyyy format	Expense should be saved	"Save !!" toast message appear	Pass
7.	Try to save Expense with date which is future date	Date invalid message should be display	"Date invalid"toast message appear	Pass
8.	Try to save Expense with date in {0}*dd/{0}*MM/{0}*yyyy format	Expense should be save	"Save !!" toast message appear	Pass
9.	Save Expense list without permission of storage	Permission denied message should be display	"Permission Deny" Toast appear	Pass
10.	Save Expense list with permission of storage	Appropriate message should be display	"Permission already granted" & "(file name) Save !!" toast appear	Pass
11.	Try to save empty Expense list in storage with storage permission	Appropriate message should be display	Only "Permission already granted " toast message appear	Pass
12.	While trying to update any Expense which is already save.	All input field should be filled appropriate values	All input field filled with appropriate values	Pass

- Screen shots



(Home page)

4:06 PM | 13.5KB/s

ExpenseTracker

Food

Enter a Expense Subject

Enter a Date (Double Tap or dd/MM/yyyy)

Enter a Amount

Enter short Description

SAVE

(Add Expense)



(Expense list)

4:12 PM | 1.5KB/s

ExpenseTracker

☐ Bills

Lightbill

13/3/2020

2000

Torrent

SAVE


(Adding the expense)



(Expense Added)

4:14 PM | 0.4KB/s

ExpenseTracker

 Bills

Lightbill

13/3/2020

3000

Torrent

UPDATE

(Updating expense)



(Updated Expense list)





(Save as PDF)



Conclusion

In this project we have successfully implemented functionalities like Add expense, Update expense, Delete expense, View Expense-list, View Summary and convert Expense-list to PDF. In our android application, Expense list is shown in the decreasing order of date. We have put date validation in our Expense Tracker application.

Limitations and Future Extension

Limitations:

We have not implemented the Custom category functionality. Instead we have provided category list by which user can choose any category. We haven't put date-wise expense filter. And while inserting a amount of expense it should be integer.

Future Extension:

- Custom Category will be provided.
- Date-wise filter will be provided.
- We are looking to implement pi-chart.

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