

PERSONAL EXPENSE TRACKER APPLICATION

1. INTRODUCTION

1.1 Project Overview:

Nowadays people are concerned about regularity of their daily expenses. This is done mainly for keep a track of the users' daily expenses to have a control of their monthly expenses. As the traditional methods of budgeting, we need to maintain the Excel sheets, Word Documents, notes, and files for the user daily and monthly expenses. There is no as such full-fledged solution to keep a track of our daily expenses easily. Keeping a log in diary is a very monotonous process and also may sometimes lead into problems due to the manual calculations.

Looking on all the above given conditions, we are trying to satisfy the user requirements by building a application which will help them reduce their burdens. "Personal Expense Tracker Application" is an application where one can enter their daily expenses and end of the day, they know their expenses in charts. Personal Expense Tracker app will not only help you with budgeting and accounting but also give you helpful insights about money management. This applications will ask users to add their expenses and based on their expenses, wallet balance will be updated which will be visible to the user. Also, users can get an analysis of their expenditure in graphical forms. They have an option to set a limit for the amount to be used for that particular month if the limit is exceeded the user will be notified with an email alert.

1.2 Purpose:

This application will help us to reduces the manual calculations for their daily expenses and also keep the track of the expenses. With the help of this application, user can calculate his total expenses per day and these results will stored for unique user.

2 LITERATURE SURVEY

2.1 Existing problem

- I. Income and Expense Tracker will maintain data of daily, weekly, monthly, yearly expenses, Manages user's expenses and earnings in a simple and intuitive way. User can select category of expense, enter other information like user can capture photo, add location, select amount of expense etc. And this will save to the local database. User can view and sort expense as per weekly, monthly, yearly. By using this, the system can reduce the manual calculations for their expenses and keep the track of the expenditure. In this, user can provide his income to calculate his total expenses per day and these results will stored for unique user. People when usually go for trips or movies with friends they can use this tracker to maintain their expense. It will be easy for them to share the bill in this tracker. This will display graph as per selected view. And user can enter his monthly income or limit of monthly Expense in this tracker. This tracker system provides an integrated set of features to help user to manage the expenses and cash flow. But this project will not have any reminder to remain a person in a specific date, so that is the only drawback in which the remainder is not present. This project will be an unpopulated data because it has some disadvantages by not alerting a person for each and every month. But it can used to perform calculation on income and expenses to overcome this problem we propose the new project.
- II. Income and Expense Tracker which is helpful to manage out income and expense as an daily or periodically or else whenever want to remind. It also act as an indicator or reminder example in the fastest world which can't able to remember what are the things people have to do for the end of month and what are the payments have to pay for the particular month. Due to some conflict or some other stress people forget some times that what are the income or where the money has to come from or what the payments have to pay. This application will help you to make a note for what or the things user have to do for the end of month. For example, like how much it expenses for monthly and what are the expenses for a month. Some of the expense features like food expenses billing expenses like phone, electricity, taxation and some other personal expenses.
- III. Expense Tracker is a day-to-day expense management system designed to easily and efficiently track the daily expenses of unpaid and unpaid staff through a computerized system that eliminates the need for manual paper tasks that systematically maintains records and easily accesses data stored by the user. Expense Tracker app is usable by anyone who are willing to manage their expenses and aiming to save for the future investments. This app has no range criteria or any kind of profession or gender are focused so it will used hugely by any other person. This system is developed to work without internet and design the window application in such a way that the user does not have to bother using this application without much effort. End users with window running devices can use this software. If the users are a window user then can download the application and work accordingly. This system is used by any person to control their income expenditure from daily to annual basics and to keep an eye on their spending. This system can be used in mutli-language. The main feature of this system is to track by day and category.
- IV. This system is very helpful to the smartphone users and make their life easy. The expense manager application is one among those applications, which provides a variety of help in daily life. As there are many similar applications available trying to solve the same problem but are not effective, here are some added innovative features to make the application unique, easy to use and efficient, this is what makes the application standout from the rest of others. Other than adding unique features like integrating group expenses and personal expenses into one single application, also add features like trends

and estimations. This system also includes syncing of applications with personal email IDs or social network account which help also help to serve better recommendations and personalised marketing campaigns. The main features of this system are keep track of all daily transactions, keep track of money lent or borrowed, Suggest the user with the best investment options, offers in popular categories, helps to view stock market and also helps to read latest authenticated financial news. The application delivered efficiently in calculating split expenses and recording the expenses together accurately with date and time.

- V. Daily Expense Tracker is a small rule in imitation of successfully bossing one's costs easily. It is raised in imitation of superintending the daily expenses in an extra efficient and manageable way. By using the software, decrease the guide calculations regarding-by-day by fees care of period these effects desire stay stored because of each user. Daily Expense Trackers lets in the person in accordance with hold a computerized diary. It is an application as users do accomplish between their computers. It is capable after begetting one's fees yet deliverance document so care of duration up to expectation be able to keep selected. Daily Expense Tracker is chronic by someone character in imitation of rule one's income-expenditure of daily groundwork upon after the end regarding the month longevity. The essential function that utility is so much can tune costs by looking out the date, month, or year. Daily Expense Tracker helps in figuring out fraud, with India mildly moving according to digital charge such is vital you maintain close tune regarding your savings visiting card statements, financial institution debts yet spend. Otherwise, execute read exhaust according to monetary fraud and no longer even realize it. This challenge also offers half possibilities that choice help the person by maintaining all pecuniary things to do kind of digital computerized diary. This software is entirely effortless in imitation usage and that have multi-language features. The important characteristic about this application is that amount that perform than expense by means of citing date, month yet year. It utilizes according to preserve than expenses then additionally enhance your savings.
- VI. This system is for keeping track of earnings. Expense Tracker is a tool that can assist anyone in keeping track of their expenses and reducing their spending. Expense Tracker where users may download to their phones and use to track and update their daily costs so they are always aware of how much they are spending. The user can establish their own spending categories, such as food, clothing, rent, and bills, and then enter the amount spent as well as any notes. Include more information in the additional information area to specify the expense. A pie chart of costs will be available to the user. Every Day Expense Tracker System is a software programme that keeps track of a user's daily income and expenses. Overall, this is a smart automated solution for tracking expense. This system should be capable of analysing data provide information on the categories the user spent the most money in. The suggested system should have a user interface that allows users to save and track their previous expenses. Track money which is developed with a concept in mind to help users to easily manage all their income and expenses and keep track of all credits and debits of transaction according to different categories, also users can have a pictorial representation of all the transactions of different categories and can also download excel reports of transaction. Also receives customised tips in the form of push notifications which helps users to manage expenses.
- VII. The Real-time voice operated expense and transaction tracking application is a application that acts as a wallet to the people and tracks all the transaction and expenses that a person is doing in their daily life. This application is a voice command activated application that contributes in providing user interactive UI allowing the people to easily add and remove the money as per the required date. This is a totally automatic website that works on voice command. A user using the application can see a wide range of features in respective categories. This application each user a satisfaction for the login and safety of each and every particular user also its very user friendly and user oriented application. Many users in their daily life try to save money in order to save money and use that for further use. Therefore in order to simplify their work and help them to save money and track their expense this application is the best practice to work with. With the rapid development of cost and expense, it will try to save money so if user is not

able to track the expense or find difficulty in having the record then user can use the application for their personal use and save as much they want because this will help one to have daily expense record. Money wastage irritates every person while doing purchase. So, in expense tracking app there will be no case of wastage of money.

- VIII.** Nowadays there are a wide range of spreadsheets and projects that are intended to make your financial planning that are meant to make a lot easier and more proficient. This system overcomes by addressing the complexity of tracking income and expenses by introducing budget tracking application developed for high performance. The result indicated the need of solution to ease the task. Budget tracking native mobile application with interactive user interface and with handy features would be one of the ideal solutions for the current problem. User centered applications require user feedback by delivering prototype version to the real users. This application is known for its performance, reliability and user friendliness. This system's solution will make positive impact on people's day to day life by making use of the budget tracking application's promising features. The drawback is further research may be needed in order to identify other factors that could strengthen the effectiveness as features are sometimes inactive.

2.2 References

- i.** Chandini, S., Poojitha, T., Ranjith, D., Akram, V. M., Vani, M. S., & Rajyalakshmi, V. (2019). Online Income and Expense Tracker. *International Research Journal of Engineering and Technology (IRJET)*, 6(3), 2395-0056.
- ii.** Thanapal, P., Patel, M. Y., Raj, T. L., & Kumar, J. S. (2019). Income and expense tracker. *Indian Journal of Science and Technology*, 8(S2), 118-122.
- iii.** Gupta, H., Singh, A. P., Kumar, N., & Blessy, J. A. (2020). Expense Tracker: A Smart Approach to Track Everyday Expense (No. 4809). EasyChair.
- iv.** Velmurugan, A., Mayan, J. A., Niranjana, P., & Francis, R. (2020, December). Expense manager application. In *Journal of Physics: Conference Series* (Vol. 1712, No. 1, p. 012039). IOP Publishing.
- v.** Masendu, T. R., & Tripath, A. M. (2021). Daily Expense Tracker. *International Journal of Research in Engineering, Science and Management*, 5(5), 90-92.
- vi.** Jadhav, N. J., Chakor, R. V., Gunjal, T. M., & Pawar, D. D. (2021) EXPENSE TRACKER.
- vii.** Sharma, S., & Verma, P. (2021). VOICE OPERATED REAL TIME EXPENSE TRACKER.
- viii.** Hezretov, M. (2021). Budget Tracker Highly Customizable.

2.3 Problem Statement Definition

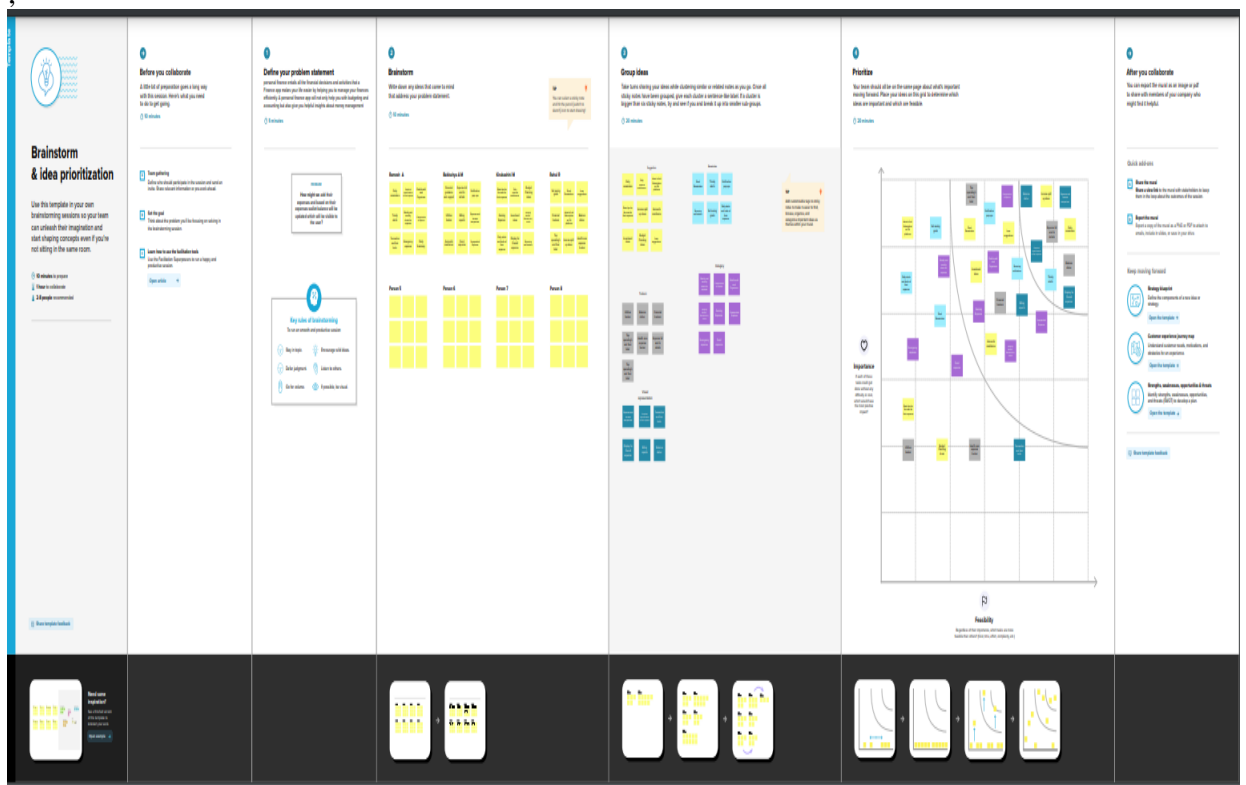
Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	An Entrepreneur	Manage the finances more efficiently	I often forget many hidden costs of running a business	Insufficient knowledge about how much it costs to run the business	Depressed and unable to track my cash flows efficiently to stay competitive
PS-2	An Employee	Manage the monthly expenses	Couldn't have control over the income and expenditure	I often purchase branded items so cannot limit my expenses	No one to monitor the income and control the expenditure.
PS-3	A Student	Spend my part time job salary for rent, shopping and some other additional expenses.	Cannot find a clear graph of my expenses as my income varies for every month	My income is based on the number of client I approach	Unable to track the expenses which makes me feel low

3 IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas



3.2 Ideation & Brainstorming



3.3 Proposed Solution:

i. **PROBLEMSTATEMENT:**

Now a day's people are concerned about regularity of their daily expenses. This is done mainly for keep a track of the users' daily expenses to have a control of their monthly expenses. As the traditional methods of budgeting, we need to maintain the Excel sheets, Word Documents, notes, and files for the user daily and monthly expenses. There is no as such full-fledged solution to keep a track of our daily expenses easily. Keeping a log in diary is a very monotonous process and also may sometimes lead into problems due to the manual calculations.

ii. **IDEA/SOLUTIONDESCRIPTION:**

The idea for the problem stated above can be solved by satisfying the user requirements by building a application which will help them reduces their burdens. "Personal Expense Tracker Application" is an application where one can enter their daily expenses and end of the day, they know their expenses in charts. A personal Expense Tracker app will not only help you with budgeting and accounting but also give you helpful insights about money management.

iii. **NOVELTY/UNIQUENESS:**

The solution to be developed will have a super-fast response when compared to the other applications on the web today. There are many applications that provide expense and various other fuctionalities. But this application will help us to maintain the expense with each category by setting limit in our daily expense even with option to expand the expense limit.

iv. **SOCIAL IMAPACT/CUSTOMER SATISFACTION:**

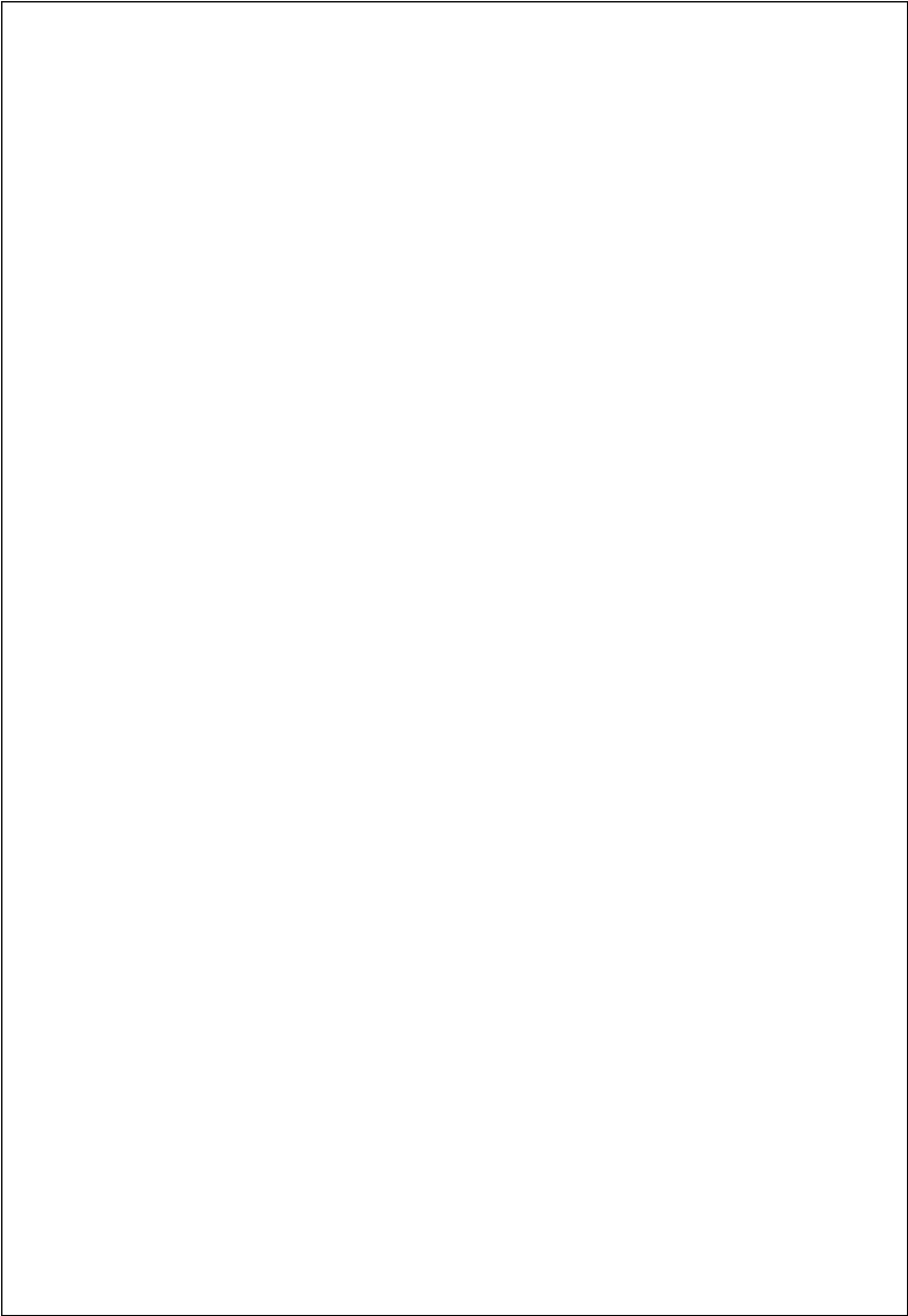
The application will be a major assistance to the user in managing their personal expense by providing a user friendly methods to it. For a gist the personal expense of the user can be made by setting up the limit and then adding the user expense .Thus this makes a great social impact.

v. **BUSINESS MODEL:**

Increase in the users are directly proportional to the download rate that ultimately rises the revenue of the developer and the future growth of technology gives the business model to bloom up.

vi. **SCALABILITY OF SOLUTION:**

The solution proposed can be used in various application model that is useful for the user in tracking up their users expenditures by capturing it .Thus it helps in perfect management of their daily expense.



3.4 PROPOSED SOLUTION FIT

Define CS, fit into CC	1.CUSTOMER SEGEMENTS <p>The users of the application are going to be the people in any profession which includes a millionaire to a moderate people who needs to monitor and control their expenses .</p>	4.CONSTRAINTS <ul style="list-style-type: none"> Financial instabilities prevent to upgrade technically. Insufficient knowledge about how to control the cash flow. 	5.AVAILABLE SOLUTIONS <ul style="list-style-type: none"> A basic functionality phone to access the application. Ask users to add their expenses and based on their expenses, wallet balance will be updated which will be visible to the user. Some past tries of the user include Excel sheets, Word Documents, notes, and files for the daily and monthly expenses which results in problem due to manual calculations . Pros of the solution include fast,accurate and reliable access by viewing expenditure in graphical forms. 	Explore AS, differentiate
Focus on J&P, tap into BE, understand RC	2. JOBS TO BE DONE/PROBLEMS <ul style="list-style-type: none"> People are concerned about regularity of their daily expenses and cannot have control over the income and expenditure. Cannot find an analysis of their expenditure in graphical forms. Keeping a log in diary is a very monotonous process and also may sometimes lead into problems due to the manual calculations. 	9. PROBLEM ROOT CAUSE <ul style="list-style-type: none"> One of the reasons that this problem exists is because of the poor understanding as cannot find a clear graph of expenses as some people's income varies for every month The users adapt to the application for the betterment understanding of the expenses. 	6. BEHAVIOUR <ul style="list-style-type: none"> Users can use the software application functionalities and get the alert through mail when it exceeds the limit. Thereby finding the necessary features in the application is significant. Positive approach over the expenditure. 	Focus on J&P, tap into BE, understand RC
Identify strong TR & EM	3.TRIGGERS <p>Social media platforms and daily television or newspaper impact people mentality to upgrade into a new and easy life lifestyle.</p> <hr/> 4. EMOTIONS: BEFORE / AFTER <p>Before :Discrepancies,time consuming. After :Easy to approach,quick process, Accurate result.</p>	10. YOUR SOLUTION <p>Easy accessibility and self understandable features throughout the system This application not only help the user with budgeting and accounting but also give you helpful insights about money management.It will ask users to add their expenses and based on their expenses, wallet balance will be updated which will be visible to the user. Also, users can get an analysis of their expenditure in graphical forms. They have an option to set a limit for the amount to be used for that particular month if the limit is exceeded the user will be notified with an email alert.It helps user to reduces the manual calculations for their daily expenses and also keep the track of the expenses. User can also calculate total expenses per day and these results will stored for unique user.</p>	8. CHANNELS OF BEHAVIOUR 8.1 ONLINE <ul style="list-style-type: none"> Users get the alert through mail when it exceeds the limit. 8.2 OFFLINE <ul style="list-style-type: none"> Initially add to expense wallet. Set limit to expenses. User gets analysis of their expenditure in graphical forms. 	Extract online & offline CH of BE

4 REQUIREMENT ANALYSIS

4.1 Functional requirement

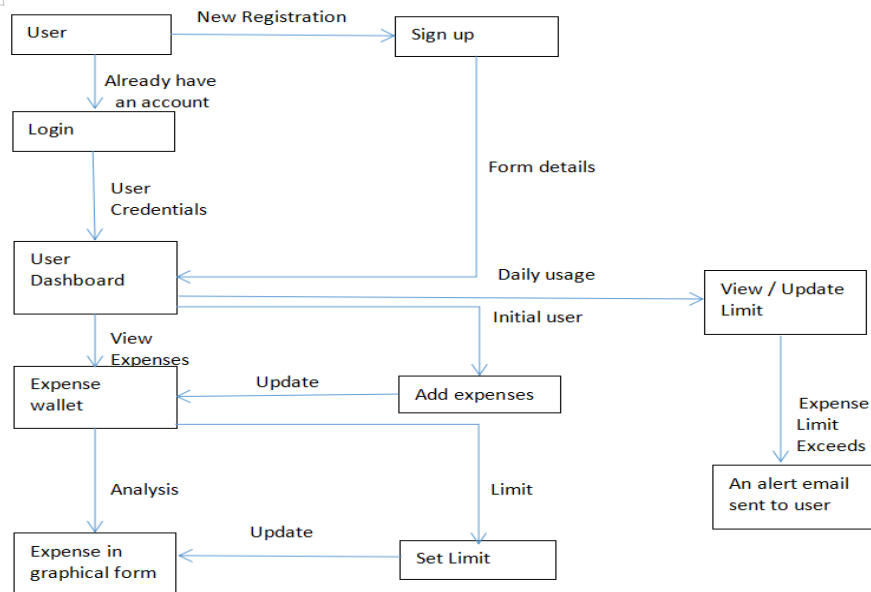
FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form, Registration through Email, Profile built.
FR-2	User Confirmation	Confirmation via text message Confirmation via Email
FR-3	Role of User	Add expenses to wallet Set limit to avoid exceeding
FR-4	Role of application	Analysis of expenditure in graphical forms When the limit is exceeded, the user will be notified with an email alert.
FR-5	Result	Reduces the manual calculations for daily expenses and also keep track of the expenses Calculate total expenses per day and the results will stored for unique user.

4.2 Non-Functional requirements

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The application provides simple and clear functionality such as graphical representation of the expenses and provides alert when the limit is reached.
NFR-2	Security	User information will be safe. The registered user information will not be shared to other users.
NFR-3	Reliability	The trust towards the system is high as it eventually provides accurate results.
NFR-4	Performance	The user does not have to wait long for accessing the result as it performs consistently well.
NFR-5	Availability	The application is user friendly which can be easily accessed by the user irrespective of time.
NFR-6	Scalability	The application is designed in such a way it can able to withstand huge number of users at any moment.

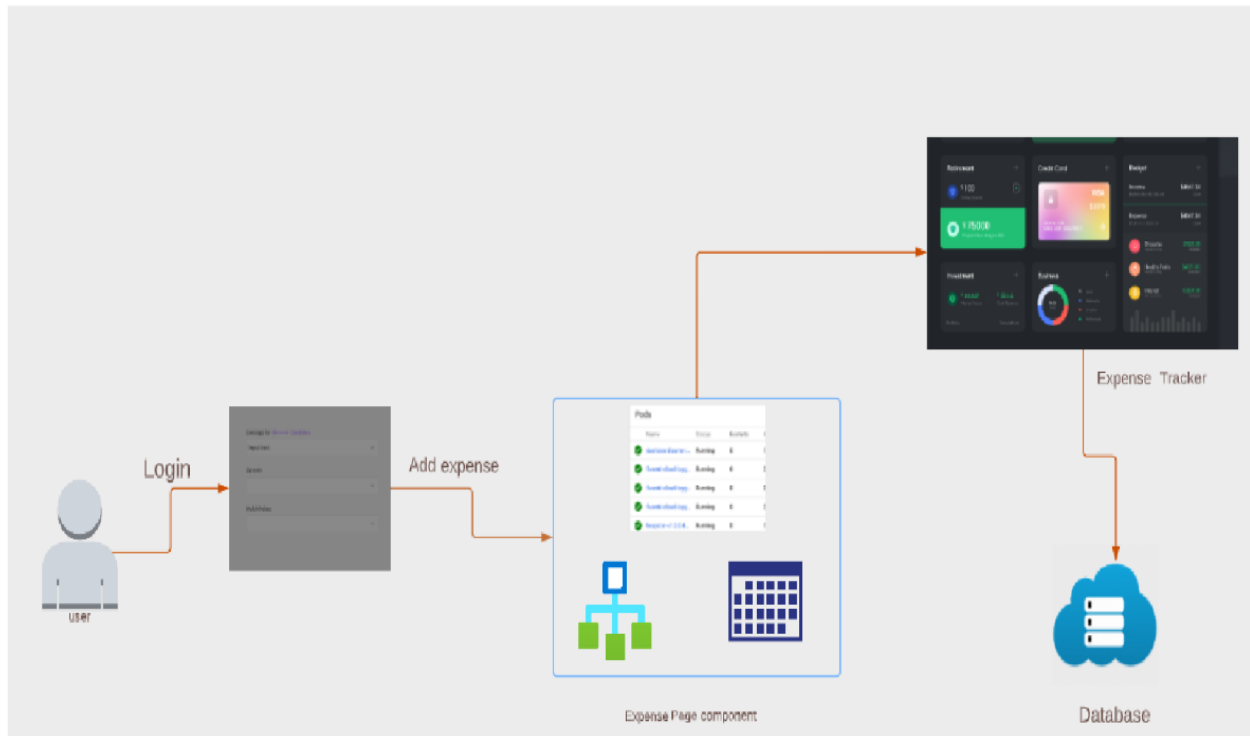
5 PROJECT DESIGN

5.1 Data Flow Diagrams

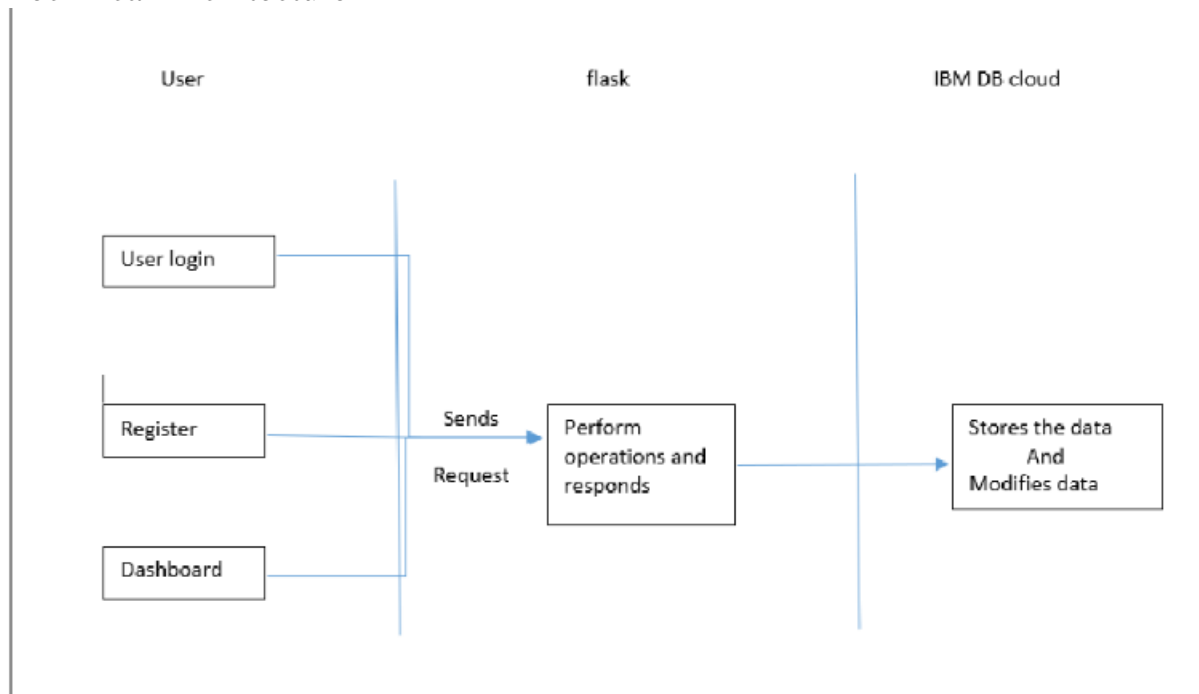


5.2 Solution & Technical Architecture

Solution Architecture



Technical Architecture



5.3 User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (web user)	Sign up	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account	High	Sprint-1
	Login	USN-2	As a user, I can log into the application by entering email & password	I can access my account	High	Sprint-1
	Dashboard	USN-3	As a view, I can view user's <u>basic informations</u>	I can access my dashboard	Medium	Sprint-2
	Expense wallet	USN-4	As a user, I can view expenses, add/update expenses and view it in graphical form of analysis about the daily expenses.	I can access my expense wallet	High	Sprint-2
	Expense limit	USN-5	As a user, I can set limit to my daily expenses and keep track of it.	I can access my Limit page	High	Sprint-3
	Email	USN-6	As a user, when my expenses exceeds the limit, I get the email alert.	I can limit my expenses by accessing it through email	High	Sprint-4

6 PROJECT PLANNING & SCHEDULING

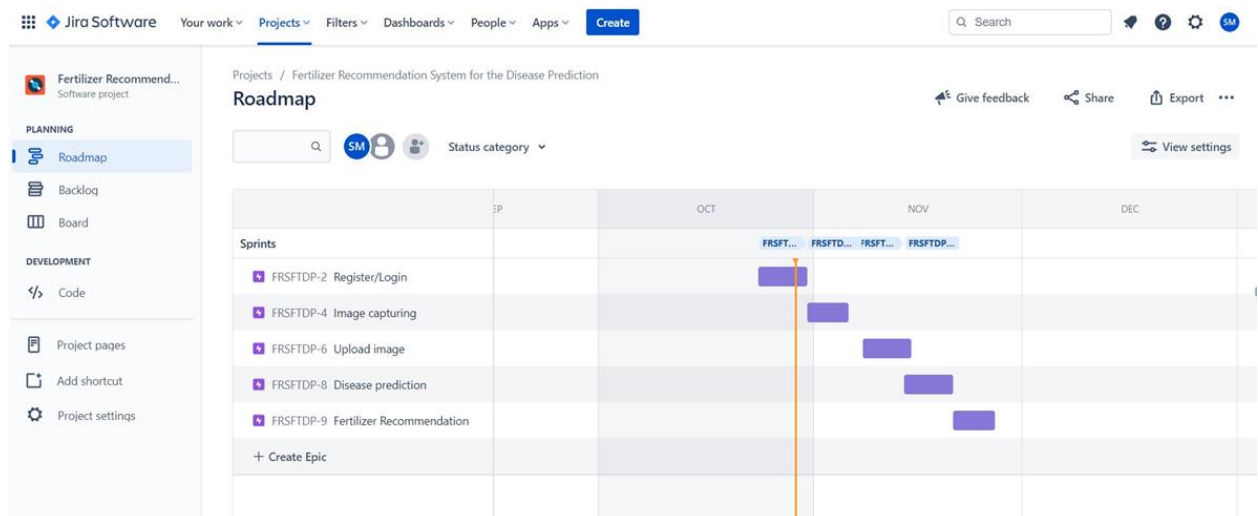
6.1 Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, they can register for the application by entering my email, password, and personal details.	2	Medium	Ramesh , Babishhya
Sprint-2	Login	USN-2	As a user, can login if they have registered for the application	2	Medium	Kirubashini , Rahul
Sprint-3	Dashboard	USN-3	The user can access the dashboard and its various options .	2	Medium	Babishhya, Rahul
Sprint-4	Expense tracker	USN-4	The user can add daily expense based on various categories ,their debts, and their wallets balance etc..it also display their daily expenditure and provide suggestion.	2	High	Ramesh, Kirubashini
Sprint-5	Expense alert	USN-5	In the expense module ,the user can set limit if it exceed the user will receive an alert message through their registered mail.	2	High	Babishhya, Kirubashini

6.2 Sprint Delivery Schedule

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022
Sprint-5	20	6 Days	20 Nov 2022	27 Nov 2022	20	27 Nov 2022

6.3 Reports from JIRA RoadMap:



7 CODING & SOLUTIONING (Explain the features added in the project along with code)

7.1 Feature 1

```
@app.route("/login", methods=['GET', 'POST'])
def loginRoute():
    if not 'userId' in session:
        if request.method == 'GET':
            return render_template('signin.html')
        else:
            data = request.form
            response = signInUser(data)
            if (response != -1):
                return redirect("/")
            else:
                return
    render_template('signin.html')
    else:
        return redirect("/")

def signInUser(data):
    response = -1
    sql = "SELECT id FROM user WHERE email = ? AND
password = ?"
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.bind_param(stmt, 1, data['email'])
    ibm_db.bind_param(stmt, 2, data['password'])
    ibm_db.execute(stmt)
    tuple = ibm_db.fetch_tuple(stmt)
    if tuple != False:
        response = tuple[0]
        session['userId'] = response
    return response
```

7.2 Feature 2

```
@app.route("/", methods = ['GET', 'POST'])
def homeRoute():
    if 'userId' in session:
        if request.method == 'GET':
            data = getDataByDay(datetime.date.today())
            return render_template('daily.html', data
= data)
        else:
            data = request.form
            if 'logout' in data:
                session.pop('userId', None)
                return redirect('/login')
            elif 'limit' in data:
                setLimit(data['limit'])
                return redirect('/')
            else:
                try:
                    addNewExpense(data,
datetime.date.today())
                except:
                    print('Exception Hello')
                finally:
                    return redirect('/')
    else:
        return redirect("/login")
```



```

def getDataByDay(date):
    expenses = []
    totalExpense = 0
    categories = []
    sql = "SELECT expense.*, expense_category.name,
expense_category.color FROM expense INNER JOIN
expense_category ON expense.category_id =
expense_category.id WHERE expense_category.user_id = ?
AND expense.date = ?"
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.bind_param(stmt, 1, session['userId'])
    ibm_db.bind_param(stmt, 2, date)
    ibm_db.execute(stmt)
    tuple = ibm_db.fetch_tuple(stmt)
    while tuple != False:
        expenses.append(tuple)
        tuple = ibm_db.fetch_tuple(stmt)

    sql = "SELECT sum(expense.amount) FROM expense INNER
JOIN expense_category ON expense.category_id =
expense_category.id WHERE expense_category.user_id = ?
AND expense.date = ?"
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.bind_param(stmt, 1, session['userId'])
    ibm_db.bind_param(stmt, 2, date)
    ibm_db.execute(stmt)
    tuple = ibm_db.fetch_tuple(stmt)
    if tuple != False:
        totalExpense = tuple[0]

    sql = "SELECT id, name FROM expense_category WHERE
user_id = ?"

```

```

stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, session['userId'])
ibm_db.execute(stmt)
tuple = ibm_db.fetch_tuple(stmt)
while tuple != False:
    categories.append(tuple)
    tuple = ibm_db.fetch_tuple(stmt)

return {
    "expenses": expenses,
    "totalExpense": totalExpense,
    "categories": categories
}

```

```

def addNewExpense(data, date):
    sql = "INSERT INTO expense (name, amount, date,
category_id) VALUES (?, ?, ?, ?)"
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.bind_param(stmt, 1, data['name'])
    ibm_db.bind_param(stmt, 2, data['amount'])
    ibm_db.bind_param(stmt, 3, date)
    ibm_db.bind_param(stmt, 4, data['category'])
    ibm_db.execute(stmt)

    sql = "SELECT (SELECT limit FROM user WHERE id = ?),
sum(expense.amount), (SELECT email FROM user WHERE id =
?), (SELECT name FROM user WHERE id = ?) FROM expense
INNER JOIN expense_category ON expense.category_id =
expense_category.id WHERE expense_category.user_id = ?
AND expense.date = ?"
    stmt = ibm_db.prepare(conn, sql)

```

```

ibm_db.bind_param(stmt, 1, session['userId'])
ibm_db.bind_param(stmt, 2, session['userId'])
ibm_db.bind_param(stmt, 3, session['userId'])
ibm_db.bind_param(stmt, 4, session['userId'])
ibm_db.bind_param(stmt, 5, date)
ibm_db.execute(stmt)
tuple = ibm_db.fetch_tuple(stmt)
if tuple != False:
    limit = tuple[0]
    total = tuple[1]
    email = tuple[2]
    name = tuple[3]
    print(email, name, limit, total)
    if total > limit:
        message = Mail(
            from_email='19bcs007@mcet.in',
            to_emails=email,
            subject='Daily expense limit exceeded',
            html_content='<h2>Hello ' + name +
'</h2><h3>This is to notify you that your daily expense
limit of ' + str(limit) + ' has been exceeded</h3>')
        try:
            sg =
SendGridAPIClient('SG.7Q4vp_cDRUW_f1FHwIRFpQ.WByfUWrtwM-
cazNXPq6QcxjYulWHPY1iSSq66EPbGDg')
            response = sg.send(message)
            print(response.status_code)
            print(response.body)
            print(response.headers)
        except Exception as e:
            print(e.message)

```

7.3Database Schema (if Applicable)

User

ID	NAME	EMAIL	PASSWORD	WALLET	LIMIT
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Expense Category

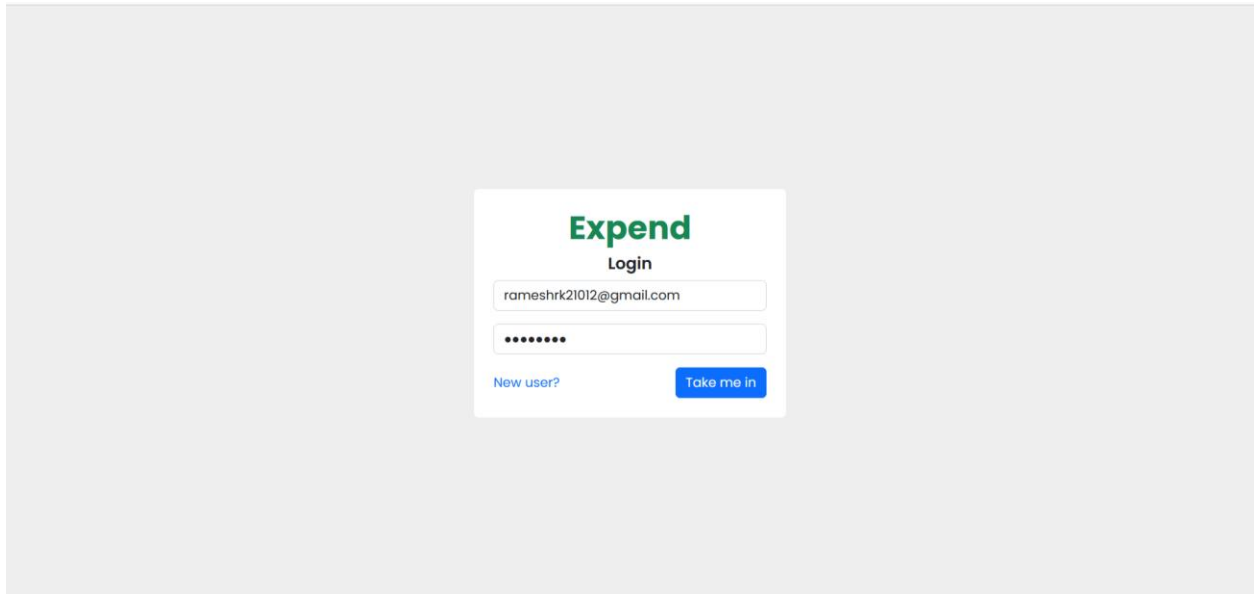
ID	NAME	COLOR	USER_ID
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Expense

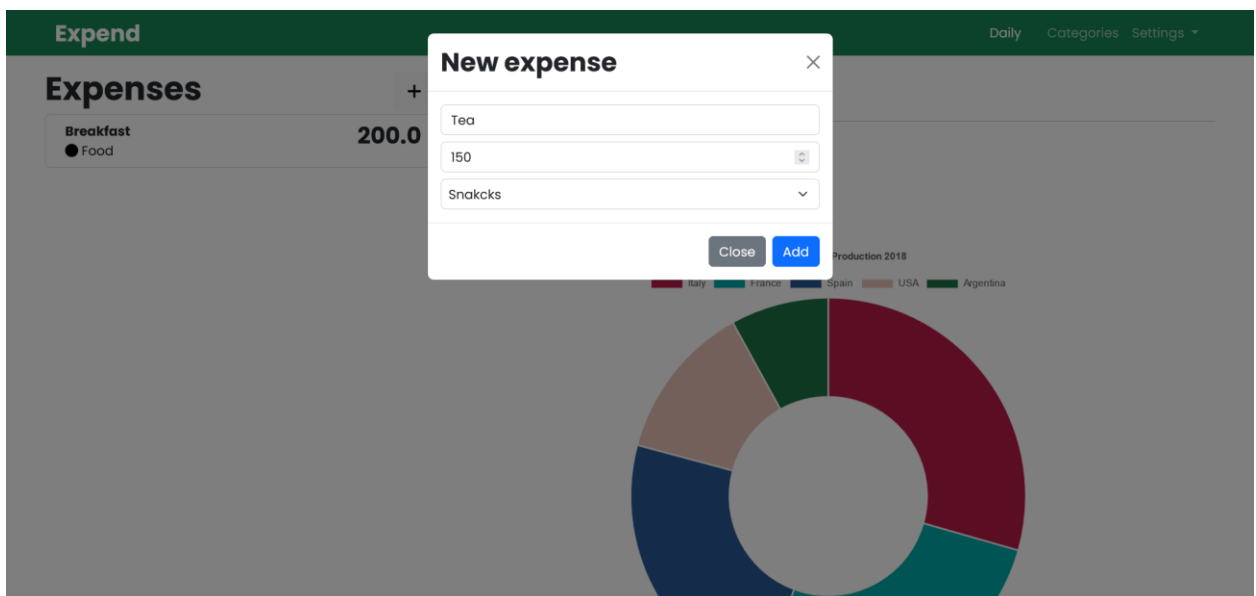
ID	NAME	AMOUNT	DATE	CATEGORY_ID
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8 TESTING

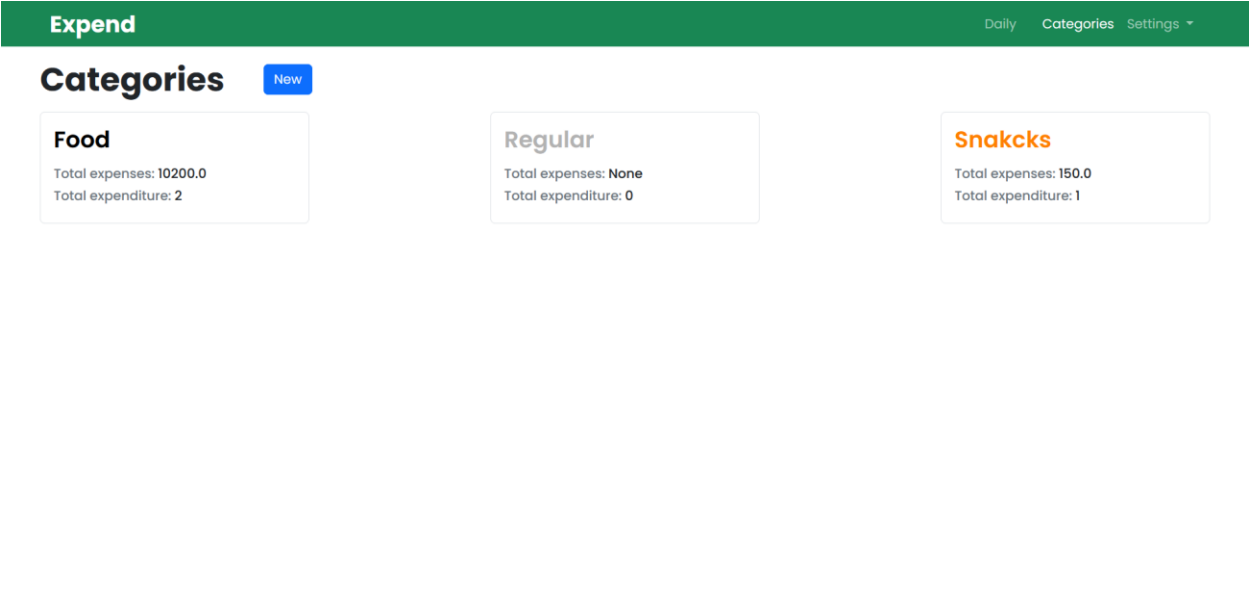
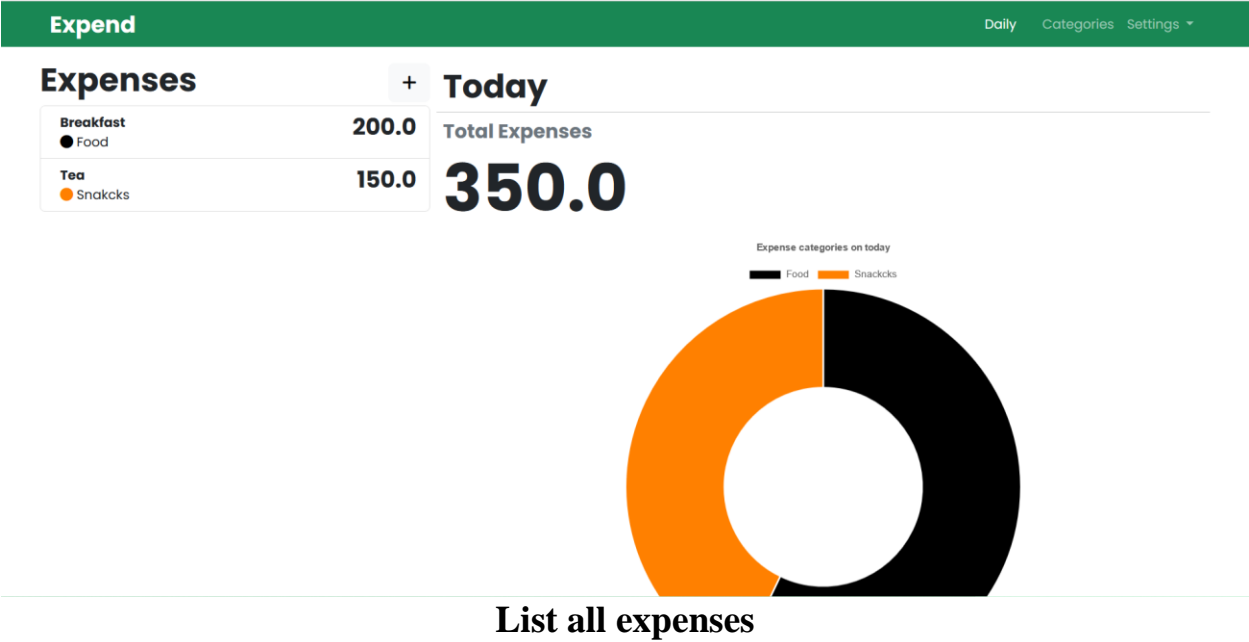
8.1 Test Cases



Login



Add new expense



Create and view categories for your account

8.2 User Acceptance Testing

1. Purpose of document:

The purpose of this document is to briefly explain the test coverage and open issues of the project at the time of the release to user acceptance testing (UAT).

2. Database storage check:

ID	NAME	COLOR	USER_ID
13	Regular	#B2B2B2	25
9	Regular	#B2B2B2	22
10	stationary items	#11c1e4	22
11	Regular	#B2B2B2	24
12	clothes	#a6f27d	24
14	Regular	#B2B2B2	26
15	Food	#000000	26
16	Snakcks	#ff8000	26
17	Regular	#B2B2B2	27

ID	NAME	AMOUNT	DATE	CATEGORY_ID
37	Lunch	3000.0	2022-11-24	17
38	Dinner	2000.0	2022-11-24	17
39	Lunch	10000.0	2022-11-24	15
40	Breakfast	200.0	2022-11-25	15
41	Tea	150.0	2022-11-25	16

9 RESULTS

A personal expense tracker application was developed with the following features:

- Creating categories
- Adding expenses
-

10 ADVANTAGES & DISADVANTAGES

- I. One expense management app allows them to scan receipts in real time, thus avoiding data loss of any kind. And with the help of OCR, receipt data is extracted behind the scenes making expense submission a breeze. All the data your employees and financial controllers need is safe, backed up on the cloud..
- II. A mobile expense tracking app combined with a cloud-based database means that employees can submit, approve and access expense reports at any time, from anywhere. When all you need is an internet connection, this removes barriers to fulfilling tedious but necessary tasks such as expense submission.
- III. The ability to submit expenses on the go allows your employee to do so immediately following a drive or meeting rather than waiting to get back to the office. This helps eliminate the risk of error and allows them to focus on the more important tasks at hand, rather than trying to remember it.
- IV. Many automatic spending tracking software programs are available for free. Having the program on a hand-held device can be a main pro since it can be checked before spending occurs in order to be sure of the available budget

- V. The system used to track spending is that one may start doing it then taper off until it's forgotten about all together. Yet, this is a risk for any new goal such as trying to maintain the uncontrolled habits expenses.
- VI. When creating a budget, it's important to consider the wants and needs of everyone it may involve. This way you can learn about a team's daily expenses along with the larger costs
- VII. Even with constant tracking of one's spending habits, there is no guarantee that financial goals will be met. Although this can be considered to be a con of tracking spending, it could be changed into a pro if one makes up his or her mind to keep trying to properly manage all finances
- VIII. Therefore, frequent tracking of cash spending can allow one to catch and correct errors so that the budget plan is still able to be adhered to despite the mistake.

11 CONCLUSION

Expenses Tracker System is a system that being developed to assist users in budget planning. It provides end users to records their income and expenses within the budget that have been planned beforehand. Furthermore, users are able to keep track on their spending so they are not wasting their money without doubt. Last but certainly not the least, they are able to access the system anytime and anywhere that is accessible. Daily spending tracking can not only help you save money, but it can also help you set financial objectives for the future. If you know exactly where your money goes each month, you can quickly see where you can make some savings and compromises. We have designed a project that is more efficient than other income and expense trackers. The project succeeds in avoiding manual calculations for estimating monthly revenue and expenses. The modules have been designed to be both efficient and appealing.

12 FUTURE SCOPE

The system his application can take a good market as it is usable by anyone who are willing to manage their expenses and aiming to save for the future investments and many more. There is not any range criteria or any kind of profession or gender are focused, it will used hugely. The spreadsheet and paper-based expense reporting process have become a thing of the past today. Economic downtown and increasing costs have forced companies to look for alternative ways to

manage expenses. Deploying a simple system can end up with inaccuracy and lack of visibility. To overcome the inefficiency, you need a system that puts an end to opaque processes and allows leaders to make better strategic business decisions.

13 APPENDIX

Source Code

```
from flask import Flask, render_template, session,
redirect, request
from controllers.login import signInUser
from controllers.signup import addNewUser
from controllers.daily import getDataByDay,
addNewExpense, setLimit
from controllers.categories import getAllCategories,
addNewCategory
import datetime

app = Flask(__name__)
app.secret_key = 'supersuper'

@app.route("/", methods = ['GET', 'POST'])
def homeRoute():
    if 'userId' in session:
        if request.method == 'GET':
            data = getDataByDay(datetime.date.today())
            return render_template('daily.html', data =
data)
        else:
            data = request.form
            if 'logout' in data:
                session.pop('userId', None)
                return redirect('/login')
            elif 'limit' in data:
```

```

        setLimit(data['limit'])
        return redirect('/')
    else:
        try:
            addNewExpense(data,
datetime.date.today())
        except:
            print('Exception Hello')
        finally:
            return redirect('/')
    else:
        return redirect("/login")

@app.route("/categories", methods = ['GET', 'POST'])
def categoriesRoute():
    if 'userId' in session:
        if request.method == 'GET':
            categories = getAllCategories()
            return render_template('categories.html',
categories = categories)
        else:
            data = request.form
            if 'logout' in data:
                session.pop('userId', None)
                return redirect('/login')
            elif 'limit' in data:
                setLimit(data['limit'])
                return redirect('/categories')
            else:
                try:
                    addNewCategory(data)
                    return redirect("/categories")

```

```

        except:
            print('Exception')
        finally:
            return
    redirect('/categories')
    else:
        return redirect("/")

@app.route("/login", methods=['GET', 'POST'])
def loginRoute():
    if not 'userId' in session:
        if request.method == 'GET':
            return render_template('signin.html')
        else:
            data = request.form
            response = signInUser(data)
            if (response != -1):
                return redirect("/")
            else:
                return
    render_template('signin.html')
    else:
        return redirect("/")

@app.route("/sign-up", methods=['GET', 'POST'])
def signupRoute():
    if not 'userId' in session:
        if request.method == 'GET':
            return render_template('signup.html');
        else:
            data = request.form
            try:

```

```
        addNewUser(data)
        return redirect("/login")
    except:
        print('Exception Hello')
        return redirect("/sign-up")
else:
    return redirect("/")
```

GitHub & Project Demo Link

https://github.com/IBM-EPBL/IBM-Project-2246-1658468077/tree/main/final%20deliverables/expense_tracker