

PERSONAL EXPENSE TRACKER APPLICATION

TEAM ID: PNT2022TMID35639

1. INTRODUCTION

a. Project Overview

Personal expense tracker entails all financial decisions and activities. It makes our life easier by helping us to manage our expenses efficiently. Using this application, We can know where our money goes and can ensure that our money is used wisely. It helps you track all transactions like bills, refunds, payrolls, receipts, taxes, etc., on a daily, weekly, and monthly basis.

Personal finance 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.

b. Purpose

This app helps to keep an accurate record of your money inflow and outflow. It not only helps with budgeting and accounting but also give helpful insights about money management.

- It helps achieve business goals
- Has an easy user interface for interaction
- Generated detailed reports to give insights about profits, loss, budgets, income, balance sheets, etc.
- Helps having a smart budget plan
- Has enhanced AI based bot for answering all queries and addressing user needs
- Avoiding data loss

2. LITERATURE SURVEY

a. Existing problem

- Lack of time for proper noting down of expenses
- Data entry errors
- Improper management of money
- Lack of visibility of expenses
- Lost receipts
- Internet issues(In case of online webapps)
- Security
- Unavailable balance due to less saving of money

b. References

https://www.researchgate.net/publication/347972162_Expense_Manager_Application

A mobile application that Keeps track of all of your daily transactions, keeps track of your money lent or borrowed ,suggests you with the most effective investment options, offers your discounts in popular categories , view exchange and to read latest authenticated financial news.

https://ijirt.org/master/publishedpaper/IJIRT150860_PAPER.pdf

A working prototype of an intelligent online budget tracker where security issues like web security or network security have also been treated in the design and development of the system, thus increasing the reliability of the system.

<https://ijarsct.co.in/Paper391.pdf>

“Expense Tracker” is developed to manage the daily expenses in a more efficient and manageable way. By using this application. we can reduce the manual calculations of the daily expenses and keep track of the expenditure.

<https://github.com/simplyvinay/vue-expenses>

A simple expenses tracking application built with VueJs and .NET

c. Problem Statement Definition

i) Expense Tracker is a day-to-day expense management system designed to easily and efficiently track the daily expenses of an individual. In simple words, personal finance entails all the financial decisions and activities that a Finance app makes your life easier by helping manage your finances efficiently.

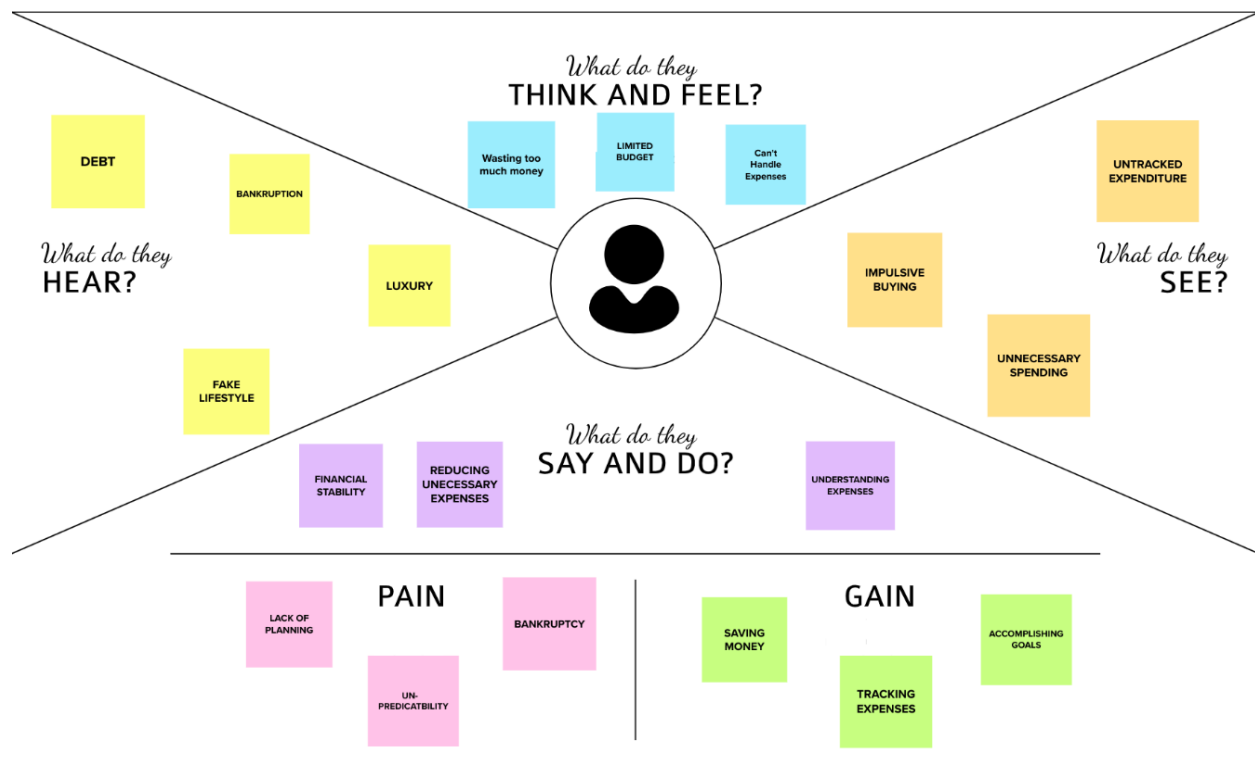
ii) A personal finance app will not only help you with budgeting and accounting but also give you helpful insights about money management.

iii) Personal finance 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.

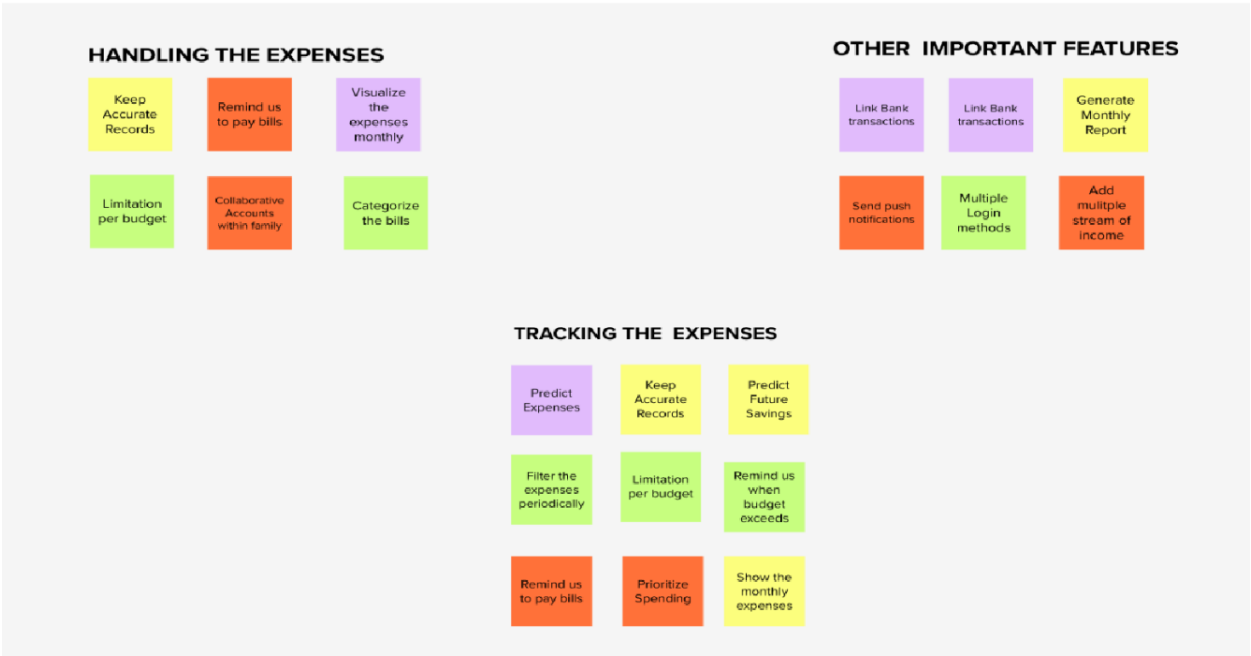
iv) They have an option to set a limit for the amount to be used for that particular month if the limit is exceeded the user will be notified with an email alert.

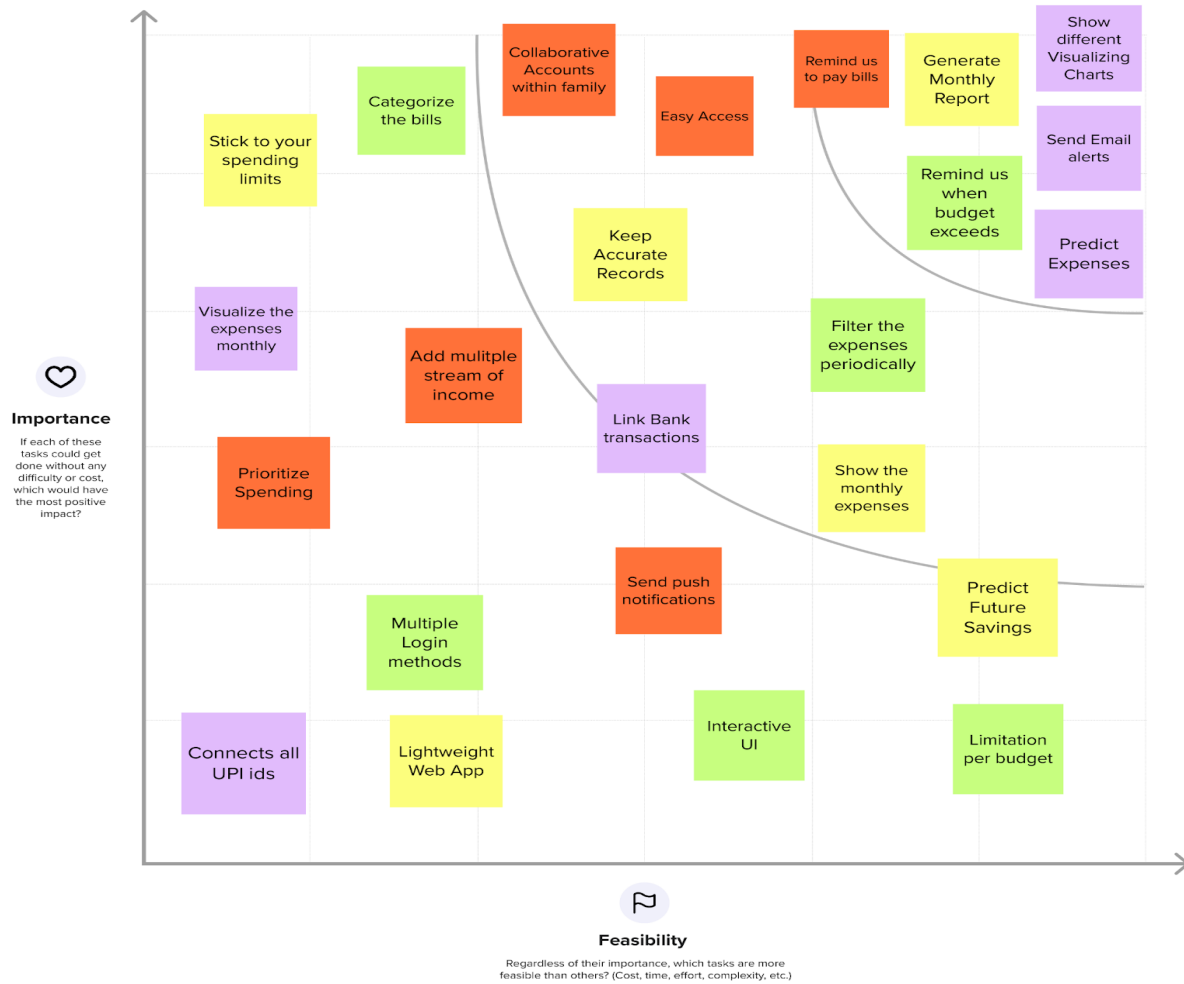
3. IDEATION & PROPOSED SOLUTION

a. Empathy Map Canvas



b. Ideation & Brainstorming





Akshay Ajit

Show the monthly expenses	Stick to your spending limits	Generate Monthly Report
Keep Accurate Records	Predict Future Savings	Lightweight Web App

Santhosh Kumar S

Prioritize Spending	Remind us to pay bills	Send push notifications
Add multiple stream of income	Collaborative Accounts within family	Easy Access

Sivakumar TV

Categorize the bills	Remind us when budget exceeds	Multiple Login methods
Limitation per budget	Filter the expenses periodically	Interactive UI

Vishnutheep B

Visualize the expenses monthly	Show different Visualizing Charts	Send Email alerts
Connects all UPI ids	Predict Expenses	Link Bank transactions

c. Proposed Solution

S.no	Parameter	Description
1.	Problem Statement (Problem to be solved)	Normally people find it hard to keep track of their daily expenses using pen-and-paper methods, record books or in their mind. This leads to them forgetting their entire expense history and make it difficult to draw inferences from previous expenses.
2.	Idea / Solution description	To create a personal expense tracker application which manages their expense and provide insights to reduce the expenses.
3.	Novelty / Uniqueness	It will alert the user when they exceed their budget limit and user can analyze the details and a report is also generated.
4.	Social Impact / Customer Satisfaction	Our application will help users to reduce their daily expenses by effectively tracking down and categorizing the expenses.
5.	Business Model (Revenue Model)	Advertisements and some premium features like money management and investing tips (only for subscribed) can be introduced to generate revenue.
6.	Scalability of the Solution	This application handles multiple users at a time as newly emerging technologies like cloud and dockers are used.

d. Problem Solution fit

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) Who is your customer? i.e. working parents of 0-5 y.o. kids 1. People who really wants to save money, categorize their expenses and track down their expenditure regularly.	6. CUSTOMER CONSTRAINTS What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices. 1. Requires network connection	5. AVAILABLE SOLUTIONS Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital notetaking 1. Pen and paper is alternative way to note down the expenses. 2. People have to remember their spendings all the time and should calculate it manually without statistical understanding.	Explore AS, differentiate
	2. JOBS-TO-BE-DONE / PROBLEMS Which jobs to be done (or problems) do you address for your customers? There could be more than one; explore different sides. 1. Tracking the expenses in digital mode. 2. Notifying the users when the exceed the limit. 3. Providing visual representation of the categorical expenses to provide better understanding of their spendings.	9. PROBLEM ROOT CAUSE What is the real reason that this problem exists? What is the back story behind the need to do this job? i.e. customers have to do it because of the change in regulations. 1. Poor money handling. 2. Not Tracking down the expenses because it is very hard to do manually.	7. BEHAVIOUR What does your customer do to address the problem and get the job done? i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace) 1. User has to enter their daily spendings to our application. So, our application tracks down the expenses and visually represents all the expenditures, and alert the user when they exceed the limit. 2. Monthly and annual report will be generated to interpret the expenses.	
Identify strong TR & EM	3. TRIGGERS TR By having a great aim towards saving money by reducing the unwanted expenses.	10. YOUR SOLUTION SL The personal expense tracker application which enable people to track down their expenses and helps them reduce their unwanted spendings, this application sends notification and alert messages to user to notify their limits. This application also represents the expenses statistically based on daily, weekly, monthly and yearly basis with different visual representation to better understand the expenses.	8. CHANNELS of BEHAVIOUR CH Online: Real-time tracking of expenses, with statistical representation of periodic data. Offline: No offline functionalities.	Focus on JAR, tap into BE, understand PC
	4. EMOTIONS: BEFORE / AFTER EM Before: 1. No proper visualization of data and no alert mechanism After: 1. Proper statistical representation and visualization of expenses with alert mechanism			

4. REQUIREMENT ANALYSIS

a. Functional requirement

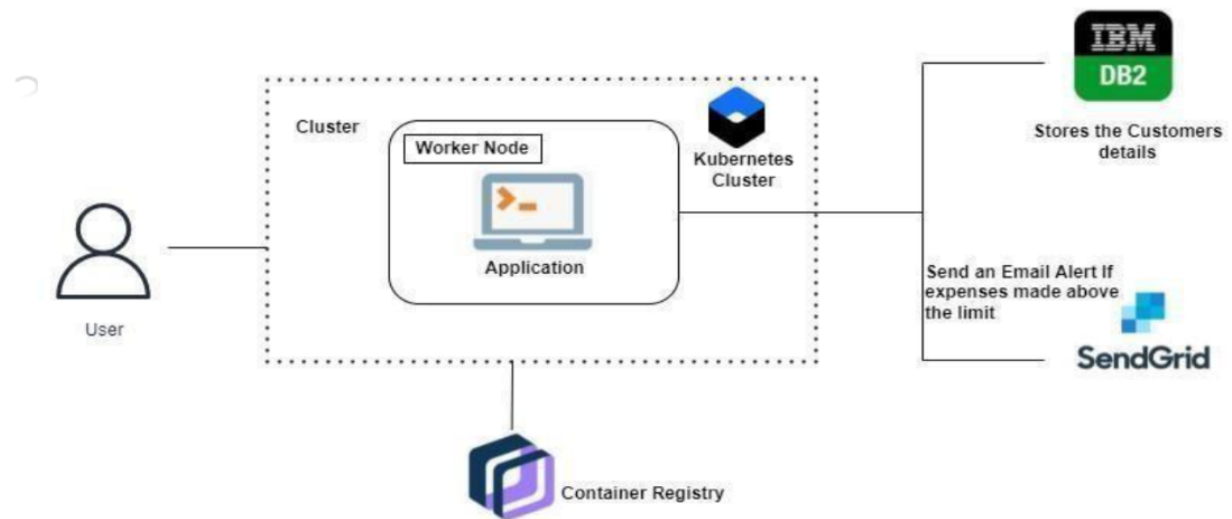
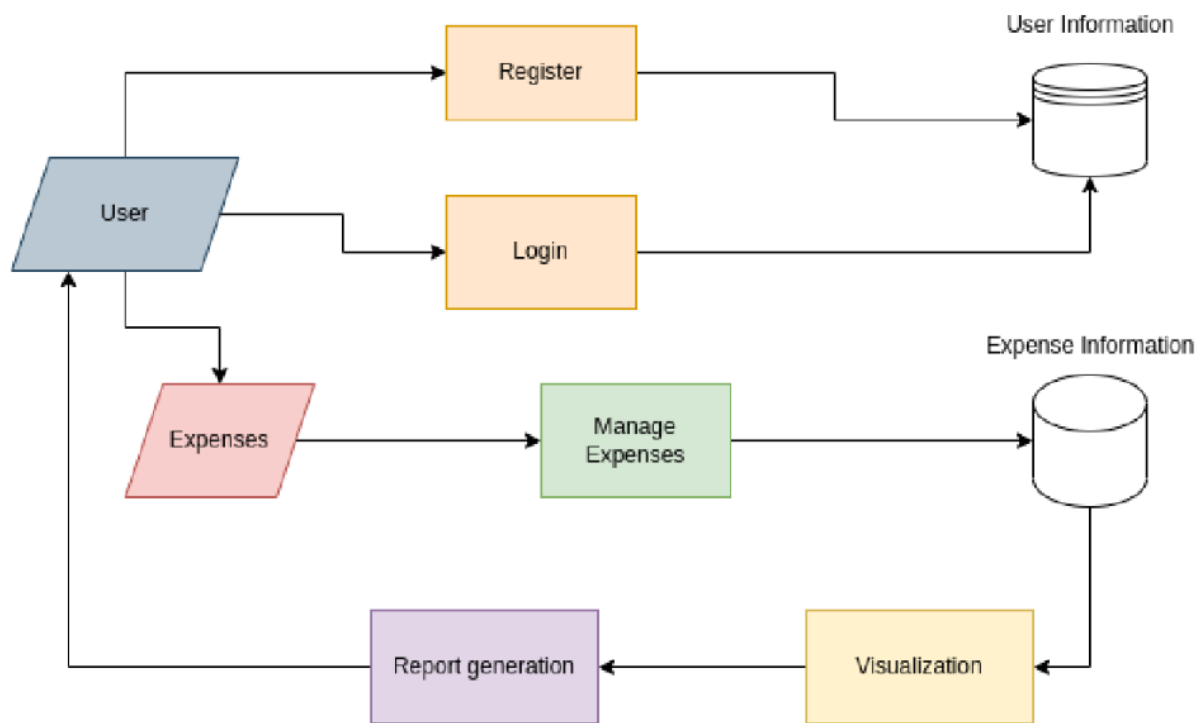
FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form
FR-2	User Confirmation	Confirmation via Email
FR-3	Tracking Expense	Helpful insights about money management
FR-4	Alert Message	<ul style="list-style-type: none"> Give alert mail if the amount exceeds the budget limit. Alert through Email. Alert through SMS.
FR-5	Report Generation	Generate monthly and yearly based report.

b. Non-Functional requirements

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Categorizing the expenses and to cut down the unnecessary spending
NFR-2	Security	It employs the latest security and technology measures to keep customers personal and financial information safe.
NFR-3	Reliability	Error – free application which helps the user to track and manage their expenses. Application should serve with minimal failures.
NFR-4	Performance	Smooth and responsiveness of the application.
NFR-5	Availability	People from all over the world should be able to access the application any time without any restrictions.
NFR-6	Scalability	To scale the capacity of the application to serve large community.

5. PROJECT DESIGN

a. Data Flow Diagram



c. User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer	Registration	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 / dashboard	High	Sprint-1
Customer	Account Activation	USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
Customer	Login	USN-3	As a user, I can log into the application by entering email & password	I can login on correct credentials	High	Sprint-1
Customer	Dashboard	USN-4	As a user, I can add expenses and income	I can enter the amount and category to save	High	Sprint-2
Customer	Dashboard	USN-5	As a user, I can change my password	I can change password if i'm logged in	Low	Sprint-4
Customer	Dashboard	USN-6	As a user, I can view my past expenses and income over a period of time, and visualize them	I can view past records provided if records available	High	Sprint-2
Customer	Notification	USN-7	As a user, When my monthly limit exceeds, i get a email notification	I can get alert notification, if i have set a limit	Low	Sprint-4
Customer	Dashboard	USN-8	As a user, I can set a monthly expense limit	I can set a valid limit	Low	Sprint-4
Customer	Forgot password	USN-9	As a user, I can get a reset password link if i forget it through mail	I need to have access to my email	High	Sprint-3
Customer	Forgot password	USN-10	As a user, I can change my password if I forget it	The link should be valid	High	Sprint-3

6. PROJECT PLANNING & SCHEDULING

a. Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint - 1	Registration	USN - 1	User should register for the application by entering their username, email and password	4	High	Sivakumar TV Vishnutheep B
		USN - 2	User, will receive confirmation email once they registered for the application.	3	Low	
	Login	USN - 3	User should be able to log into the application by entering the provided email and password	4	High	Akshay Ajit Santhosh Kumar S
	Dashboard	USN - 4	On successful login, user should land on the dashboard page.	2	Low	
Sprint - 2		USN - 5	User should able to add expense, they should give information regarding expense_name, amount, payment mode, payment category	2	Medium	Vishnutheep B Santhosh Kumar S
		USN - 6	As a user , I will set a target/limit to keep track of my expenditure.	2	Medium	Sivakumar T V Akshay Ajit
	Workspace	USN - 7	Workplace for personal expense tracking	6	Medium	Sivakumar T V Santhosh Kumar S
	Charts	USN - 8	Graphs to show weekly and everyday expenditure	6	High	Vishnutheep B Akshay Ajit

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint - 3	IBM DB2	USN - 9	Linking database with dashboard	3	High	Akshay Ajit Sivakumar T V
		USN -10	Making dashboard interactive with JS	3	High	Akshay Ajit Santhosh Kumar S
	SendGrid	USN -11	Sending mail to the user once they have crossed their limits, and their reports can also be sent to their mail.	5	Medium	VishnuthEEP B Santhosh Kumar S
	PDF	USN - 12	Daily, Weekly, Yearly based report can be downloaded as PDF	3		VishnuthEEP B Sivakumar T V
Sprint - 4	Integration	USN -13	Integrating frontend and backend.	3	High	Akshay Ajit Santhosh Kumar S
	Docker	USN -14	Creating Docker image of web app.	2	High	VishnuthEEP B Akshay Ajit
	Cloud Registry	USN -15	Uploading docker image to IBM cloud registry.	3	High	VishnuthEEP B Sivakumar T V
	Kubernetes	USN -16	Creating container using docker and hosting the webapp.	5	High	Akshay Ajit VishnuthEEP B
	Exposing Deployment	USN -17	Exposing IP/Ports for the site.	1	Medium	Sivakumar T V Santhosh Kumar S

b. 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	28 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	6 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

c. Reports from JIRA

CODING & SOLUTIONING

a. Feature 1 - Sending report via mail

#GENERATE REPORT DAILY/YEARLY/MONTHLY

```
def generateReport(report_type):
```

```
    if(session.get('id') == None):
        return
```

```
    id = str(session['id'])
```

```
    total=0
```

```
    t_food=0
```

```
    t_entertainment=0
```

```

t_business=0
t_rent=0
t_EMI=0
t_other=0
expense = []
texpanse = []

if(report_type == 'Today'):
    sql = 'SELECT TIME(date), AMOUNT FROM EXPENSES WHERE USER_ID = {} AND
DATE(date) = DATE(NOW())'.format(id)
    df = pd.read_sql(sql,pd_conn)
    texpanse = df.values.tolist()

    sql = 'SELECT * FROM EXPENSES WHERE USER_ID={} AND DATE(DATE) =
(CURRENT_DATE) ORDER BY AMOUNT DESC, DATE DESC'.format(id)
    df = pd.read_sql(sql,pd_conn)
    expense = df.values.tolist()

elif(report_type == 'Monthly'):
    sql = 'SELECT DATE(date), SUM(AMOUNT) FROM EXPENSES WHERE USER_ID = {} AND
MONTH(DATE(date)) = MONTH(CURRENT_DATE) GROUP BY DATE(date)'.format(id)
    df = pd.read_sql(sql,pd_conn)
    texpanse = df.values.tolist()

    sql = 'SELECT * FROM EXPENSES WHERE USER_ID={} AND MONTH(DATE(DATE)) =
MONTH(CURRENT_DATE) ORDER BY AMOUNT DESC, DATE DESC'.format(id)
    df = pd.read_sql(sql,pd_conn)
    expense = df.values.tolist()

elif(report_type == 'Yearly'):
    sql = 'SELECT YEAR(date), SUM(AMOUNT) FROM EXPENSES WHERE USER_ID = {} AND
YEAR(DATE(date)) = YEAR(CURRENT_DATE) GROUP BY YEAR(date)'.format(id)
    df = pd.read_sql(sql,pd_conn)
    texpanse = df.values.tolist()

    sql = 'SELECT * FROM EXPENSES WHERE USER_ID={} AND YEAR(DATE(DATE)) =
YEAR(CURRENT_DATE) ORDER BY AMOUNT DESC, DATE DESC'.format(id)
    df = pd.read_sql(sql,pd_conn)
    expense = df.values.tolist()

```

```

for x in expense:
    total += x[4]
    if x[6] == "food":
        t_food += x[4]

    elif x[6] == "entertainment":
        t_entertainment += x[4]

    elif x[6] == "business":
        t_business += x[4]
    elif x[6] == "rent":
        t_rent += x[4]

    elif x[6] == "EMI":
        t_EMI += x[4]

    elif x[6] == "other":
        t_other += x[4]

return {'texpanse':texpanse,'t_food':[t_food],'t_entertainment':[t_entertainment],
        't_business':[t_business],'t_rent':[t_rent],
        't_EMI':[t_EMI],'t_other':[t_other],'total':[total] }

```

#MAIL THE REPORT

```

@app.route('/mail/<report_type>')
def sendReportMail(report_type):
    mailConfig()
    mail = Mail(app)

    sql = 'SELECT EMAIL FROM REGISTER WHERE USER_ID={}'.format(session['id'])
    df = pd.read_sql(sql,pd_conn)
    row = df.values.tolist()
    msg = Message('Personal Expense Tracker', recipients=[row[0][0]])
    msg.body = report_type + ' Report'

```

```

sql = 'SELECT * FROM EXPENSES WHERE USER_ID={} AND MONTH(DATE(DATE)) =
MONTH(CURRENT_DATE) ORDER BY AMOUNT DESC, DATE DESC'.format(session['id'])
df = pd.read_sql(sql,pd_conn)
df.drop(columns=['EXPENSE_ID','USER_ID'],inplace=True)

rep = generateReport(report_type)
del rep['texpense']
df1 = pd.DataFrame(rep)
df1.rename(columns={"t_food": "Food", "t_entertainment": "Entertainment","t_business":
"Business","t_rent": "Rent","t_EMI": "EMI","t_other":"Other","total":"TOTAL"}, inplace=True)

html = """\
<html>
<head></head>
<body>
<p>Hi!<br>
<b>Monthly Expenses:<b><br>
{0}
<br><b>Total Categorized Expenses:<b><br>
{1}

    Regards,
</p>
</body>
</html>

"".format(df.to_html(), df1.to_html())

msg.html = html
mail.send(msg)

print("mail sent successfully")
flash("Mail sent successfully!")
return redirect(report_type)

```

b. Feature 2 -Download Report as pdf

```
@app.route('/<report_type>')
```

```

def downloadPDF(report_type):
    rep = generateReport(report_type)
    html = render_template("MailPDF.html", type=report_type, texpanse = rep['texpanse'], total =
rep['total'][0] ,
        t_food = rep['t_food'][0],t_entertainment = rep['t_entertainment'][0],
        t_business = rep['t_business'][0], t_rent = rep['t_rent'][0],
        t_EMI = rep['t_EMI'][0], t_other = rep['t_other'][0] )

    pdf = pdfkit.from_string(html, False)
    response = make_response(pdf)
    response.headers["Content-Type"] = "application/pdf"
    response.headers["Content-Disposition"] = "inline; filename=output.pdf"

    return response

```

```

def mailConfig():
    SENDGRID_API_KEY=
"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"
    MAIL_DEFAULT_SENDER= "sparklingvishnu@gmail.com"

    app.config['SECRET_KEY'] = 'top-secret!'
    app.config['MAIL_SERVER'] = 'smtp.sendgrid.net'
    app.config['MAIL_PORT'] = 587
    app.config['MAIL_USE_TLS'] = True
    app.config['MAIL_USERNAME'] = 'apikey'
    app.config['MAIL_PASSWORD'] = SENDGRID_API_KEY
    app.config['MAIL_DEFAULT_SENDER'] = MAIL_DEFAULT_SENDER

```

c. Feature-3 Sending alert mail if the limit exceeds

CODE:

```

def sendLimitAlert(exceded_amt):
    mailConfig()
    mail = Mail(app)

```



```

sql = 'SELECT EMAIL FROM REGISTER WHERE USER_ID={}'.format(session['id'])
df = pd.read_sql(sql,pd_conn)
row = df.values.tolist()
msg = Message('Personal Expense Tracker', recipients=[row[0][0]])
msg.body = 'Exceeded the Limit!!! You have exceeded by ' + str(exceded_amt)


sql = 'SELECT * FROM EXPENSES WHERE USER_ID={} AND MONTH(DATE(DATE)) =
MONTH(CURRENT_DATE) ORDER BY AMOUNT DESC, DATE DESC'.format(session['id'])
df = pd.read_sql(sql,pd_conn)
df.drop(columns=['EXPENSE_ID','USER_ID'],inplace=True)

rep = generateReport('Monthly')
del rep['texpense']
df1 = pd.DataFrame(rep)
df1.rename(columns={"t_food": "Food", "t_entertainment": "Entertainment","t_business":
"Business","t_rent": "Rent","t_EMI": "EMI","t_other":"Other","total":"TOTAL"}, inplace=True)


html = """\
<html>
<head></head>
<body>
<p>Hi!<br>
<b>Total Categorized Expenses<b><br>
{0}
<br><b>Monthly Expenses:<b><br>
{1}

    Regards,
</p>
</body>
</html>

""".format(df1.to_html(), df.to_html())

msg.html = html
mail.send(msg)

print("mail sent successfully")

```

flash("Mail sent successfully!")

8. TESTING

a. Test Cases

A		B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1					Date	03-Nov-22												
2					Team ID	PN120221MD05639												
3					Project Name													
4					Maximum Marks	4 marks												
5	Test case ID	Feature Type	Component	Test Scenario	Pre-Requsite	Steps To Execute	Test Data	Expected Result	Actual Results	Status	Comments	TC for Automation(Y/N)	DBZ ID	Executed By				
6	LoginPage_TC_001	Functional	Home Page	Verify user is able to see the Login/Signup button when user entered the website		1.Enter URL and click go 2. Click on Login/Signup button displayed on home page 3. Verify Login/Signup page displayed or not	(http://63.51.207.139:34050)	Login/Signup page should display	Working as expected	Pass				Vishnuthweep B				
7	LoginPage_TC_002	UI	Home Page	Verify the UI elements in Login/Signup button		1.Enter URL and click go 2. Click on Signup button 3. Verify Signup button with below UI elements: a. email text box b. password text box c. Create password	(http://63.51.207.139:34050)	Application should show below UI element: a. email text box b. password text box c. Create password	Working as expected	Pass				Sanjosh Kumar S				
8	LoginPage_TC_003	Functional	Home page	Verify user is able to create an account in the application		1.Enter URL(http://63.51.207.139:34050) and click go 2. Click on Signup button 3. Enter valid email in Email text box 4. Enter username in username text box 5. Enter valid password in password text box	Username: vishnuthweep@gmail.com password: 3003	User should display an Account created message	Working as expected	Pass				Vishnuthweep B				
9	LoginPage_TC_004	Functional	Home page	Verify user is able to login to application with valid credentials		1.Enter URL(http://63.51.207.139:34050) and click go 2. Click on Login button 3. Enter valid email in Email text box 4. Enter valid password in password text box	Username: vishnuthweep@gmail.com password: 3003	User should navigate to user account homepage	Working as expected	Pass				Sanjosh Kumar S				
10	LoginPage_TC_005	Functional	Login page	Verify user is able to login to application with invalid credentials		1.Enter URL(http://63.51.207.139:34050) and click go 2. Click on Login button 3. Enter valid email in Email text box 4. Enter wrong password in password text box	Username: vishnuthweep@gmail.com password: Testing123	Application should show 'Incorrect email or password' validation message	Working as expected	Pass				Aishay Agr				
11	LoginPage_TC_006	Functional	Login page	Verify user is able to login to application with invalid credentials		1.Enter URL(http://63.51.207.139:34050) and click go 2. Click on Login button 3. Enter wrong email in Email text box 4. Enter valid password in password text box	Username: vishnuthweep@gmail.com password: Testing12378989789876543	Application should show 'Incorrect email or password' validation message	Working as expected	Pass				Swakuma TV				
12	LoginPage_TC_007	Functional	Login page	Verify user is able to login to application with invalid credentials		1.Enter URL(http://63.51.207.139:34050) and click go 2. Click on Login button 3. Enter wrong email in Email text box 4. Enter wrong password in password text box	Username: km password: Testing12378989789876543	Application should show 'Incorrect email or password' validation message	Working as expected	Pass				Swakuma TV				
13	HomePage_TC_001	Functional	Home page	Verify user is able to see Add expense, History, Line, Report buttons in the Menu		1.Enter the valid login credentials and click Login 3. Verify Add expense, History, Line, Report buttons are displayed in the Menu	Website Homepage URL	Application should show below UI element: a. Add Expense button b. History button c. Line button d. Report button	Working as expected	Pass				Aishay Agr				
14	HomePage_TC_002	Functional	Add Expense	Verify user is able to add his expense in the Add Expense Menu		1.Enter URL(http://63.51.207.139:34050) and click go 2. Enter the valid login credentials and click Login 3. Go to Add expense tab in the menu 4. Enter Date, Expense name, Expense Amount, Payment mode, Expense category	Date: 12-11-2022 11:40:56	Application should push the data into the ERP database created and display the details in the display tab	Working as expected	Pass				Sanjosh Kumar S				
15	HomePage_TC_003	UI	History	Verify user is able to view the total history of the expenses made by the user		1.Enter URL(http://63.51.207.139:34050) and click go 2. Enter the valid login credentials and click Login 3. Click the History button in the menu	(http://63.51.207.139:34050)	Application should display the total history of the expenses made by the user	Working as expected	Pass				Swakuma TV				
16	HomePage_TC_004	Functional	Limit	Verify user is able to set the limit for his expenses		1.Enter URL(http://63.51.207.139:34050) and click go 2. Enter the valid login credentials and click Login 3. Go to the Limit tab in the menu 4. Enter the Expense limit amount in the text box	(http://63.51.207.139:34050)	Application should push the Expense limit amount in the database and display the Current Expense limit in the same tab itself	Working as expected	Pass				Vishnuthweep B				
17	HomePage_TC_005	Functional	Limit	Verify user is able to receive an alert message when the expense exceeds the limit		1.Enter URL(http://63.51.207.139:34050) and click go 2. Enter the valid login credentials and click Login 3. Add your day to day expenses in the Add expense tab	(http://63.51.207.139:34050)	Application should send an alert message will be sent to the registered mail, when the expense exceeds the limit	Working as expected	Pass				Sanjosh Kumar S				
18	HomePage_TC_006	Functional	Report	Verify user is able to see the statistics of his own expenses on the basis of a day, a month or a year		1.Enter URL(http://63.51.207.139:34050) and click go 2. Enter the valid login credentials and click Login 3. Click the Report dropdown button in the Menu 4. Select the required button as Today, a month, or a year and click on display button	(http://63.51.207.139:34050)	Application should display the statistics of his own expenses on the basis of a day, a month or a year	Working as expected	Pass				Sanjosh Kumar S				
19	HomePage_TC_007	Functional	Report	Verify new user is able to see the statistics of newly added expense on the basis of day, month or year		1.Enter URL(http://63.51.207.139:34050) and click go 2. Enter new user details and register 3. Enter the valid login credentials and click Login 4. Click the Report dropdown button in the Menu 5. Select the required button as Today, a month, or a year and click on display button	(http://63.51.207.139:34050)	Application should display the statistics of his own expenses on the basis of a day, a month or a year	No showing report for today night	Fail				Vishnuthweep B				

b. User Acceptance Testing

Acceptance Testing
UAT Execution & Report Submission

Date	03 November 2022
Team ID	PNT2022TMID35639
Project Name	Personal Expense Tracker
Maximum Marks	4 Marks

1. Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the Personal Expense Tracker project at the time of the release to User Acceptance Testing (UAT).

2. Defect Analysis

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	0	2	0	1	3
Duplicate	0	0	0	1	1
External	1	0	2	0	3
Fixed	1	1	2	0	4
Not Reproduced	1	3	0	0	4
Skipped	0	2	0	0	2
Won't Fix	1	0	0	1	2
Totals	4	8	4	3	19

3. Test Case Analysis

This report shows the number of test cases that have passed, failed, and untested

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	2	0	0	2
Client Application	1	0	0	1
Security	2	0	0	2

Outsource Shipping	4	0	0	4
Exception Reporting	1	0	0	1
Final Report Output	2	0	1	1
Version Control	2	0	0	2

9. RESULTS

a. Performance Metrics

		NFT - Risk Assessment						
S.No	Project Name Personal Expense Tracker Web Application	Scope/feature	Functional Changes	Hardware Changes	Software Changes	Impact of Downtime	Load/Volume Changes	Risk Score
1		New	Low	No Changes	Moderate	Yes, 2hrs	>10 to 30%	GREEN
		NFT - Detailed Test Plan						
		S.No	Project Overview	NFT Test approach		Assumptions/Dependencies/Risks	Approvals/SignOff	
		1	Login Page	1) Open the Personal Expense Tracker Application 2) Login with user Credentials		No Risks	N/A	
		2	Signup Page	1) Open the Personal Expense Tracker Application 2) Enter the Details and Create a new User		No Risks	N/A	
		3	Add Expense Page	1) Log in to Personal Expense Tracker Application 2) Enter all the expenses and their respective categories.		No Risks	N/A	
		4	Expense History Page	1) Log in to Personal Expense Tracker Application 2) View the Past Expenses.		No Risks	N/A	
		5	Report	1) Log in to Personal Expense Tracker Application 2) Visualization of past expenses in a day, or a month, or a year.		No Risks	N/A	
		6	Budget limit Page	1) Log in to Personal Expense Tracker Application 2) Budget Limits can be added.		No Risks	N/A	
		7	Email Acknowledgement	1) Mails are Sent to the Registered user if expenses>budget		No Risks	N/A	
		End Of Test Report						
S.No	Project Overview	NFT Test approach	NFR - Met	Test Outcome	GO/NO-GO decision	Recommendations	Identified Defects (Detected/Closed/Open)	Approvals/SignOff
	Tracker- Web application where can we add budgets and expenses to better improve our financial life.	1) Log in to Personal Expense Tracker Web Application 2) Test for all Testcases 3) Log out of Personal Expense Tracker Web Application	YES	Test Passed	GO	N/A	None	N/A

10.ADVANTAGES & DISADVANTAGES

a.Advantages

- i) Personal expense tracker helps the user to maintain their expenses and sends email if the user exceeds their budget limit that they have setted.
- ii) This web application helps the users' visualize the expenses in terms of graphs which will provide a clear understanding of how much they spent weekly monthly yearly
- iii) The users can set the budget limit for their expenses if they exceed their limit user will get email alert about it.

b.Disadvantages

- i) The users have to manually enter their expenses
- ii) Users can't search for specific expenses on a specific day

11.CONCLUSION:

The personal expense tracker web application has the functionalities of adding expenses,visualizing the expenses,viewing the expenses history, setting the budget limit and sending an email alert when the budget exceeds the limit. We can download the report or mail the report generated through this web application therefore by using the web application the users can optimise their spending habits and save money This web application developed through the ibm created the oppurtunity to learn dockers,flask, html,and css.

12.FUTURE SCOPE:

- The web application can be modified where users can search for their expenses based on the date or category

- Their expenses can be taken from bank transaction which would automate the process of manually entering the expenses

13.APPENDIX

SOURCE CODE:

- <https://github.com/IBM-EPBL/IBM-Project-6575-1658831974/tree/main/Final%20Deliverables/Code>

PROJECT DEMO LINK : <http://169.51.207.139:31405/>

GITHUB LINK: <https://github.com/IBM-EPBL/IBM-Project-6575-1658831974>

YOUTUBE DEMO LINK: <https://youtu.be/IXMUX-NqgaE>