

**PROJECT BASED EXPERIENTIAL LEARNING  
PROGRAM (NALAIYA THIRAN)**

**PERSONAL EXPENSE TRACKER**

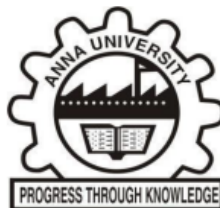
**A PROJECT REPORT**

*Submitted by*

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**BACHELOR OF ENGINEERING  
IN  
ELECTRONICS AND COMMUNICATION ENGINEERING**



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**NOVEMBER 2022**

**PERSONAL  
EXPENSE TRACKER  
APPLICATION**

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# 1. INTRODUCTION

## 1.1 Project Overview

Nowadays, most individuals don't keep track of their finances and often spend more than they can afford. Due to unnecessary expenses that are paid out of their income, they also take unneeded loans and have negative credit ratings.

The cost tracker software ensures that the expenses are logged according to category. Additionally, it offers daily and monthly graph analyses of the expenses incurred. it will give the user insights.

With the aid of the SendGrid framework, the user will also be informed via email if the expense exceeds a predetermined amount (the amount will be user set).

## 1.2 Purpose

The cost tracker software ensures that the expenses are logged according to category. Additionally, it offers daily and monthly graph analyses of the expenses incurred. it will give the user insights.

With the aid of the SendGrid framework, the user will also be informed by email if the expenditure exceeds a predetermined amount (the amount will be user specified).

## THE REASONS FOR EXPENSE TRACKER

QUESTION	DESCRIPTION
Who does the problem affect	People who need to monitor their unwanted expenses
What is the issue	Unable to keep track of their own expenses
When does the issue occur	When user is unaware of their expenses
Where is the issue occurring	Due to diverse payment gateways such as UPI,Net banking etc it is highly impossible to monitor the expenses
Why it is important that we fix the problem	To avoid the unwanted expenses that had been made and rectify it in the future purchases

General purpose of the expense tracker 1.1



## 2. LITERATURE SURVEY

### 2.1 Existing problem

An app that keeps track of your complete financial decision-making process. This programme makes your life easier by helping you manage your money well. In addition to budgeting and accounting, Personal Expense Tracker software will help you with financial management, accounting, and budgeting. Users of personal finance applications will be prompted to enter their costs, after which their wallet balance will be updated and displayed to them. Users can also receive a graphical breakdown of their expenses. They can choose to establish a cap on how much can be used in that month, and if the cap is surpassed, an email notice will be sent to the user.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	<p>An App to manage your entire financial decision-making process by keeping track of it. By assisting you in effectively managing your funds, this software makes your life simpler.</p> <p>Personal Expense Tracker software will assist you with financial management, accounting, and budgeting in addition to budgeting and accounting.</p>

2.	Idea / Solution description	<p>Personal finance includes all of the financial choices and</p> <p>tasks that finance software streamlines by assisting you in effectively managing your money. Personal Expense Tracker software will not only assist you with accounting and budgeting, but it will also provide you with valuable advice and control</p> <p>on money management.</p>
3.	Novelty / Uniqueness	<p>Display the costs on a monthly and weekly basis of</p> <p>expense in all in one app.</p>
4.	Social Impact / Customer Satisfaction	<p>People can use it to keep track of their</p> <p>spending and receive alerts when their budget is exceeded at times of low balance.</p>
5.	Business Model (Revenue Model)	<p>We can offer the additional program and features on a</p> <p>subscription basis if required.</p>
6.	Scalability of the Solution	<p>Future customers of IBM Cloud will automatically receive</p> <p>additional storage based</p> <p>on their usage and customer base.</p>



## 2.2 References

- Title : Security and privacy challenges in mobile cloud computing survey and way ahead
- Author : Muhammad Baqer Mollah et al
- Journal : Journal of Network and Coumputer Applications
- Year : 2017
- Methodology : Computational offloading, Virtualization
- Scope : The primary security and privacy issues facing cloud computing are highlighted in this survey in order to raise awareness within the academic and scientific communities. While there are many difficulties, comparable security solutions have been suggested and found in the literature by numerous researchers to address the difficulties. The recent works are also briefly presented in this work.
- 
- Title : Exploring infrastructure support for app based services on cloud platforms
- Author : Hai Nguyen et al
- Journal : Journal of Cloud Computing Advances Systems and Applications
- Year : 2017
- Methodology : Virtualization, Introspection and Security
- Scope : In this paper, a rich model's design and implementation are discussed, allowing third-party cloud apps to access a client's virtual machines (VMs) and carry out privileged operations. The infrastructure support required to support cloud apps was discussed. Different design approaches to deploy cloud apps were also addressed. Various examples were used to demonstrate and assess the practicality of cloud applications.

Title : Mobile Financial Management Application using Google Cloud Vision API

Author : Kurniawan Dwi Saputra et al

Journal : International Conference on Computer Science and Computaional Intelligence

Year : 2019

Methodology : Google Vision Cloud API, Optical Character Recognition

Scope : In order to address the primary financial issues , this study looked at the potential usefulness of the mobile application "Manage on Money (MoM)".OCR technology was created using Google Cloud Vision API. This technique works well for locating a single precise keyword on a receipt printed in black ink.MoM enables users to arrange their recurring expenses and sends a push reminder prior to the due date. OneSignal API serves as the foundation for this notification.

Title : Cloud Based Development Issues

Author : Sukhpal Singh, Inderveer Chana

Journal : International Journal of Cloud Computing and Services

Science Year : 2020

Methodology : A Methodical Analysis

Scope : The systematic representation process, research study findings, and challenges to the study's validity have all been covered in this review paper. By responding to the initially defined questions, the article has demonstrated the areas of research within cloud-based development that have been carried out. This paper presents findings from a rigorous investigation of problems with cloudbased development.

Title : Expense Tracker  
Author : Prof Miriam Thomas, Lekshmi P, and Dr.Mahalekshmi T  
Journal : International Journal of Advanced Research in Science, Communication and Technology  
Year : 2020  
Methodology : Least Square Algorithm  
Scope : This application allows the user to enter their income to determine their daily expenses, and the results are saved for each user. The application has a feature that uses data mining to predict the manager's income and expenses. The suggested system takes less time to process, and all the information is updated and processed right away.

Title : Cloud based Expense Tracker  
Author : Asthha Wahal and Muskan Aggarwal  
Journal : International Journal of Innovative Research in Technology  
Year : 2021  
Methodology : Clustering, Apriori algorithm, Virtualization  
Scope :  
  
The DET app developed through this project includes clustering functionality. The Apriori algorithm allows for the clustering of organizations and individuals. As soon as a transaction is added to the list, an automated update is made to the graph of income and expenses. The information is all kept in local storage, which is the factor that is more crucial.

Title : A Novel Expense Tracker  
Author : Muskaan Sharma, Ayush Bansal, Dr. Raju Ranjan, Shivam Sethi  
Journal : International Journal of Innovative Research in Technology  
Year : 2021  
Methodology : Statistical Analysis, Data Mining  
Scope : Some statistical analysis was done to be able to give users correct information on their expenses and help them spend better. This helps the society to prevent the issues like bankruptcy and save time from manual calculations.

Title : Student Expense Tracking Application

Author : Saumya Dubey, Pragya Dubey, Rigved Rishabh Kumar, Aaisha Khatoon

Journal : International Journal of Advance Research and Innovative Ideas in Education

Year : 2022

Methodology : Clustering, Classification and Association

Scope : A student's costs are tracked in something that is similar to a digital diary. The application records daily financial transactions for the student, including both revenues and expenditures. The main objective of this project is to offer budget tracking in an online format so that every homeowner can review their financial information at any time, from anywhere online using a web browser on their PC or new mobile device.

## 2.3 Problem Statement Definition

Budget Tracker There is currently no readily available, or better yet, cost-free, comprehensive solution that makes it possible for a person to effortlessly keep track of their daily expenses. To achieve this, one must maintain a journal in a diary or on a computer. Additionally, one must perform all calculations themselves, which might occasionally result in mistakes that result in losses. There is a continual burden to rely on the daily input of the spending and total estimation through the end of the month since there is no comprehensive monitoring system. This initiative, as its name implies, aims to more effectively and manageably manage our everyday spending.

The system makes an effort to relieve the user of as much of the load of manual computation and expense tracking as feasible.

As of now, there are many budget planner programmes online, but not all of them are effective at assisting users in creating

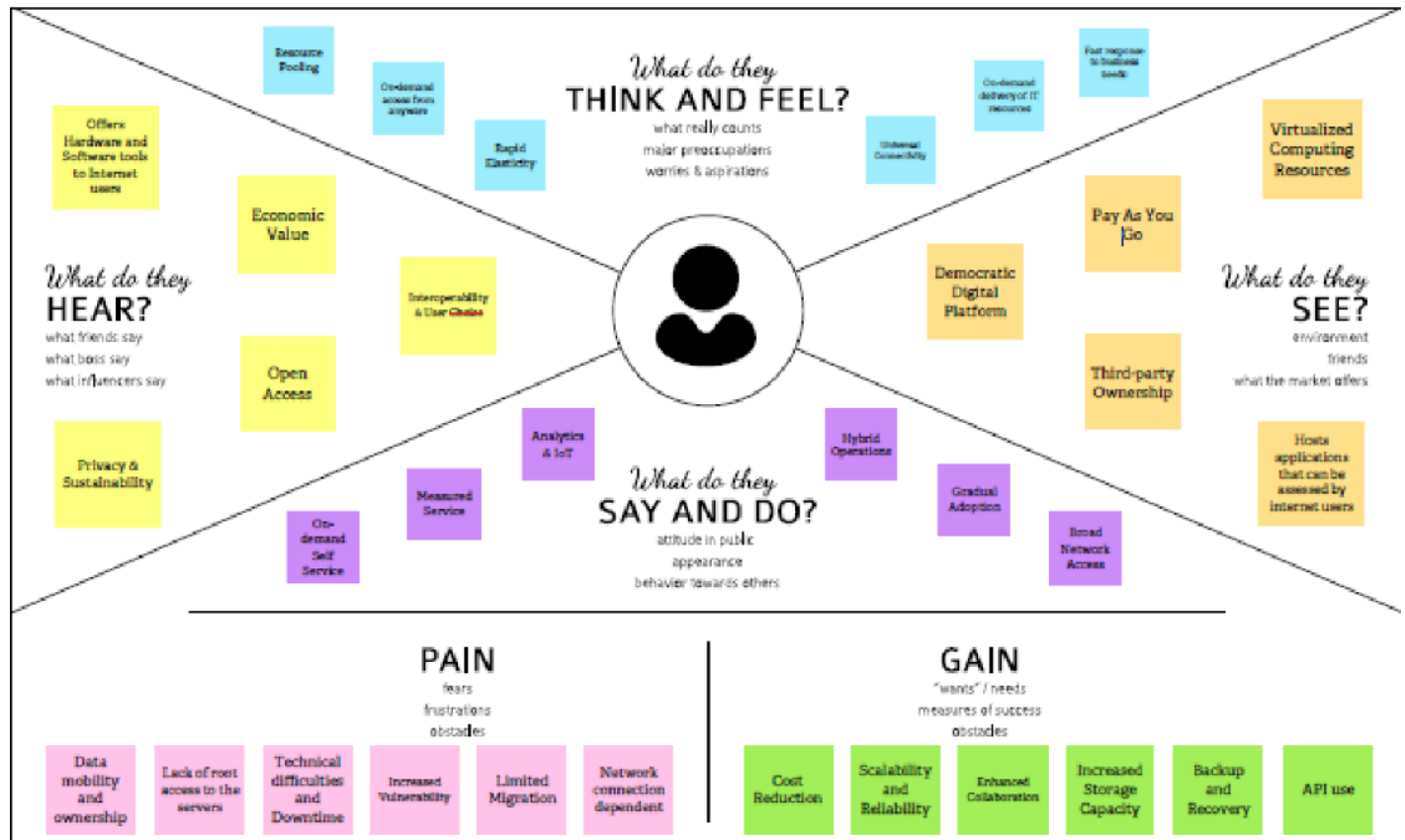
One of the drawbacks is the ongoing maintenance; many budgeting programmes provide the ease of integrating with all users' financial accounts and condensing their activity into a single dashboard. However, a lot of the software that is now available has cumbersome, inefficient features.

Additionally, because of their busy and chaotic lifestyles, people often neglect their budgets and wind up overspending since they didn't carefully plan their expenditures. Last but not least, the user is unable to foresee future costs. Even though they can record their expenses on paper or in an excel spreadsheet, their lack of financial management experience will be a problem.

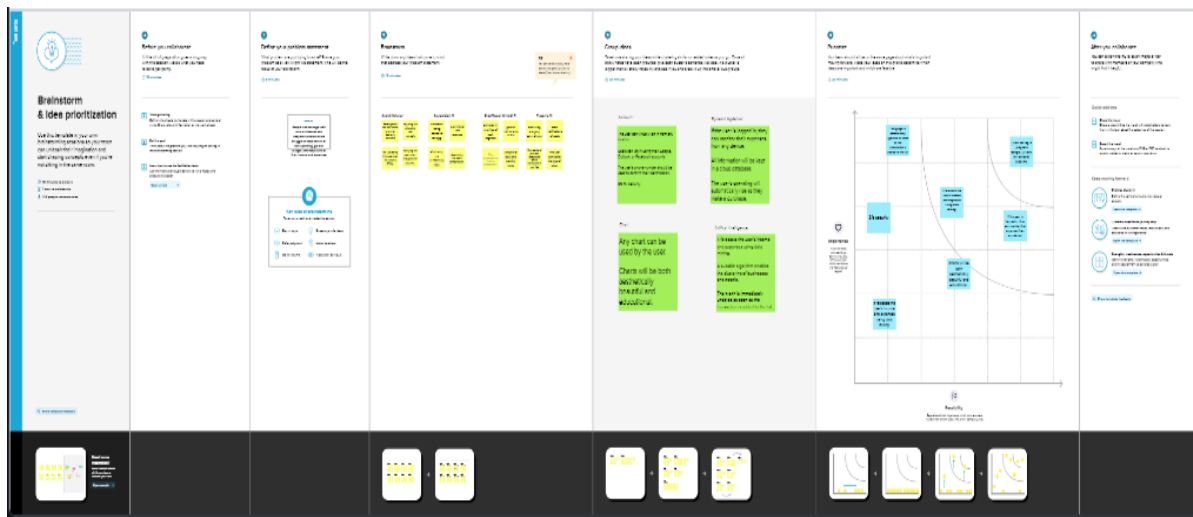
S.No	Parameter	Description
1.	Problem Statement (Problem to be solved)	An App to manage your entire financial decision-making process by keeping track of it. By assisting you in effectively managing your funds, this software makes your life simpler. Personal Expense Tracker software will assist you with financial management, accounting, and budgeting in addition to budgeting and accounting.
2.	Idea / Solution description	Personal finance includes all of the financial choices and tasks that finance software streamlines by assisting you in effectively managing your money. Personal Expense Tracker software will not only assist you with accounting and budgeting, but it will also provide you with valuable advice and control on money management.
3.	Novelty / Uniqueness	Display the costs on a monthly and weekly basis of expense in all in one app.
4.	Social Impact / Customer Satisfaction	People can use it to keep track of their spending and receive alerts when their budget is exceeded at times of low balance.

# 1. IDEATION & PROPOSED SOLUTION

## 3.1 Empathy Map Canvas



### 3.2 Ideation & Brainstorming



<https://github.com/IBM-EPBL/IBM-Project-26259-1660022478/blob/master/Project%20Design%20%26%20Planning/Ideation%20Phase/Brainstorm%20%26%20Idea%20Prioritization.pdf>



### 3.3 Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The data in standard expense tracker applications is not visually appealing to customers. It causes the user to become confused and frustrated. Some expense trackers are also unavailable in certain regions due to cloud databases that are only accessible from specific locations. We are attempting to resolve this.
2.	Idea / Solution description	This expense tracker is a web application that allows the user to view data in graphical form and makes use of the IBM db2 database, which is available in almost all regions.
3.	Novelty / Uniqueness	This expense tracker application includes all of the basic expense tracker applications, as well as graphic representation and regional usage, as well as some machine learning properties to predict the user's expenses and budget in advance.
4.	Social Impact / Customer Satisfaction	The customer will be able to readily monitor their spending and incomes due to the graphical representation; the user can select any type of graph based on their preferences and access this nearly anywhere; this will satisfy the customer.
5.	Business Model (Revenue Model)	We maintain this application free of charge because it is solely for educational purposes.
6.	Scalability of the Solution	This programme is not only for businessmen; any sort of customer may use it, and its functions can be improved even more.

### 3.4 Problem Solution fit

Project Title: Personal Expense Tracker Application

Team ID: PNT2022TMID03491

Define CS, fit into CC	<b>1. CUSTOMER SEGMENT(S)</b> Anyone who wants to keep track of their expenses can use our app; even if they are new to this financial stuff, our app will be very user friendly.	<b>6. CUSTOMER CONSTRAINTS</b> Elderly folks will become confused when they see figures that have no significance; it will be difficult for some customers to understand what this or that means when it comes to their spending; they will easily lose track of how much they are spending if there are no alerts.	<b>5. AVAILABLE SOLUTIONS</b> Customers can view the data in a graphical representation which will make the data more meaningful and everyone can easily understand how much they're spending and their incomes.	Explore AS, differentiate
	<b>2. JOBS-TO-BE-DONE / PROBLEMS</b> The data in standard expense tracker applications is not visually appealing to customers. It causes the user to become confused and frustrated. Some expense trackers are also unavailable in certain regions due to cloud databases that are only accessible from specific locations.	<b>9. PROBLEM ROOT CAUSE</b> People do not have the time to go through every expenditure, and they spend a lot without considering their budget and expenses.	<b>7. BEHAVIOUR</b> The consumer must perform all calculations manually, and comprehending the data takes a significant amount of time.	
Identify strong TR & EM	<b>3. TRIGGERS</b> This expense tracker is a web application that allows the user to view data in graphical form and makes use of the IBM db2 database, which is available in almost all regions.	<b>10. YOUR SOLUTION</b> Our expense tracker is a web application that allows the user to view data in graphical form and makes use of the IBM db2 database, which is available in almost all regions.	<b>8. CHANNELS of BEHAVIOUR</b> <b>8.1 ONLINE</b> They may use other paying internet services to calculate things, or they could utilise a VPN where the application is accessible.  <b>8.2 OFFLINE</b> They may use a calculator or delegate the calculation to others. They may also employ alternative spending tracking software.	CH
	<b>4. EMOTIONS: BEFORE / AFTER</b>  Frustration Dejection Annoyed			

# REQUIREMENT ANALYSIS

## 4.1 Functional requirement

The technical aspect of the project is tabulated as the functional requirement.

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through gmail,facebook,outlook.
FR-2	User verification	Confirmation via Email or OTP
FR-3	Categorization	Classification of expenses based on different categories
FR-4	Report	A monthly report will be sent to the customer in docx format or pdf format.
FR-5	Graphical Representation	Customers will be able to view their expenses and budget data in a graphical way
FR-6	Inbuilt calender	To keep track of the expenses and other financial stuff.

## 4.2 Non-Functional requirements

The non technical aspect of the project is tabulated here.

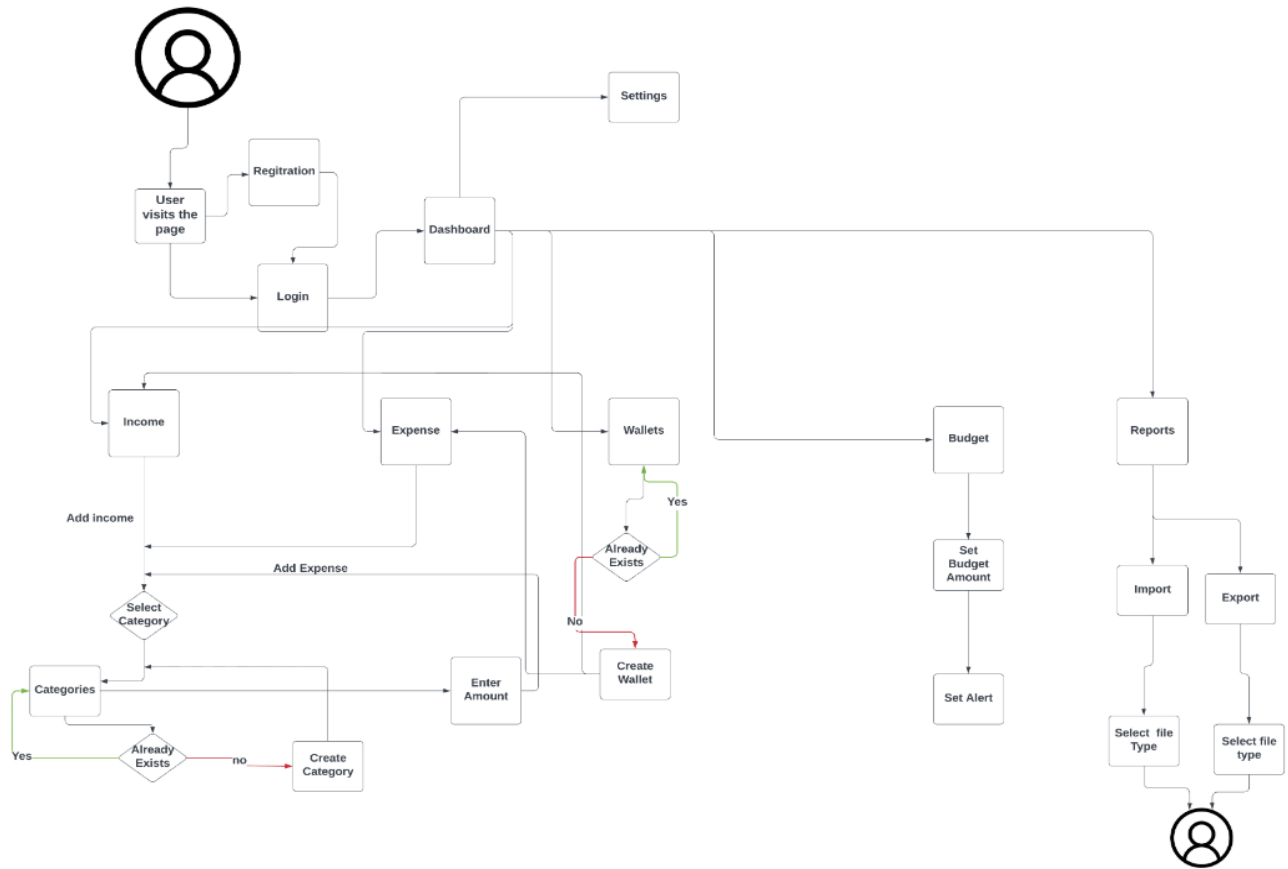
Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	Assists in maintaining an accurate record of the customer's revenue and expenses
NFR-2	<b>Security</b>	Uses 3fa for logging in and will send an alert message if the account is logged in from any other place.
NFR-3	<b>Reliability</b>	Each data collection is stored in IBM db2 which is very safe and the web api will be https and shall be coded in way to have more security.
NFR-4	<b>Performance</b>	IBM db2 is available in nearly any region, hence the performance of querying the data will be much faster.
NFR-5	<b>Availability</b>	The personal expense tracker application will always be available.
NFR-6	<b>Scalability</b>	Will be able to handle big data's in an efficient way

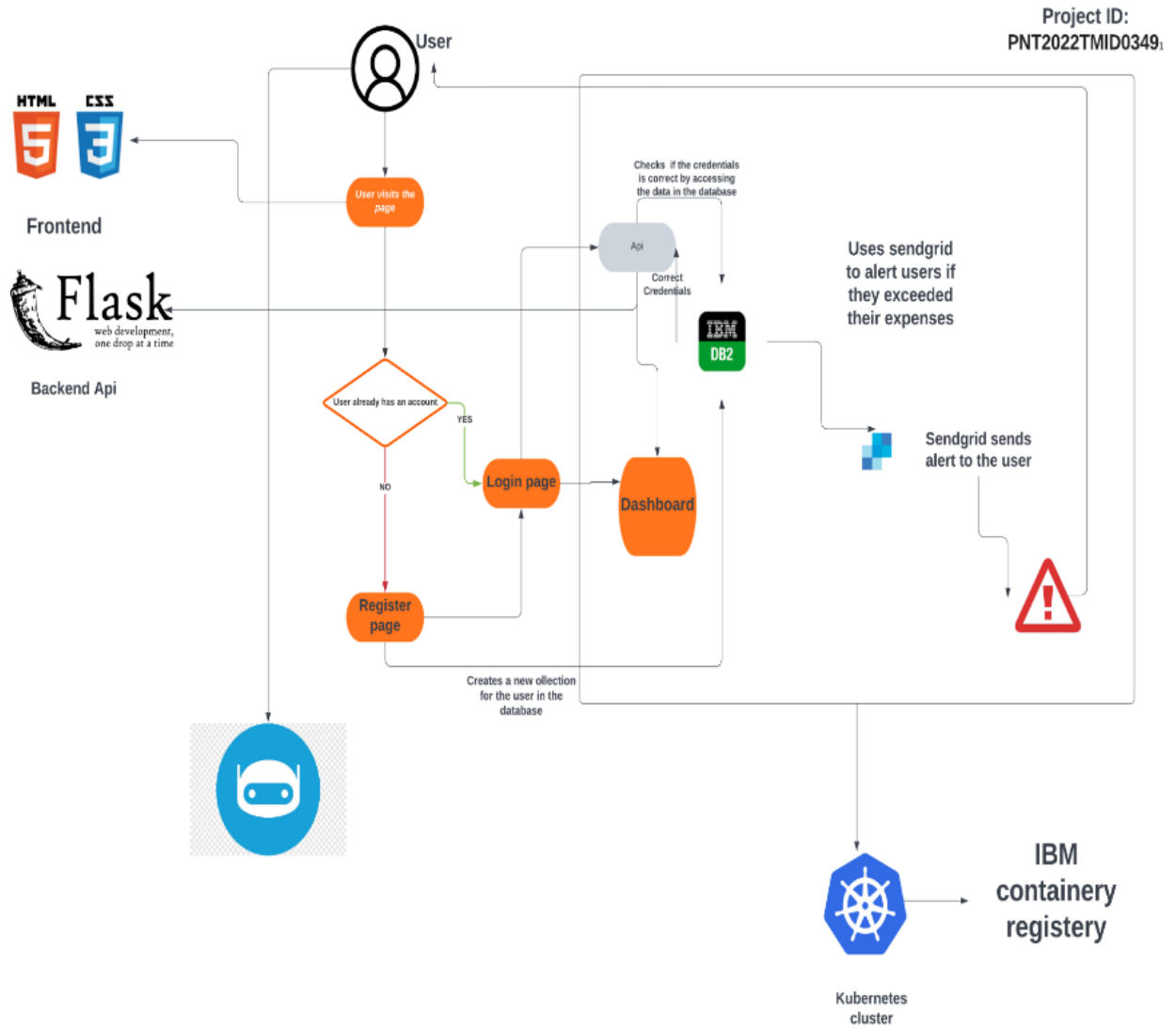
## 2. PROJECT DESIGN

### 5.1 Data Flow Diagrams

The data flow diagram depicts the flow of the project (personal expense tracker).



## Solution architecture:



## Components & Technologies

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript
2.	Application Logic-1	Logic for a process in the application	Flask-Python
3.	Cloud Database	Database Service on Cloud	IBM DB2
4.	File Storage	File storage requirements	IBM Object Storage, Container registry
5.	Infrastructure (Server / Cloud)	Application Deployment on Cloud	IBM Cloud , Kubernetes.

### 5.3 User Stories

Note: Web users and mobile users will have the same functionalities.

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	Security	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-3
Customer	Registration	USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-3
Customer	Registration	USN-4	As a user, I can register for the application through Gmail	I can register and access the dashboard with gmail login.	High	Sprint-1
Customer	Login	USN-5	As a user, I can log into the application by entering email & password	I can login to the application and access the dashboard using email and password	High	Sprint-1
Customer	Dashboard	USN-6	As a user, I can view, edit, delete my expenses and budget.	I can view, edit, delete my expenses and budget.	High	Sprint-2
Customer	Report	USN-7	As a user, I can group the expenses	I can classify my expenses into various groups	Low	Sprint-3
Customer	Inbuilt Calender	USN-8	As a user, I can keep track of the expenses	I can keep track of the	Low	Sprint-4

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
			and other financial stuff using the calender.	expenses and other financial stuff using the calender.		
Customer	Alert	USN-9	As a user, I should be able to receive alerts whenever I exceed my limit.	I receive alerts whenever I exceed my limit.	High	Sprint-2
Customer	Graphical Representation	USN-10	As a user, I can view my expense data in a graphical way.	I can view my expense data in a graphical way.	Low	Sprint-4
Administrator	Security	USN-11	As an administrator, I can view if there are any spam accounts and I should be able to ban them.	I can view if there are any spam accounts and I should be able to ban them.	High	Sprint-4
Customer care	Help	USN-12	As a customer care executive, I should be able to receive calls from users for any help.	I should be able to receive calls from users for any help.	Low	Sprint-4
Customer	Chat Bot	USN-13	As a customer, I should be able to chat with the chat bot regarding any queries.	I can chat with the chat bot regarding any queries.	High	Sprint-3



### 3. PROJECT PLANNING & SCHEDULING

#### 6.1 Sprint Planning & Estimation

The phase by phase development of the project has been specified as sprint plan.

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High	Anand Mohanan
Sprint-3	Security	USN-2	As a user, I will receive confirmation email once I have registered for the application	2	High	Anand Mohanan
Sprint-3	Registration	USN-3	As a user, I can register for the application through Facebook	1	Low	Prasanna M
Sprint-1	Registration	USN-4	As a user, I can register for the application through Gmail	2	Medium	Syed Rayaah Ahmedh
Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	2	High	Anand Mohanan
Sprint-2	Dashboard	USN-6	As a user, I can view, edit, delete my expenses and budget.	2	High	Arunachalam
Sprint-3	Report	USN-7	As a user, I can group the expenses	1	Medium	Syed Rayaah Ahmedh
Sprint-4	In built Calender	USN-8	As a user, I can keep track of the expenses and other financial stuff using the calender.	1	Low	Prasanna
Sprint-2	Alert	USN-9	As a user, I should be able to receive alerts whenever I exceed my limit.	2	High	Anand Mohanan
Sprint-4	Graphical Representation	USN-10	As a user, I can view my expense data in a graphical way.	1	Medium	Anand Mohanan
Sprint-4	Security	USN-11	As an administrator, I can view if there are any spam accounts and I should be able to ban them	2	Medium	Prasanna
Sprint-4	Help	USN-12	As a customer care executive, I should be able to receive calls from users for any help.	1	Low	Arunachalam
Sprint-3	Chat Bot	USN-13	As a customer, I should be able to chat with the	2	High	Syed Rayaah

## 6.2 Sprint Delivery Schedule

The deliverable are listed as per the schedule and they are tabulated.

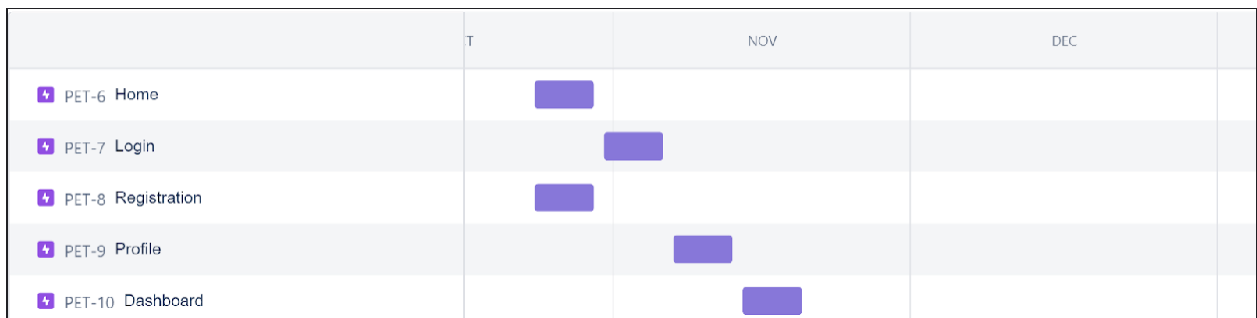
<b>Sprint</b>	<b>Total Story Points</b>	<b>Duration</b>	<b>Sprint Start Date</b>	<b>Sprint End Date (Planned)</b>	<b>Story Points Completed (as on Planned End Date)</b>	<b>Sprint Release Date (Actual)</b>
Sprint-1	5	6 Days	24 Oct 2022	29 Oct 2022	5	29 Oct 2022
Sprint-2	3	6 Days	31 Oct 2022	05 Nov 2022	3	05 Oct 2022
Sprint-3	6	6 Days	7 Oct 2022	12 Oct 2022	6	12 Oct 2022
Sprint-4	9	6 Days	14 Oct 2022	19 Oct 2022	9	19 Oct 2022

## 6.3 Reports from JIRA

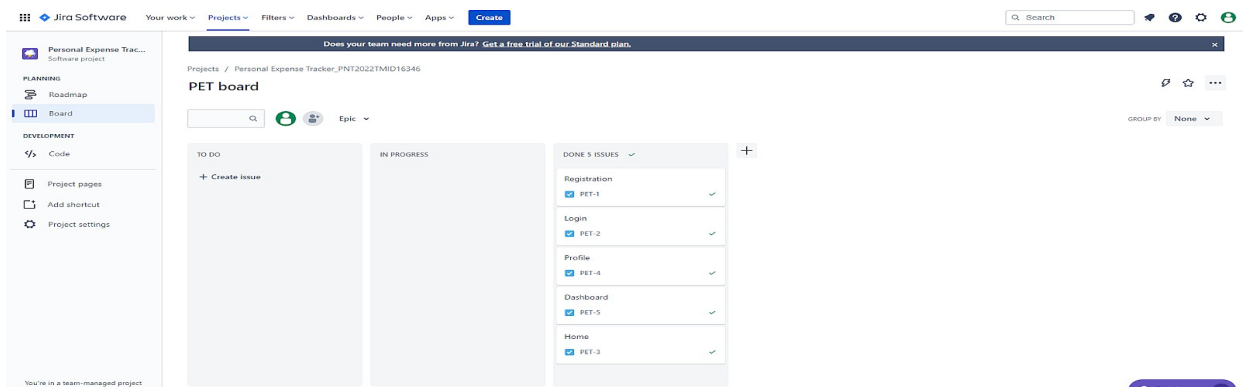
What is analytics Jira



Analytics Plus for Jira Software is **designed to serve as a unified platform with insights on multi-project metrics, workflows, roadmaps, issues, backlogs, and bottlenecks.**



JIRA REPORT ANALYSIS 1.1



JIRA REPORT ANALYSIS 1.2

## 4. CODING & SOLUTIONING (Explain the features added in the project along with code)

### 4.1 Feature 1

IBM-managed cloud databases feature native security capabilities powered by IBM Cloud Security, **protecting in-flight data and at-rest data**. Databases support any data you bring to IBM Cloud: structured, unstructured, SQL, NoSQL, IoT, blockchain and more

```
ibm_db_conn = ibm_db.connect(''DATABASE=bludb;HOSTNAME=ea286ace-86c7-4d5b-8580-3fbfa46b1c66.
                             bs2io90l08kqb1od8lcg.databases.appdomain.cloud;PORT=31505;
                             SECURITY=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;
                             UID=cgz83208;PWD=K56N6PSUZD5ZcQ3f'', '', '')

connection = ibm_db_dbi.Connection(ibm_db_conn)
cursor = connection.cursor()
# connection = sqlite3.connect('database/db.sqlite', check_same_thread=False)
# cursor = connection.cursor()
cursor.execute(''CREATE TABLE IF NOT EXISTS expense (
    id INTEGER NOT NULL,
    user_id INTEGER NOT NULL,
    title VARCHAR(50) NOT NULL,
    category VARCHAR(50) NOT NULL,
    amount FLOAT NOT NULL,
    date DATE ,
    PRIMARY KEY (id)
)''')
cursor.execute(''CREATE TABLE IF NOT EXISTS user (
    id INTEGER NOT NULL,
    email VARCHAR(100) NOT NULL,
    password VARCHAR(100),
    name VARCHAR(1000),
    budget FLOAT,
    number VARCHAR(10),
    gender VARCHAR(100),
    address VARCHAR(100),
    PRIMARY KEY (id),
    UNIQUE (email)
)''')
```

IBM DB

## 4.2 Feature 2

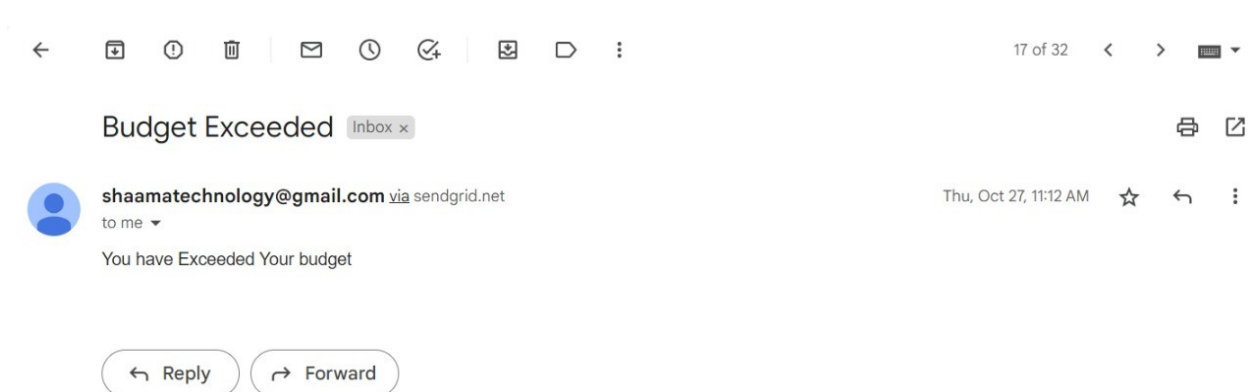
SendGrid is a cloud-based SMTP provider that **allows you to send email without having to maintain email servers**. SendGrid manages all of the technical details, from scaling the infrastructure to ISP outreach and reputation monitoring to whitelist services and real time analytics.

```
21
22 SUBJECT = "Budget"
23 s = smtplib.SMTP('smtp.gmail.com', 587)
24 def sendgridmail(user,TEXT):
25     sg = sendgrid.SendGridAPIClient('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')
26     from_email = Email("shaamatechnology@gmail.com") # add the team senders mail id
27     to_email = To(user)
28     subject = "Budget Exceeded"
29     content = Content("text/plain",TEXT)
30     mail = Mail(from_email, to_email, subject, content)
31     mail_json = mail.get()
32     response = sg.client.mail.send.post(request_body=mail_json)
33     print(response.status_code)
34     print(response.headers)
35
```

Send grid functional code

```
if totalBudgetNow<totalExpenseNow and totalBudgetNow!=0:
    sendgridmail(current_user.email,"You have Exceeded Your budget")
```

if conditional code



### 4.3 Database Schema

IBM Db2 on Cloud

Load DataLoad HistoryTablesViewsIndexesAliasesMQTsSequencesApplication objects

Find schemas or tables

Refresh

SQL

Schemas

Tables

Views

Indexes

Aliases

MQTs

Sequences

Application objects

Tables

New table

Filter

Sort

Columns

Rows

Details

Help

Name	Schema	Properties
EXPENSE	CGZ83208	...
USER	CGZ83208	...

Total: 2, selected: 0

Table definition

USER

Approximate 4 rows (32.0 KB)  
Updated on 2022-11-17 13:25:22

Name	Data type	Nullable	Length	Scale	
ID	INTEGER	N		0	
EMAIL	VARCHAR	N	100	0	
PASSWORD	VARCHAR	Y	100	0	
NAME	VARCHAR	Y	1000	0	
BUDGET	DOUBLE	Y		0	
NUMBER	VARCHAR	Y	10	0	
GENDER	VARCHAR	Y	100	0	
ADDRESS	VARCHAR	Y	100	0	

View data

## 5.

## TESTING

### 8.1 Test Cases

Test case ID	Feature Type	Component	Test Scenario	Pre-Requisite	Steps To Execute
LoginPage_TC_01	Functional	Home Page	Verify user is able to see the Login/Signup popup when user clicked on My account button	Text field should be enabled	1.Enter URL and click go 2.Click on My Account dropdown button 3.Verify login/Signup popup displayed or not
LoginPage_TC_02	UI	Home Page	Verify the UI elements in Login/Signup popup	Text field should be enabled	1.Enter URL and click go 2.Click on My Account dropdown button 3.Verify login/Signup popup with below UI elements: a.email text box b.password text box c.Login button d.New customer? Create account link e.Last password? Recovery password link
LoginPage_TC_03	Functional	Home page	Verify user is able to log into application with Valid credentials	Text field should be enabled	1.Enter URL(https://shopenzer.com/) and click go 2.Click on My Account dropdown button 3.Enter Valid username@email in Email text box 4.Enter valid password in password text box
LoginPage_TC_04	Functional	Login page	Verify user is able to log into application with Invalid credentials	Text field should be enabled	1.Enter URL(https://shopenzer.com/) and click go 2.Click on My Account dropdown button 3.Enter Invalid username@email in Email text box 4.Enter valid password in password text box 5.Click on login button
LoginPage_TC_04	Functional	Login page	Verify user is able to log into application with Invalid credentials	Text field should be enabled	1.Enter URL(https://shopenzer.com/) and click go 2.Click on My Account dropdown button 3.Enter Valid username@email in Email text box 4.Enter Invalid password in password text box
LoginPage_TC_05	Functional	Login page	Verify user is able to log into application with Invalid credentials	Text field should be enabled	1.Enter URL and click go 2.Click on My Account dropdown button 3.Enter Invalid username@email in Email text box 4.Enter Invalid password in password text box 5.Click on login button

VSV

Home Sign in

Sign in

Email address

Password

☐ Remember me

Sign in

Create an Account

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## 8.2 User Acceptance Testing

Test Data	Expected Result	Actual Result	Status	Comments	TC for Automation(Y/N)	BUG ID	Executed By
Username: vinay@gmail.com password: Testing123	Login/Signup popup should display	Working as expected	Pass	Nil	Y	Nil	Rahul
Username: vinay@gmail.com password: Testing123	Application should show below UI elements: a.email text box b.password text box c.Login button with orange colour d.New customer? Create account link e.Last password? Recovery password link	Working as expected	Pass	good	Y	Nil	vinay
Username: vinay@gmail.com password: Testing123	User should navigate to user account homepage	Working as expected	Pass	nice	Y	Nil	venkata
Username: vinaykrishna174@gmail.com password: vina123	Application should show 'Incorrect email or password' validation message.	Working as expected	Pass	Good	Y	Nil	shaama
Username: shaama@gmail.com password: Testing123678686	Application should show 'Incorrect email or password' validation message.	Working as expected	Pass	good	Y	Nil	shaama
Username: vinaykrishna174@gmail.com	Application should show 'Incorrect email or password' validation message.	Working as expected	Pass	Nice	Y	Nil	rahul



□      —

**Acceptance Testing  
UAT Execution & Report Submission**

Date	03 November 2022
Team ID	PNT2022TMID16140
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 [ProductName] 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	10	4	2	3	19
Duplicate	1	0	3	0	4
External	2	3	0	1	6
Fixed	11	2	4	20	37
Skipped	0	0	0	0	0
Won't Fix	0	0	0	0	0
Totals	24	9	9	24	66

### 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
Functional	7	0	0	7
Unit	5	0	0	5
Security	2	0	0	2
Version Control	2	0	0	2
Exception Reporting	9	0	0	9
Final Report Output	4	0	0	4

<b>Test Scenarios</b>	
1 Verify user is able to see login page	yes
2 Verify user is able to log into application or not?	yes
3 Verify user is able to navigate to create your account page?	yes
4 Verify user is able to recovery password	no
5 Veriify login page elements	yes
<b>Search</b>	
1 Verify user is able to search by entering keywords in search box	no
2 Verify user is able to see suggestions based on keyword entered in search box	no
3 Verify user is able to see related auto suggestions displaying based on keyword entered in search box	yes
4 Verify user is able to see no matches found message when no results are matching with entered keyword	yes
5 Verify user is able to see seach detailed page when nothing entered in textbox	no

Sign Up

Username  
User

Email address  
vgsece@gmail.com

Password  
\*\*\*\*\*

Sign Up

© vsv

6.

RESULTS

9.1Performance Metrics

			NFT - Risk Assessment						
S.No	Project Name	Scope/feature	Functional Changes	Hardware Changes	Software Changes	Impact of Downtime	Load/Volumen Changes	Risk Score	Justification
1	Personal Expense Tracker	Achieve your business goals	Low	No Changes	Moderate	Unenforceable Policies	>5 to 10%	ORANGE	As we have seen the changes
		Boost the productivity				Processing Costs			
		valuable insights				Costs of (Lacking) Integration			
		Avoid data loss							
			NFT - Detailed Test Plan						
			S.No	Project Name	NFT Test approach	assumptions/Dependencies/Risk	Approvals/SignOff		
			1	Personal Expense Tra	Performance Testing	web based application	Approved		
					Security Testing	Flask	Approved		
						Kubernetes			
						Docker			
			End Of Test Report						
S.No	Project Name	NFT Test approach	NFR - Met	Test Outcome	GO/NO-GO decision	Recommendations	(Detected/Closed/Open)	Approvals/SignOff	
1	Personal Expense Tracker	Performance Testing	90	High	Go	No recommendation	closed	Approved	
		Security Testing	95	High security	Go	No recommendation	closed	Approved	

## 7. ADVANTAGES & DISADVANTAGES

### Pros

It's simple to set up and use. When you're creating your own method of tracking your finances, you first have to figure out how you're going to do that. Are you going to use pen and paper, or software, or an excel spreadsheet? What are you going to track? How are you going to input that data, and how often are you going to do it? With an automated app, it tracks everything for you in real time. It has a wealth of information, so no matter what data you feel is important to track, it is all there and available for you - you just need to take a look to see it. There's an easy user interface for everything as well. Whether you want to set up budget, track a type of expense, or look over your financial history, there's a tab or an option ready and waiting for you.

It's instantaneous. The application will track all of your data for you. It doesn't do it once a week or once a month, like you might if you were doing it manually. All the information is automatically brought right into your account as soon as it is available. That means that you have a day by day way of checking to ensure that you're on track and moving in the right direction. I've had it where Mint.com actually helped me react very quickly to a fraudulent transaction from an ATM machine. Someone had gotten a hold of our bank account details through a card skimmer (most likely), and they withdrew a bunch of cash. Within a few hours, I had already been made aware of it through Mint, contacted my bank, and started the process of getting my money back, all thanks to the automated system that was already in place.

## Cons

Your information is less secure, and probably being used and sold. If the service is free, then the product is you. Mint.com, like other financial apps, is a free service. They have to pay their bills somehow, so regardless of what their privacy policy may or may not say, just assume that your spending history and trends are going to be recorded and analyzed, by someone, somewhere. Now, you shouldn't have to worry about credit card fraud or identity theft, these companies are large enough and secure enough that you'll never have to worry about something like that. Just recognize that your information, most likely anonymous, will be used and potentially even sold. Personally, I have no problem with that, but if you do, then make sure you avoid these types of services.

Automating everything to do with your finances can make you financially lazy. If your bills are paid automatically and your finances are tracked automatically, then what is there left for you to do? Not a lot, to be honest. So you might stop caring about what you're spending and where your money is going. Eventually you may look at your Mint data and realize that you've blown your budget over the last two months, but by then it is too late. So if you do choose to use this program, ensure that you are also being.

ADVANTAGES	DISADVANTAGES
LOW OPERATING COSTS	SECURITY AND PRIVACY ISSUE
HIGHER EMPLOYEE PRODUCTIVITY	LACK OF TECHNICAL KNOWLEDGE
BETTER CUSTOMERS EXPERIENCE	INTERNET CONNECTION
CONSUMER INSIGHTS	TIME CONSUMING

## **8 . CONCLUSION**

The new system has overcome most of the limitations of the existing system and works according to the design specification given. The project what we have developed is work more efficient than the other income and expense tracker. The project successfully avoids the manual calculation for avoiding calculating the income and expense per month. The modules are developed with efficient and also in an attractive manner. The developed systems dispense the problem and meet the needs of by providing reliable and comprehensive information. All the requirements projected by the user have been met by the system.

The newly developed system consumes less processing time and all the details are updated and processed immediately. Since the screen provides online help messages and is very user friendly, any user will get familiarized with its usage. Module s are designed to be highly flexible so that any failure requirements can be easily added to the modules without facing many problems. The best organizations have a way of tracking and handling these reimbursements. This ideal practice guarantees that the expenses tracked are accurately and in a timely

## 9. FUTURE SCOPE

- 1) It will have various options to keep record (for example Food, Travelling Fuel, Salary etc.
- 2) Automatically it will keep on sending notifications for our daily expenditure.
- 3) In today's busy and expensive life, we are in a great rush to make moneys, but at the end of the month we broke off. As we are unknowingly spending money on title and unwanted things. So, we have come over with the plan to follow our profit.
- 4) Here user can define their own categories for expense type like food, clothing, rent and bills where they have to enter the money that has been spend and likewise can add some data in extra data to indicate the expense.