

Team ID	PNT2022TMID32962
Project Name	Personal Expense Tracker Application
Team members	VIGNESH.T (TEAM LEAD) SRINIVAS.P.R VASANTH.R SAKTHI GANESH.M

CHAPTER 1

INTRODUCTION

The introduction briefs about evolution of fabric defect detection in industries and recent approaches.

1.1 Project Overview

In simple words, personal finance entails all the financial decisions and activities that a Finance app makes your life easier by helping you to manage your finances efficiently. A personal finance app will not only help you with budgeting and accounting but also give you helpful insights about money management.

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.

1.2 Purpose

When you track your spending, you know where your money goes and you can ensure that your money is used wisely. Tracking your expenditures also allows you to understand why you're in debt and how you got there. This will then help you design a befitting strategy of getting out of debt.

Budgeting ensures you're not spending more than you're making, allowing you to plan for short- and long-term expenses. It's an easy, helpful way for people with all types of income and expenses to keep their finances in order.

CHAPTER 2

LITERATURE SURVEY

Literature review was carried out to gain knowledge and improve the skills needed to complete this project. This chapter shows the different techniques that have been implemented.

2.1 Existing Problem

An expense tracker is a software or application that helps to keep an accurate record of your money inflow and outflow. Many people in India live on a fixed income, and they find that towards the end of the month they don't have sufficient money to meet their needs.

2.2 References

- [1] <http://expense-manager.com/how-expense software/>
 - [2] <https://www.splitwise.com/terms>
 - [3] <http://code.google.com/p/socialauthandroid/wiki/Facebook>
 - [4] <http://code.google.com/p/socialauth-android>
 - [5] Developer.android.com
 - [6] <http://www.appbrain.com/app/expensemanager/ com.expensemanager>
 - [7] <https://www.xpenditure.com/en?>
 - [8] <http://expense-manager.com/how-expense software/>
 - [9] Donn Felker, "Android Application Development for Dummies", published by For Dummies, 2010.
 - [10] Ed Burnette, "Hello, Android: Introducing Google's Mobile Development Platform", published by Pragmatic Bookshelf, 2009.
- Lee, "Beginning Android Application Development", Published by WroxPress, 2011.

2.3 Problem Statement Definition

It is tough to keep track of all the financial decisions and activities that a person makes. Traditional expense tracking methods are inconvenient and unreliable. In order to get a quick overview about your total incomes and expenses and control spending , its convenient to digitize the process by having a personal expense tracker.

Who does the problem affect?	Working individuals, students and budget conscious consumers.
What are the boundaries of the problem?	Limited features to provide for expense tracking.
What is the issue?	To be vigilant about the expense spent increases financial stress. Being indecisive about the finances may result in less financial security and exceed the budget.
When does this issue occur?	When people are not able to track their expenses properly.
Where is the issue occurring?	In daily life of employees as well as students.
Why is it important that we fix the problem?	Fixing this issue will help users to better plan their budget and lead to financial well-being.

- Sophie, who is a homemaker, finds it hard to control her desire to shop. To stop herself from overindulging in impulsive purchases, she needs to track her expenses and hold herself accountable.
- Sam is a high school student who usually gets a limited allowance from his parents. Tracking his expenses and good budgeting technique allows him to spend on his regular expenses as well as on himself.
- Percy, who is a novice budgeter, finds it tedious to track and manage the expenses amongst his busy schedule. Prioritizing his expenses will help him to curtail his unnecessary expenditures.

CHAPTER 3

IDEATION & PROPOSED SOLUTION

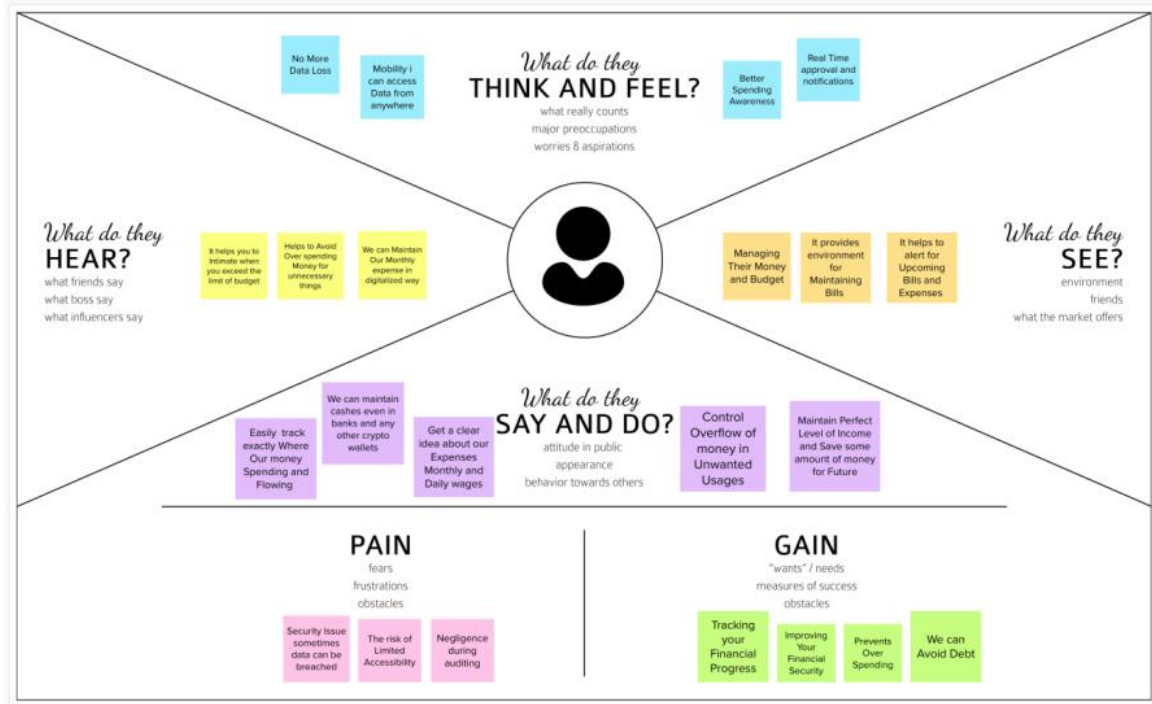
3.1 Empathy Map Canvas

Empathy Map Canvas

Gain insight and understanding on solving customer problems.

1

Build empathy and keep your focus on the user by putting yourself in their shoes.



3.2 Ideation & Brainstorming

3.2.a Brainstorm

Step-1: Team Gathering, Collaboration and Select the Problem Statement

Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

- 10 minutes to prepare
- 1 hour to collaborate
- 2-8 people recommended

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

10 minutes

- A Team gathering**
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.
- B Set the goal**
Think about the problem you'll be focusing on solving in the brainstorming session.
- C Learn how to use the facilitation tools**
Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#)

1 Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

5 minutes

PROBLEM

HOW TO TRACK THE PERSONAL EXPENSES

Key rules of brainstorming

To run an smooth and productive session

- Stay in topic.
- Defer judgment.
- Go for volume.
- Encourage wild ideas.
- Listen to others.
- If possible, be visual.

Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

 10 minutes

TIP



You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

VASANTH R

how to
control our
expenses?

detect to keep
an accurate
record of your
money inflow
and outflow

avoid to
use savings

identify to
prevent
poverty

VIGNESH T

Detect to
helps you to
create a
useful
budget

Identify and
ensure that
your money is
used wisely or
not

You will able to
control yourself
and work with
limited resource

Helps you to
maintain bills
in periodic
manner

SRINIVAS P R

You will know
accurate picture
of where your
money is going

You will able to
allocate money
to different
priorities

It allows you
to cutdown
unnecessary
spending

Used to track
monthly
expenditure

SAKTHIGANESH M

You spend
and save in a
highest
manner

Identify You to
have funds for
emergencies

Identify the
expenses to
understand in
graphically

Detect that you
over crossing
your
expenditure
limit

3.2.b Group Ideas

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

🕒 20 minutes

DETECTING EXPENDITURE

Identify the expenses to understand in graphically

Identify to keep an accurate record of your money inflow and outflow

Used to track monthly expenditure

You will know accurate picture of where your money is going

Identify and ensure that your money is used wisely or not

SETTING A LIMIT

how to control our expenses?

You will able to allocate money to different priorities

Identify that you are crossing your expenditure limit

Identify the time to have funds for emergencies

Identify the expenses to understand in graphically

It allows you to cutdown unnecessary spending

TIP



Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

3.2.c Prioritize

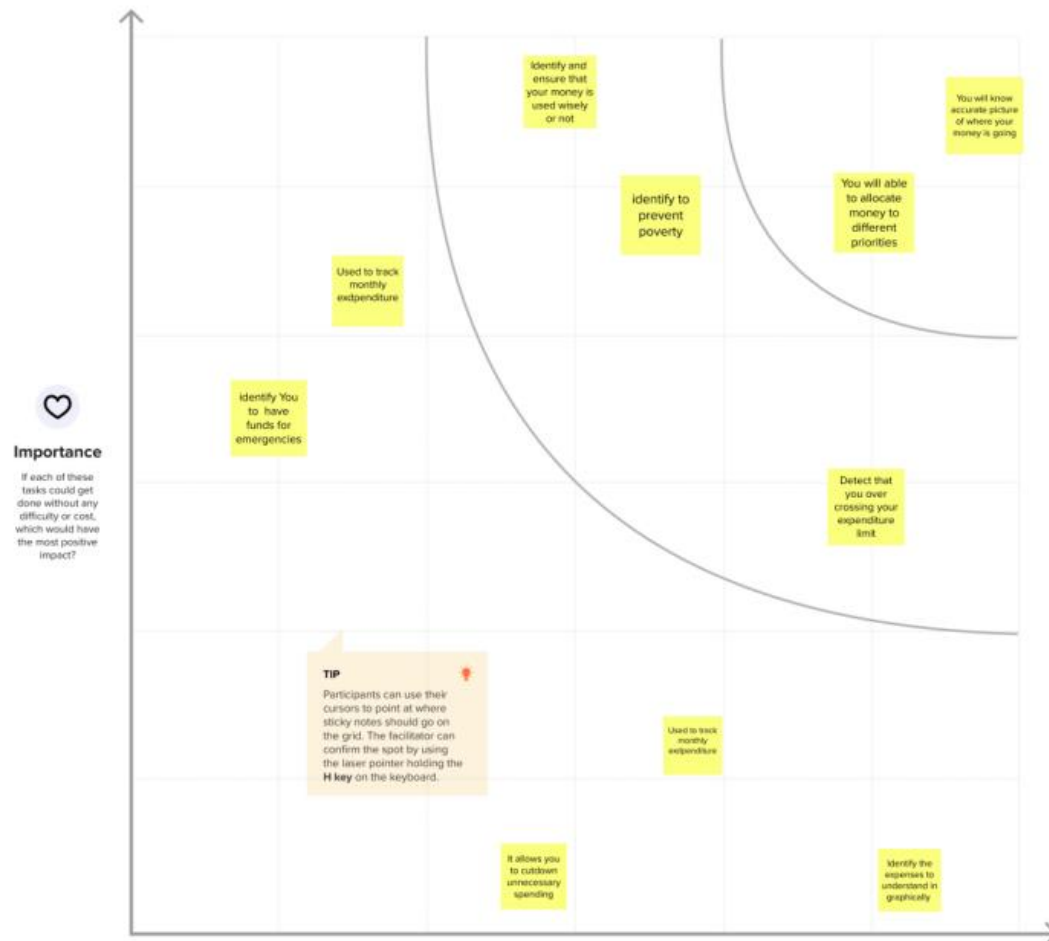
Step-3: Idea Prioritization

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

🕒 20 minutes



3.3 Proposed Solution

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	In paper-based expense tracker system it is difficult to track our monthly expenses manually. The paper-based expense records may get lost in case of fire accidents, flood etc.
2.	Idea / Solution description	This app makes your life easier by helping you to manage your finances efficiently. This personal expense app will not only help you with budgeting and accounting but also give you helpful insights about financial management.
3.	Novelty / Uniqueness	The user gets notified when their expense exceeds the limit and also it reminds the user when they forgot to make entry.
4.	Social Impact / Customer Satisfaction	It will help the people to track their expenses and also alerts when they exceed the limit of their budget.
5.	Business Model (Revenue Model)	We can provide the application in a subscription based.
6.	Scalability of the Solution	This application can handle large number of users simultaneously.

3.4 Problem Solution fit

Team Members: VIGNESH T, SRINIVAS P R, VASANTH R, SAKTHI GANESH M.

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS <p>Who is your customer? The bulk of clients are adults above 16 who earn and spend money.</p>	6. CUSTOMER CONSTRAINTS CC <p>What constraints prevent your customers from taking actions to limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices. An expense tracker is a software program of an application that helps you to keep accurate record of your income and expenses. It is also commonly referred to as an expense manager. Many people in India have fixed incomes and acknowledge that they spend money towards the end of each month.</p>	5. AVAILABLE SOLUTIONS AS <p>For user convenience, this project is being developed on web application. Because they include an web application anytime they can create immediate expenses. This makes using this data containy. We think that a practical design and a practical web application can solve this problems. Such an application is capable of keeping track of expenditure, providing a comprehensive view with user-friendly interface, and being enough intelligence to display the history of expenditures indicating the application.</p>	Explore AS, differentiate
	2. JOBS-TO-BE-DONE / PROBLEMS J&P <p>Which jobs to be done (or problem to you address for your customers? There could be more than one, explore different sides. Due to manual error in the expenses calculation process and lack of expense history maintenance. Therefore, this application was developed with history and automatic day, week, month and year calculation.</p>	9. PROBLEM ROOT CAUSE RC <p>What is the real reason that is problem exists? What is the backstory behind the need to do this job? You may rapidly pay for the invoices by using an expense tracker app that supports financial transaction using debit cards and credit cards and net banking. Additionally, a spending tracking software will spend payment reminders and link payment to client accounts.</p>	7. BEHAVIOUR BE <p>Customers get unlimited access to their calculation. This approach makes it very simple and really beneficial to estimate their expenditure and needs.</p>	Focus on J&P, tap into BE, understand RC
Identify strong TR & EM	3. TRIGGERS TR <p>What triggers customers to act? By viewing YouTube promotions and advertising while engaging in online activities like gaming and searching the web, as well as getting recommendation from their friends and neighbors</p>	10. YOUR SOLUTION SL <p>For the user development this web application is developed, because they can use mobiles for anytime when they needed immediate expense calculation as this source that it is various methods used by different people. This makes using this data containy. There is still complication in areas like there is no assurance for data compatible, there are chances of crucial inputs can be missed and the manual errors may seek in. Such an application is capable of keeping track of expenditure, providing a comprehensive view with user-friendly interface, and being enough intelligence to display the history of expenditures indicating the application.</p>	8. CHANNELS of BEHAVIOUR CH <p>Online: What kind of action do customer take online? Yes, mint's parent company, intuit, uses cutting-edge security and technology to protect the personal and financial data of its users. Multi-factor authentication as well as software and hardware encryption are security measures. Offline: What kind of action do customer take offline? The most convenient and cost-free personal finance to this expense tracker Data can be exported as a CSV file and it can be used offline.</p>	Identify strong TR & EM
	4. EMOTIONS: BEFORE / AFTER EM <p>Before: User thought that they couldn't consistently keep their budgets, missing the prior expense data and made some manual calculation error After: After using this application, users report that they detect and get rid of wasteful spending patterns in their financial lives. In addition, they felt that regularly tracking expenses would help them keep track of their money and encourage healthier financial practices like saving.</p>			

CHAPTER 4

REQUIREMENT ANALYSIS

4.1 Functional Requirements

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 Application Registration through Gmail
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User monthly expense tentative data	Data to be registered in the app
FR-4	User monthly income data	Data to be registered in the app
FR-5	Alert/ Notification	Alert through E-mail Alert through SMS
FR-6	User Budget Plan	Planning and Tracking of user expense vs budget limit

4.2 Non Functional Requirements

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

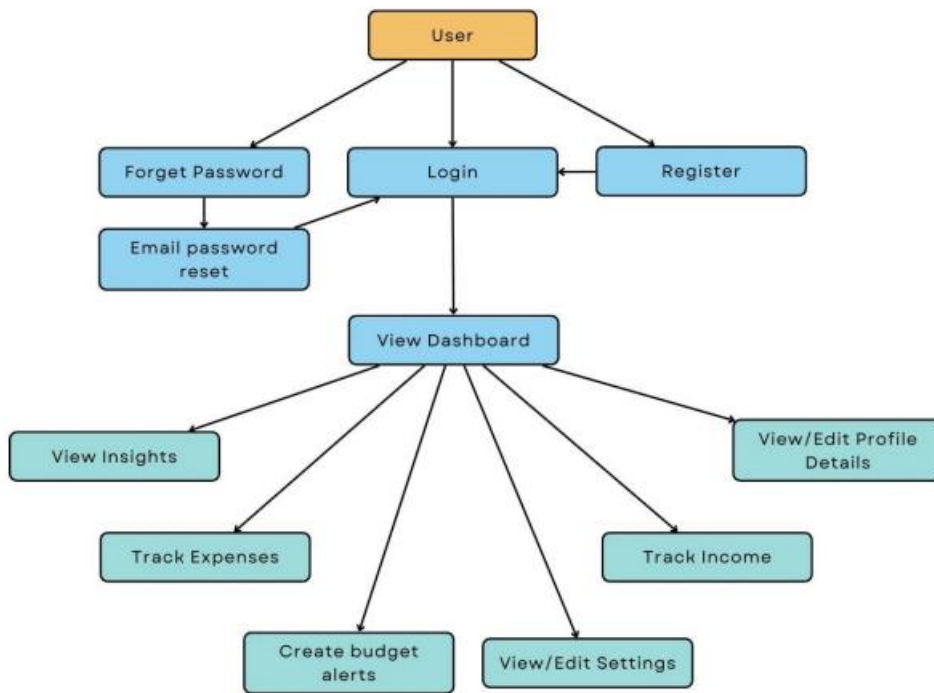
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Effectiveness, efficiency and overall satisfaction of the user while interacting with our application.
NFR-2	Security	Authentication, authorization, encryption of the application.
NFR-3	Reliability	Probability of failure-free operations in a specified environment for a specified time.
NFR-4	Performance	How the application is functioning and how responsive the application is to the end-users.
NFR-5	Availability	Without near 100% availability, application reliability and the user satisfaction will affect the solution.
NFR-6	Scalability	Capacity of the application to handle growth, especially in handling more users.

CHAPTER 5

PRODUCT DESIGN

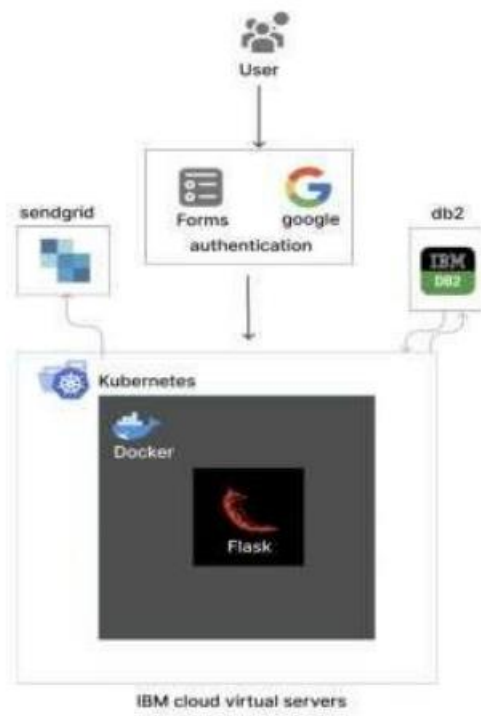
5.1 Data Flow Diagrams

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



5.2 Technical Architecture

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2



5.3 User Stories

Use the below template to list all the user stories of the product.

S.No	Component	Description	Technology
1.	User Interface	The user can interact with the application via web browser as a web application	HTML, CSS, React Js
2.	Application Logic-1	The application contains the register and login services to access the dashboard of the application	React Js, Python (Flask)
3.	Application Logic-2	Dashboard contains insights about Income and expenses	React Js, Python (Flask)
4.	Application Logic-3	The user will get the reports weekly and monthly as email notifications	React Js, Python (Flask), SendGrid
5.	Database	Income and expense-related data stored In SQL Database	MySQL
6.	Cloud Database	User data are stored in a remote cloud database for high availability and insights	IBM DB2
7.	File Storage	User's financial reports are stored	IBM Block Storage
8.	Infrastructure (Server / Cloud)	Kubernetes application with Docker pods containing the application that can be deployed in IBM K8s clusters	Local, Cloud Foundry, Kubernetes, etc.

CHAPTER 6

PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Use the below template to create product backlog and sprint schedule.

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

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 the email and password.	5	High	VIGNESH .T SRINIVASH .PR VASANTH .R SAKTHIGANESH. M
		USN-2	As a user, I will receive confirmation email when I have registered for the application.	5	High	VIGNESH .T SRINIVASH .PR VASANTH .R SAKTHIGANESH. M
	Login	USN-3	As a user, I can login or sign in with my email and password or through Gmail.	5	Medium	VIGNESH .T SRINIVASH .PR VASANTH .R SAKTHIGANESH. M
	Dashboard	USN-4	After the login, application will take the user to their corresponding dashboard.	5	High	VIGNESH .T SRINIVASH .PR VASANTH .R SAKTHIGANESH. M

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-2	Update salary	USN-5	As a user, I want to update my salary details at the start of every month.	5	High	VIGNESH .T SRINIVASH .PR
	Setting limit	USN-6	As a user, I want to set a target/limit to keep track of my expenditure.	5	High	VIGNESH .T SRINIVASH .PR
		USN-7	As a user, I want to update my daily expenses in the application.	4	High	VIGNESH .T SRINIVASH .PR
	Workspace	USN-8	Separate workspace for Personal Expense Tracker.	3	Low	VIGNESH .T SRINIVASH .PR
	Charts	USN-9	Application will show the graphs of my weekly and everyday expenditure.	3	Low	VIGNESH.T SRINIVASH.PR VASANTH.R SAKTHIGANESH.M
Sprint-3	IBM DB2	USN-11	Database will link with Dashboard.	5	Medium	VASANTH .R VIGNESH.T
		USN-12	Making Dashboard interactive with JS.	5	Medium	SAKTHIGANESH. M VIGNESH.T
	Chat bot	USN-13	Chatbot will embed with application to clarify the user's queries.	5	High	VIGNESH.T VASANTH.R
	SendGrid	USN-15	For a reminder or any alert, SendGrid will send mail to the user.	5	High	VIGNESH.T VASANTH.R

6.2 Sprint Delivery Schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-4	Integration	USN-16	Integrating Frontend and Backend.	8	High	VIGNESH.T VASANTH.R
	Containerization	USN-17	As a user, I can access the software with high performance	6	High	VIGNESH.T SRINIVASH.PR VASANTH.R SAKTHIGANESH.M
	Deployment	USN-18	As a user, I can access the software in the web	6	High	VIGNESH.T SRINIVASH.PR VASANTH.R SAKTHIGANESH.M

Project Tracker, Velocity & Burndown Chart: (4 Marks)

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	31 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

CHAPTER 7

7.1 Feature 1

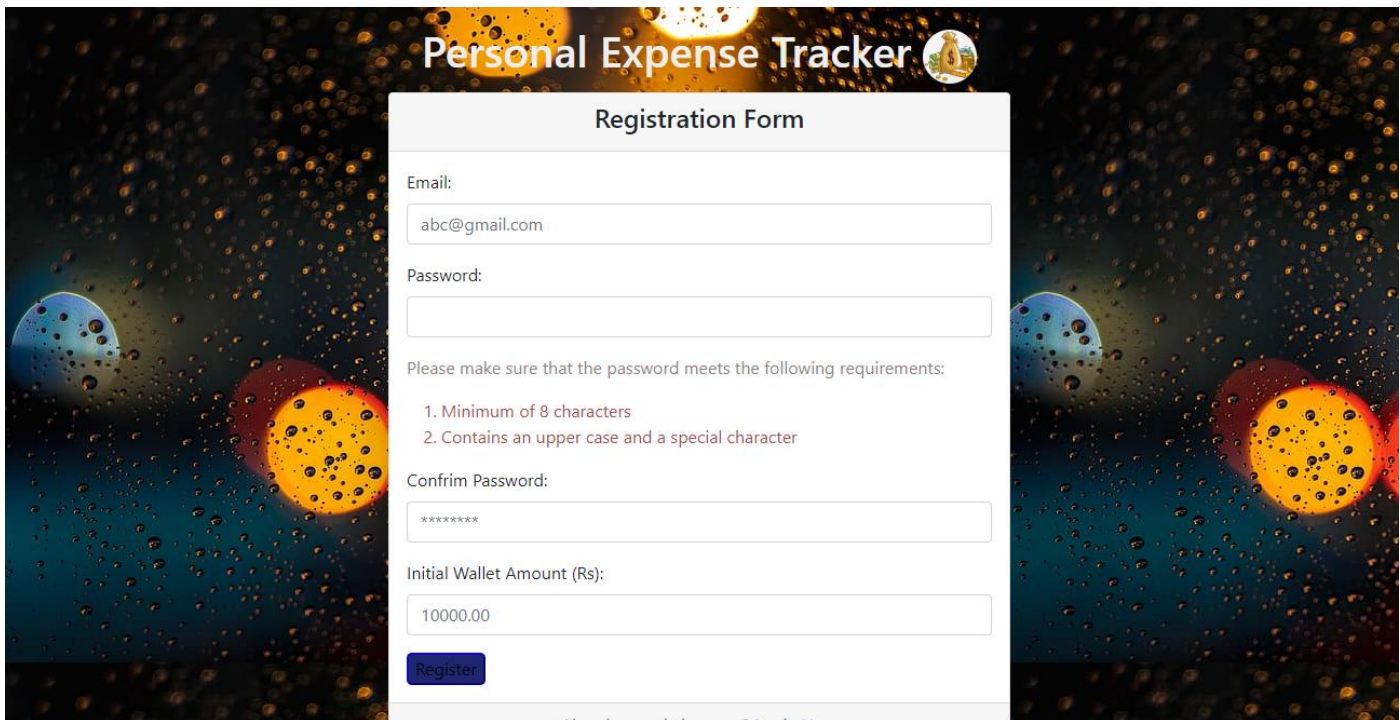
1. Expense and revenue tracking.
2. Managing transaction receipts and records.
3. Paying taxes in time.
4. Processing payment and invoices.
5. Create in-depth reports.

CHAPTER 8

TESTING

8.1 Test Cases

Registration Page



The screenshot shows a web application titled "Personal Expense Tracker" with a small circular profile icon. The background is a dark space-themed image with stars and planets. A white registration form is centered on the page. The form has a title bar "Registration Form" and contains the following fields and text:

Email:

Password:

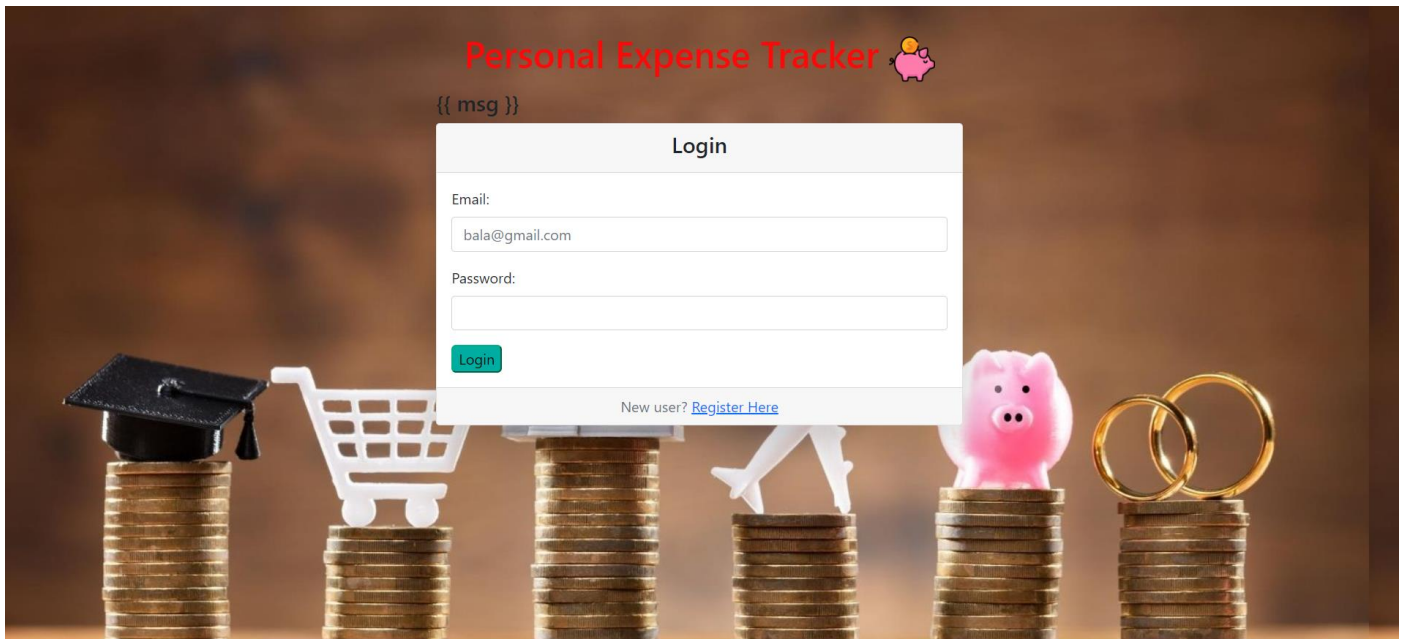
Please make sure that the password meets the following requirements:

- 1. Minimum of 8 characters
- 2. Contains an upper case and a special character

Confrim Password: (Note: typo in image)

Initial Wallet Amount (Rs):

LOGIN



ADD EXPENSE

127.0.0.1:5000/add

Personal Expense Tracker

HomeAddHistoryLIMITReport

User

Add Expense

Date

dd-mm-yyyy

Expense name

Expense Amount

Pay-Mode

Category

Add

EXPENSES

FOOD

ELECTRIC

WATER

PHONE

INTERNET

127.0.0.1:5000/add

CHAPTER 9

RESULTS

9.1 Performance Metrics

An application can be a very powerful tool for businesses if once the app becomes a success. However, the success of an app is measured through numbers, metrics, and analytics. Developing an app takes quite a lot, so once you've dedicated much time, money, and effort to the process, it's mandatory to measure mobile app performance.



CHAPTER 10

ADVANTAGES & DISADVANTAGES

10.1 Advantages

- Improved customer service
- Cloud-based solution
- Order Fulfillment
- Harness Customer Loyalty and Retention

10.2 Disadvantages

- System Clash
- Reduced Physical Audits
- No solution to improve or eliminate bottlenecks in the service cycle

CHAPTER 11

CONCLUSION

Taking proper care of our record is crucial in every business, no matter how big or little, we must understand. We must educate ourselves about the idea of effective inventory management and its applications because we can see that managers do not fully grasp it. A company's inventory management system is one of the reasons for its failure. Many customs to combat failure are present, and we can start from this point. Modern technologies can support us in managing and keeping an eye on our inventory. We may learn, put new ideas into practice, and assess our company.

CHAPTER 12

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.

SOURCE CODE:

```
<!doctype html>
<html lang="en">
<head>
  <!-- Required meta tags -->
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">

  <!-- Bootstrap CSS -->
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet"
integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">

  <title>Login</title>

</head>
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM"
crossorigin="anonymous"></script>

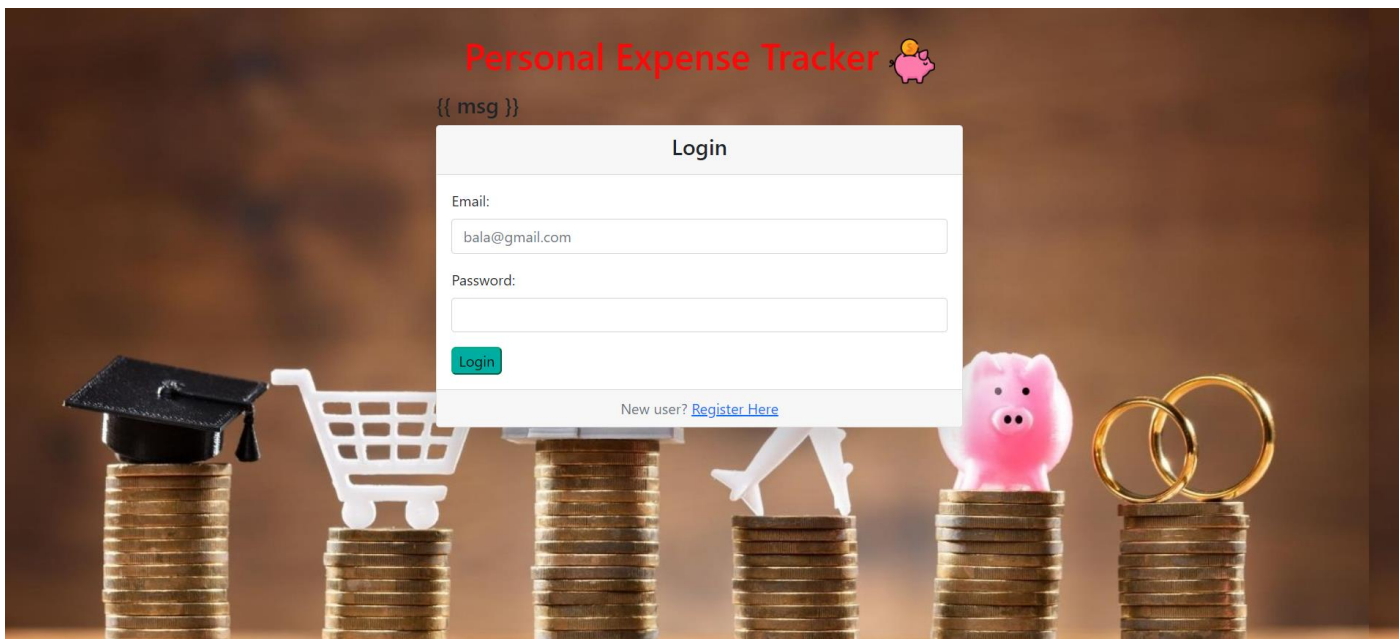
<body style="background-image: url(bg\ image.jpg);">
  <div class="container mt-5">
    <h1 style="color: rgb(251, 10, 10); text-align: center;">
      Personal Expense Tracker 
    </h1>
    <div class="container mt-1" style="width:600px; height: 300px;" >
      <h4>{{ msg }}</h4>
      <div class="card shadow-lg bg-white rounded">
        <div class="card-header" style="text-align:center;">
          <h4>Login</h4>
        </div>
        <div class="card-body">
          <form action="/login" method="POST">
            <div class="mb-3">
              <label for="email" class="form-label">Email: </label>
              <input type="email" class="form-control" name="email" id="email"
placeholder="bala@gmail.com">
            </div>
            <div class="mb-3">
              <label for="passowrd" class="form-label">Password: </label>
              <input type="password" class="form-control" name="password"
id="password"></input>
            </div>
            <button type="submit" style="background-color:#00ada1; border-color:#00AD83;
border-radius:5px;">Login</button>
```

```

        </form>
      </div>
      <div class="card-footer text-muted" style="text-align:center">
        New user? <span><a href="registration.html">Register Here</a></span>
      </div>
    </div>
  </div>
</div>
</body>
</html>

```

OUTPUT:



LOGIN PAGE

```

<!doctype html>
<html lang="en">

<head>

  <!-- Required meta tags -->
  <meta charset="utf-8">

  <meta name="viewport" content="width=device-width, initial-scale=1">

  <!-- Bootstrap CSS -->

  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-

```

EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLA

SjC" crossorigin="anonymous">

```
<title>Login</title>
</head>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min
.js"integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/t
WtIaxVXM"crossorigin="anonymous"></script>
```

```
<body style="background-color:#B2D3C2">
```

```
<div class="container mt-3">
```

```
<h1 style="color: black; text-align: center;">
```

```
Personal Expense Tracker 
```

```
</h1>
```

```
<div class="container mt-5" style="width: 600px;">
```

```
<div class="card shadow-lg bg-white rounded">
```

```
<div class="card-header" style="text-align: center;">
```

```
<h4>Login</h4>
```

```
</div>
```

```
<div class="card-body">
```

```

<form action="/login" method="POST">
  <div class="mb-3">

    <label for="email" class="form-label">Email: </label>

    <input type="email" class="form-control" name="email"
id="email"placeholder="abc@gmail.com">

    </div>
    <div class="mb-3">

      <label for="passowrd" class="form-label">Password: </label>

      <input type="password" class="form-control"
name="password" id="password"></input>

      </div>
      <button type="submit" style="background-
color:#00AD83; border-color:#00AD83; border-
radius:5px;">Login</button>

    </form>
  </div>

  <div class="card-footer text-muted" style="text-align:center">

    New user? <span><a href="registration.html">Register
    Here</a></span>

  </div>
</div>

</div>
</body>
</html>

```

OUTPUT:

Personal Expense Tracker

Registration Form

Email:

Password:

Please make sure that the password meets the following requirements:

1. Minimum of 8 characters
2. Contains an upper case and a special character

Confrim Password:

Initial Wallet Amount (Rs):

[Register](#)

ADD EXPENSE PAGE

```
!doctype html>
<html lang="en">
<head>
  <!-- Required meta tags -->
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <!-- Bootstrap CSS -->
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLA
SjC" crossorigin="anonymous">

  <title>AddExpense</title>
</head>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min
.js" integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/
```

tWtlaxVXM"crossorigin="anonymous"></script>

```
<div class="container-fluid" >

  <div class="row flex-nowrap">
    <div class="col-auto col-md-3 col-xl-2 px-sm-2 px-0"
style="background-color:#B2D3C2">

      <div class="d-flex flex-column align-items-center align-items-sm-
start px-3 pt-2min-vh-100" style="color:black">

        <p class="d-flex align-items-center pb-3 mb-md-0 me-md-auto
text-white text-decoration-none">

          <span class="fs-5 d-none d-sm-inline" style="color:black;
font-weight:bold;">Personal Expense Tracker</span>

          
        </p>

        <ul class="nav nav-pills flex-column mb-sm-auto mb-0 align-items-
center align-items-sm-start" id="menu">
```



```

        <li class="nav-item mt-2">
            <a href="dashboard.html" class="nav-link align-middle px-0"
style="color:black;">

                <span class="ms-1 d-none d-sm-inline">Home</span>

            </a>

        </li>
        <li class="nav-item mt-2" style="background-color:#00AD83;
height: 50px;width: 150px; border-radius: 5px;" >

            <a href="addexpense.html" class="nav-link px-0
align-middle"style="color:black;">

                <span class="ms-1 d-none d-sm-inline">Add Expense</span>

            </a>

        </li>
        <li class="nav-item mt-2">
            <a href="modifyexpense.html" class="nav-link px-0 align-middle"
style="color:black;">

                <span class="ms-1 d-none d-sm-inline">Modify
Expense</span><imgsrc="edit_icon.svg" style="width:20px;height:20px;margin-
left: 5px;">

            </a>

        </li>
        <li class="nav-item mt-2">

            <a href="analysis.html" class="nav-link px-0
align-middle"style="color:black;">

                <span class="ms-1 d-none d-sm-inline">View
Analysis</span><imgsrc="graph.png" style="width:20px;height:20px;margin-left:
5px;">

            </a>

        </li>
        <li class="nav-item mt-2">
            <a href="rewards.html" class="nav-link px-0 align-middle"
style="color:black;">

                <span class="ms-1 d-none d-sm-inline">Rewards &
Goals</span><imgsrc="reward.png" style="width:20px;height:20px;margin-left:
5px;">

```

```

        </a>
    </li>
</ul>
</div>

</div>
<div class="col py-3" style="background-color:black">
    <h3 style="color:white; text-align: center;">Add expense</h3>

    <div class="container mt-3" style="width: 600px;">
        <div class="card shadow-lg bg-white rounded">
            <div class="card-header" style="text-align: center;">

                <span style="display:inline-flex"><h4>Expense
Made</h4><imgsrc="pay.png" style=" margin-left:10px; width:30px;
height:30px"></span>

            </div>

            <div class="card-body">
                <form>
                    <div class="mb-3">

                        <label for="amountspent" class="form-label">Amount Spent: (Rs)
</label>

                        <input type="number" class="form-control" name="amountspent"
id="amountspent" placeholder="100.00">

                    </div>
                    <div class="mb-3">
                        <label for="expensecategory" class="form-label">Expense
Category:
</label>

                        <input type="text" class="form-control" name="expensecategory"
id="expensecategory"></input>

                    </div>

                    <div class="mb-3">
                        <label for="date" class="form-label">Date of Expense: </label>
                        <input type="date" class="form-control" name="date"
id="date"></input>

                    </div>
                </form>
            </div>
        </div>
    </div>

```

```
        <div class="mb-3">
          <label for="description" class="form-label">Description of
Expense:
    </label>
    <input type="text" class="form-control" name="description"
id="description"></input>
    </div>
</form>

    </div>
    <div class="card-footer text-muted" style="text-align:center">

        <button type="submit" style="background-
color:#00AD83; border-color:#00AD83; border-radius:5px;">Submit
Expense</button>

    </div>

    </div>

    </div>

    </div>

    </div>

</html>
```

Output:

The screenshot displays a web browser window with the address bar showing '127.0.0.1:5000/add'. The page title is 'Personal Expense Tracker'. The navigation bar includes links for 'Home', 'Add', 'History', 'LIMIT', and 'Report'. A user profile dropdown labeled 'User' is in the top right corner. The main content area features the 'Add Expense' form with the following fields:

- Date: A text input with a date picker icon, showing 'dd-mm-yyyy --:--'.
- Expense name: A text input field.
- Expense Amount: A text input field.
- Pay-Mode: A dropdown menu.
- Category: A dropdown menu.
- An 'Add' button.

To the right of the form is a decorative illustration of a notepad titled 'EXPENSES' with a checklist:

Category	Status
FOOD	<input checked="" type="checkbox"/>
ELECTRIC	<input type="checkbox"/>
WATER	<input checked="" type="checkbox"/>
PHONE	<input checked="" type="checkbox"/>
INTERNET	<input type="checkbox"/>

The python code to Connect with DB

```
import
ibm_db
dictionary=
{}
def printTableData(conn):
sql = "SELECT * FROM
userdetails" out =
ibm_db.exec_immediate(conn,
sql)document =
ibm_db.fetch_assoc(out) while
document != False:
dictionary.update({ document['USERNAME']:
```

```

document t['PASSWORD']})

document =

ibm_db.fetch_assoc(out)def

insertTableData(conn,rollno,username,email,pass word):

sql="INSERT INTO

userdetails(rollno,username,email,password) VALUES

({},{},{},{})".format(rollno,username,ema il,password)

out = ibm_db.exec_immediate(conn,sql)

print('Number of affected rows :

',ibm_db.num_rows(out),"\\n")def

updateTableData(conn,rollno,username,email,pass

word):

sql = "UPDATE userdetails SET (username,email,password)=('{},{},{})

WHERErollno={ }".format(username,email,password,rolln o)

out = ibm_db.exec_immediate(conn, sql)

print('Number of affected rows : ',

ibm_db.num_rows(out), "\\n")def

deleteTableData(conn,rollno):

sql = "DELETE FROM userdetails WHERE rollno={ }".format(rollno)

```

```

out = ibm_db.exec_immediate(conn, sql) print('Number of affected rows : ',
ibm_db.num_rows(out), "\n")

try:

conn=ibm_db.connect("DATABASE=bludb;HOSTNAME=2f3279a5-73d1-
4859-88f0-
a6c3e6b4b907.c3n41cmd0nqnrk39u98g.databases.appdomain.cloud;PORT=30
756;Security=
SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=ctb99199;PWD=
GybYxLw1rHz86oSh;", "", "")

print("Db
connected")

except:

print("Error")

from flask import
Flask,render_template,request,url_for,session

app=Flask(__name__)

@app.route("/")

@app.route("/login",methods=['POS
T','GET'])def login():

if request.method=="POST":

printTableData(conn)

username=request.form['username']

password=request.form['password']

try: if dictionary[username] == password and username in dictionary:

```