

Project Development Phase Sprint - 3

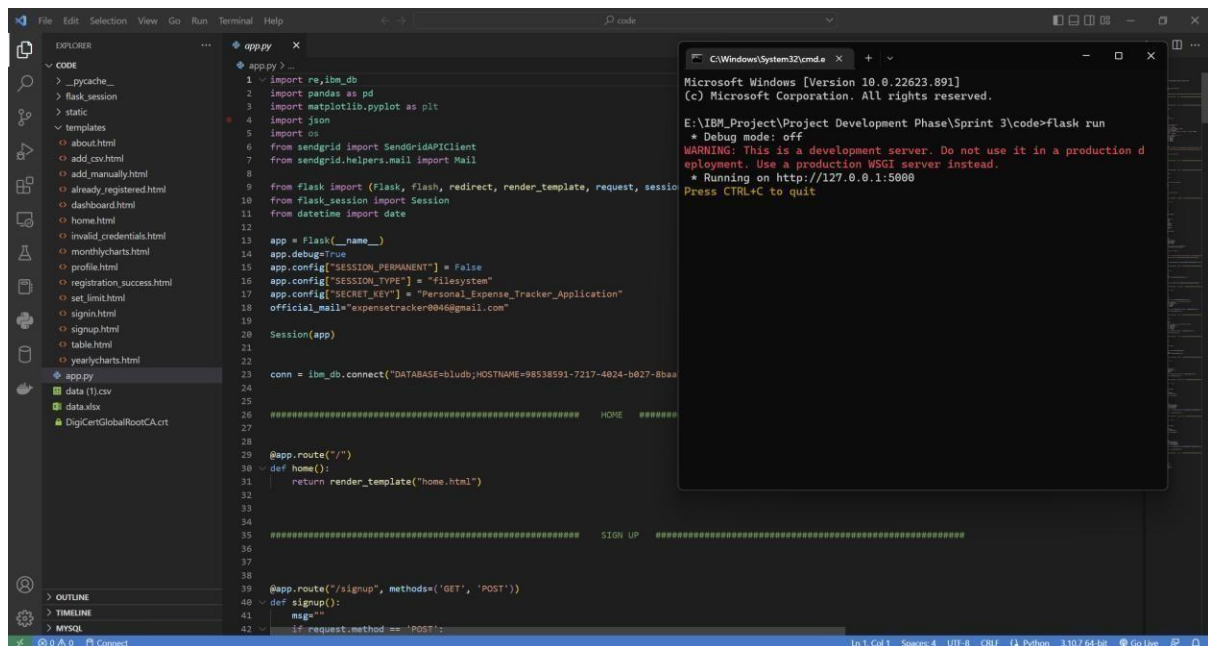
Date	18 November 2022
Team ID	PNT2022TMID29142
Project Name	Project – Personal Expense Tracker Application

In this Sprint, We made frontend and backend integrated. And we have add automation of email to registered mail using SendGrid and Watson assistance is added to assist users if any issues arises.

1. All the services mentioned in the dashboard are integrated with the backend IBM DB2.
2. IBM Watson Assistance Chatbot is added to all the pages in the application which can help the user if any help needed. In Chatbot there are navigation solutions which help the user to locate all the services.
3. SendGrid is used to send emails when a new user is registered and if the user exceeds the usage of expense limits.

Sprint- 3 Screenshots:

Running Flask Application:



The screenshot displays a Visual Studio Code editor with a Python Flask application. The Explorer pane on the left shows a project structure with folders like 'code' and 'static', and various HTML templates. The main editor shows the 'app.py' file with the following code:

```
1 import re, ibm_db
2 import pandas as pd
3 import matplotlib.pyplot as plt
4 import json
5 import os
6 from sendgrid import SendGridAPIClient
7 from sendgrid.helpers.mail import Mail
8
9 from flask import Flask, flash, redirect, render_template, request, session
10 from flask_session import Session
11 from datetime import date
12
13 app = Flask(__name__)
14 app.debug = True
15 app.config["SESSION_PERMANENT"] = False
16 app.config["SESSION_TYPE"] = "filesystem"
17 app.config["SECRET_KEY"] = "Personal_Expense_Tracker_Application"
18 official_mail = "expensetracker904@gmail.com"
19
20 Session(app)
21
22
23 conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=98538591-7217-4024-b027-8baa
24
25
26 ##### HOME #####
27
28
29 @app.route("/")
30 def home():
31     return render_template("home.html")
32
33
34 ##### SIGN UP #####
35
36
37
38
39 @app.route("/signup", methods=['GET', 'POST'])
40 def signup():
41     msg = ""
42     if request.method == 'POST':
```

The terminal window on the right shows the command prompt output for running the application:

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22623.891]
(c) Microsoft Corporation. All rights reserved.

E:\IBM_Project\Project Development Phase\Sprint 3\code>flask run
 * Debug mode: off
WARNING: This is a development server. Do not use it in a production d
evelopment. Use a production WSGI server instead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
```

IBM Watson Assistance Chatbot:

The screenshot displays the IBM Watson Assistant console interface. At the top, the navigation bar includes 'IBM Watson Assistant', 'Lite', 'Upgrade', 'Personal Expens...', and a 'Learning center' link. The main header shows 'Home'. On the left, a sidebar contains icons for various functions. The main content area is divided into several sections:

- Assistant name:** Personal Expense Tracker ChatBot
- Description:** This Chatbot helps in users in Personal Expense Tracker Application
- Assistant language:** English (US)

The **Task tracker** section shows three progress bars:

- Enhance your assistant: 5 steps left, 11 min, 16%
- Test and refine your assistant: 3 steps left, 5 min, 25%
- Deploy your assistant: 0 steps left, 0 min, 100%

The **Live assistant status** section includes:

- Channels:** A diagram showing 'Web chat' connected to a central hub.
- Resolution Methods:** A section for managing resolution methods.
- Content:** A list of content items, including 'V1' dated 11/18/2022 02:05AM, marked as 'Live'.
- Extensions:** A section for adding extensions, featuring a 'Search' extension powered by IBM Watson Discovery.

At the bottom, the **Actions** section contains a table with columns: Name, Last edited, Examples Count, and Status.

Preview:

The screenshot displays the IBM Watson Assistant console interface, specifically the 'Preview assistant' section. The top navigation bar includes 'IBM Watson Assistant', 'Lite', 'Upgrade', 'Personal Expens...', and a 'Learning center' link. The main header shows 'Preview assistant'. On the left, a sidebar contains icons for various functions. The main content area is divided into several sections:

- Sample website:** A large area showing a preview of the chatbot interface, including a header, a main content area, and a footer.
- Chatbot interface:** A preview of the chatbot's interaction, showing a greeting: 'Hi! I'm a PETA's virtual assistant. How can I help you today?'. Below the greeting are three example buttons: 'Example: Login', 'Example: Signup', and 'Example: Add data'. A text input field with the placeholder 'Type something...' and a send button is also visible.

At the bottom, the **Actions** section contains a table with columns: Name, Last edited, Examples Count, and Status.

Some actions:

IBM Watson Assistant Lite Upgrade Personal Expens... Learning center

PETA

Customer starts with:
Hello

12 total steps 1 end step 1 re-ask step

Conversation steps

- 1 Welcome, How can I help you?
Create account Login + 7
Continue to next step
- 1 is Create account
You can register using email id and password, Registration need Name, email id, mobile no...
Confirmation
Continue to next step
- 1 is Login
You can login using email id and password.
 Do you need any further assistance?
Confirmation
Continue to next step
- 1 is Logout
You can logout by using a dropdown at right top corner of the application.
 Do you need any...
Confirmation
Continue to next step

New step +

Step 1 is taken without conditions

Assistant says

Welcome, How can I help you?

Choose an option: >

Edit response Edit validation

And then

Continue to next step

Preview >

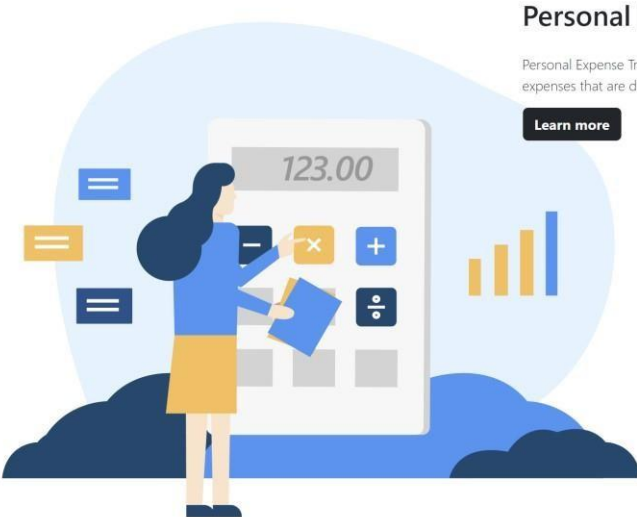
Chatbot integrated with Application:

Personal Expense Tracker Application Home About Register Login

Personal Expense Tracker Application

Personal Expense Tracker is an application which helps the customer to track and manage all the expenses that are done by them.

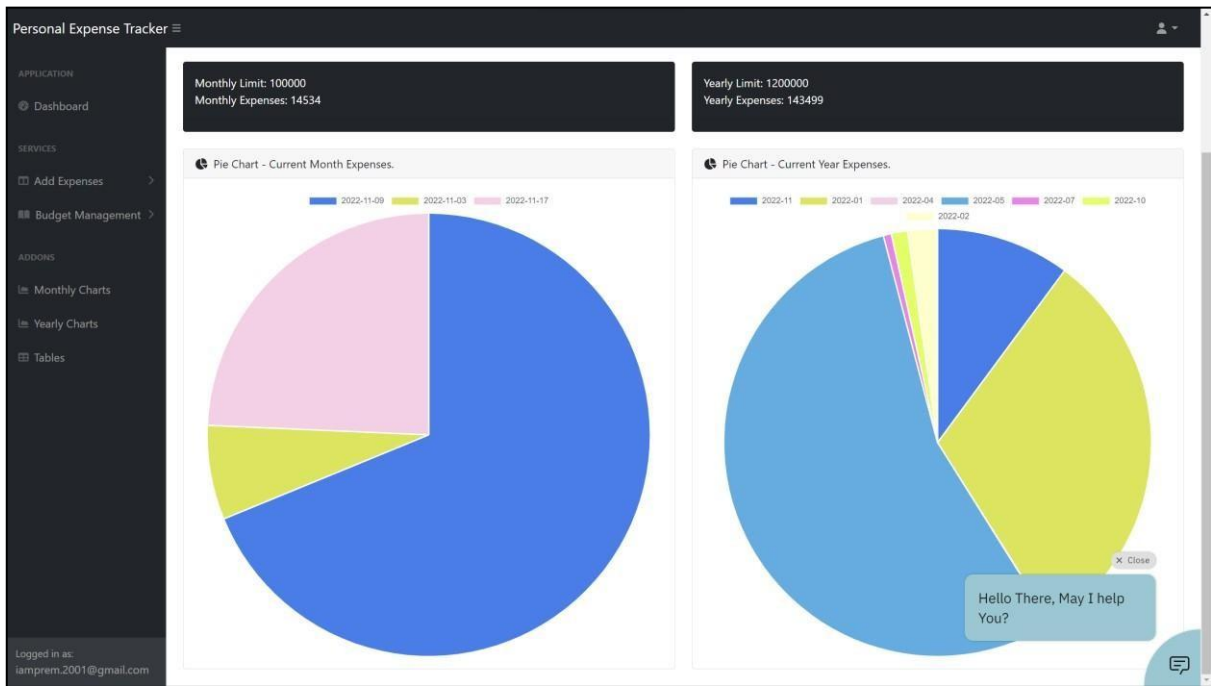
Learn more



123.00

Close

Hello There, May I help You?



SendGrid Account Activity:

Expense Tracker

Activity Feed

Timezone
UTC+05:30 - Chennai, Kolkata, Mumbai, New Delhi

Export CSV

Search emails by:

To email address
lamprem.2001

Dates
2022/11/15 - 2022/11/18

Clear Search

Advanced Search

STATUS	MESSAGE	LAST EVENT RECEIVED	OPENS	CLICKS
Delivered	To: lamprem.2001@gmail.com Expense Limit reached	2022/11/16 5:42pm UTC+05:30	6	0
Delivered	To: lamprem.2001@gmail.com Registration Successful	2022/11/16 5:42pm UTC+05:30	1	0

REPUTATION 75%

VIEW ACCOUNT USAGE

SendGrid Automated Emails:

If new user registered:

The screenshot displays the 'Expense Tracker' application interface. On the left is a sidebar with navigation links: Dashboard, Email API, Marketing, Design Library, Stats, Activity, Suppressions, and Settings. Below these is a 'Twitter SMS' section and a 'REPUTATION 75%' indicator. The main area is titled 'Activity Feed' and contains a search bar with filters for 'To email address' (iamprem.2001) and 'Dates' (2022/11/15 - 2022/11/18). Below the search bar is a table with two columns: 'STATUS' and 'MESSAGE'. The table shows two entries, both with a 'Delivered' status. The first message is 'Expense Limit reached' and the second is 'Registration Successful'. On the right side of the interface is a panel titled 'Email Information' with a 'Close' button. This panel contains two sections: 'Details' and 'Event History'. The 'Details' section shows the email's metadata: To: iamprem.2001@gmail.com, From: expensetracker0046@gmail.com, and Subject: Registration Successful. The 'Event History' section shows a timeline of events: 'Received by SendGrid', 'Processed' (2022/11/18 5:41pm UTC+05:30), 'Received by gmail-smtp-in.l.google.com', 'Delivered' (2022/11/18 5:41pm UTC+05:30), and 'Opened' (2022/11/18 5:42pm UTC+05:30).

Registration Confirmation Mail:

The screenshot shows a Gmail inbox with a registration confirmation email. The email is from 'expensetracker0046@gmail.com' and is titled 'Registration Successful'. The body of the email reads: 'Hello Prem Kashyap, Welcome to Personal Expense Tracker Application (PETA) . Hope we have a great journey ahead.' Below the text are 'Reply' and 'Forward' buttons. The email is dated '5:41 PM (1 hour ago)'. The Gmail interface includes a search bar at the top, a sidebar with 'Compose', 'Inbox', 'Starred', 'Snoozed', 'Sent', 'Drafts', and 'More' options, and a 'Labels' section at the bottom.