**VMware Tanzu Build-A-Thon**

**Personal Expense Tracker Using Flask**

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**Abstract:**

The basic idea of the project is to keep track of all the expenses of the customer on monthly basis. Also, this app will keep the user up to date with the latest financial news as well as it will send an email alert to the user once the user hits the monthly limit for the month which can be set by the user for all the months or for any specific month. Hence, this app can be used by the user on a  daily basis and will avoid wastage of money and can track all their expenses.

**Technologies Used:**

1. Sendgrid email service
2. Google news API
3. python-flask
4. MySQL
5. Bootstrap
6. Html
7. CSS
8. Javascript
9. Vscode
10. Cloud Foundry
11. Tanzu Application Service

**Working:**

* If the user is new to the system, they will  have to create an account to access the system. After the account will be made, the user will get an email to login to the system and their details will be saved to the database.
* To login, user will need emailid with which he has registered and the password he had set while registering. the system will validate these details for the user if everything is right then will let the user to enter the site. Otherwise if anything is wrong the system will remain on the same page and prompt the user the detail which is wrong.
* After login is done, the user can access the dashboard which has the username on the top right corner and 4 big tiles on the main homepage.
* The first tile wil open a new tab to show and keep the user up to date with the latest finance related news which is handled and updated by the google news API.
* The second tile is to set the limit for all the months or to set the limit for the current month if by chance the user wants to spend more this month.
* The third tile is for adding the expenses for saving it to the system so that the user can later track all the expenses. While adding the expense, if the user adds an amount which in total exceeds the limit for the month then the user will get an alert via his registered email. The user can then go to the second tile and change the limit for the month using the second option of that page, that is to set the customized limit for the current month.
* The final and the fourth tile is for accessing or tracking all the expenses for a given time period which the user can decide. The user will get all the expenses in that time period in a tabular form once he clicks the submit button.
* The user can access the side panel for changing the existing password or to logging out or he can also log out by clicking his username on top right corner. Also, Dark mode option is also given for making the system responsive as it can be seen in the demo.

**Links:**

* **Docker Link:** docker pull tejaswi24/tanzuvmware:0.01
* **Github Link:** https://github.com/smartinternz02/SBSPS-Badges-10604-1621916717
* **Deployed App Link**: https://tejaswikumarapp.apps.pcfdev.in/
* **Youtube Explanation Video Link**:  <https://youtu.be/hRiJ41kvfuE>

**Future Scope of the project:**

* Add currency support (for handling different currencies and conversion)
* Add sort parameter in api (for searching keywords and sorting and filtering the news using it)
* Add code for admin part (Admin control for the app)
* Use better error handling (Some improvements like handling password length, etc can be done in future for large scale production)
* more interactive dashboard and responsive dashboard.
* Giving user to export the data in all available formats like pdf, excel etc.