SPRINT 3 - Personal Expense Tracker

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Code: Updated in GitHub in the Deliverable section in Sprint1 folder.

Description of USN and Screenshots:

USN-7:

As a user, if I exceed my limit, I should be warned with an email.

```
def check_monthly_limit(month, year):
    sql = 'SELECT SUM(EXPENSE_AMOUNT) FROM PETA_EXPENSE WHERE USERID = ? AND MONTH(DATE) = ? AND YEAR(DATE) = ?'
    statement = execute_sql(sql, USERID, month, year)
    amt_spent = ibm_db.fetch_tuple(statement)

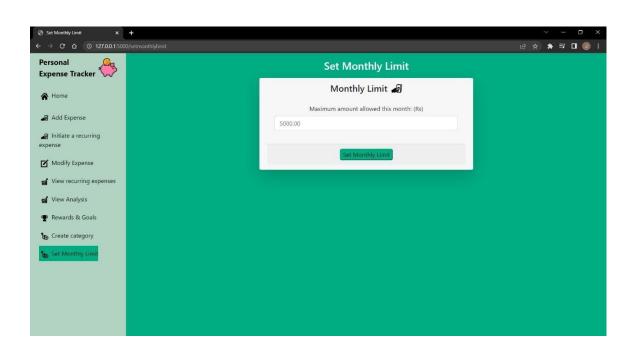
sql = 'SELECT LIMITAMOUNT FROM PETA_LIMIT WHERE USERID = ? AND LIMITMONTH = ? AND LIMITYEAR = ?'
    statement = execute_sql(sql, USERID, month, year)
    monthly_limit = ibm_db.fetch_tuple(statement)

if amt_spent and monthly_limit and int(amt_spent[0]) > int(monthly_limit[0]):
    diff = int(amt_spent[0]) - int(monthly_limit[0])
    print(diff)
    msg = Message('Monthly limit exceeded', recipients=[email])
    msg.body = (
        f'Monthly limit exceeded by {diff} for the month of {month}, {year}')
    mail.send(msg)
```

USN-9:

As a user, I can set a monthly limit for my expenses.

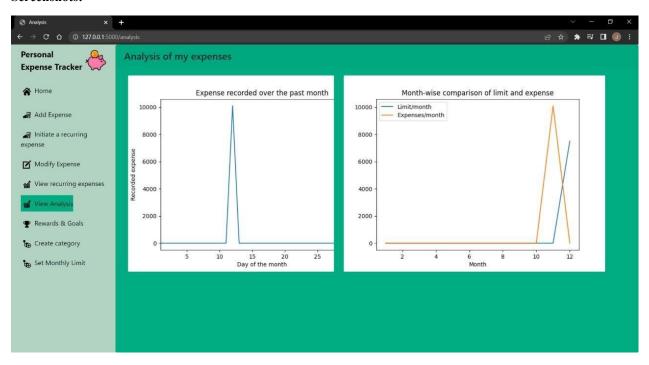
Screenshots:



USN-11:

At the end of every month, as a user, I should be able to view my monthly expenses, projections in the form of graphs.

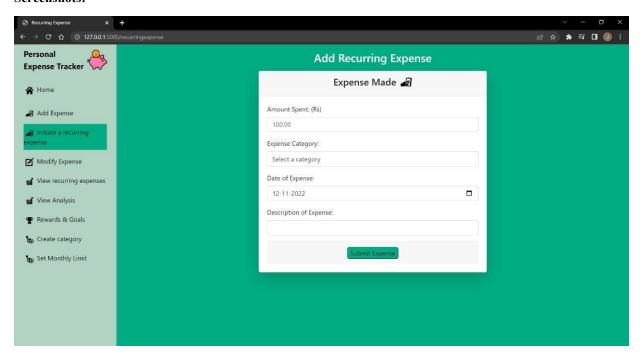
Screenshots:

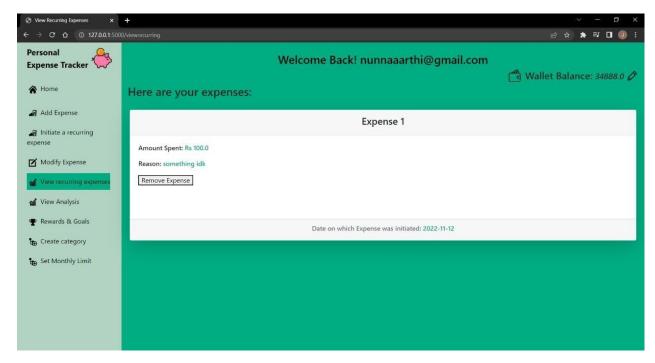


USN-12:

As a user, I should be able to set reminders to alert me of periodic transactions or delayed expenses that are to be completed.

Screenshots:





Please Note:

USN 8 has been pushed to Sprint 4. Instead, User Stories 11 and 12 have been completed for Sprint3.

Therefore, USN for Sprint 4 are: USN 8 and USN 10

Test Cases:

USN - 7 & 9 Test Cases:

- 1. Test case 1:
 - 1. Go to /setmonthlylimit.
 - 2. Enter the limit.
 - 3. Submit the limit amount.
 - 4. If your expenditure has exceeded the limit, then an alert is sent through SendGrid.

2. Test case - 2:

- 1. Go to /setmonthlylimit.
- 2. Ignore the field specified for entering the money, i.e., leave the field blank.
- 3. Try to add the expense by clicking 'Set Monthly Limit'.
- 4. Check that an error message has popped up to notify that you cannot specify nothing for the ignored required field.

USN -11 Test Cases:

- 1. Test case 1:
 - 1. Go to /analysis.
 - 2. View the expenditure in the form of a graph.
 - 3. View 2 graphs denoting various data.

2. Test case -2:

- 1. Go to /analysis.
- 2. The graphs are not visible.
- 3. This means that no expenses have been made, or monthly limit has not been set, i.e., there is insufficient data to represent the graph.

USN - 12 Test Cases:

- 1. Test case 1:
 - 1. Go to /recurringexpense.
 - 2. Enter appropriate information in all the fields.
 - 3. Submit the recurring expense.
 - 4. View the dashboard and observe that the expense has been made.
 - 5. On the same day next month, observe a deduction of the same amount from the wallet and the creation of a card denoting the expense made.

2. Test case -2:

- 1. Go to /viewrecurring.
- 2. View the active recurring expenses that will be made over the consecutive months unless removed by the user.

3. Test case -3:

- 1. Go to /viewrecurring.
- 2. To remove a recurring expense, click on the button "Remove Expense", the expense will no longer be deducted from your wallet.