SPRINT-3

PROJECT DEVELOPMENT PHASE

Team ID	PNT2022TMID01338
Project Name	PERSONAL EXPENSE TRACKER APPLICATION

hi.py

```
from flask import Flask, render_template, request, redirect, session
import re

from base import DB2
from flask_db2 import DB2
import ibm_db
import ibm_db_dbi
from sendgrid import sendgridmail,sendmail


import os


app = Flask(__name__)

app.secret_key = 'a'


"""
dsn_hostname = "9938aec0-8105-433e-8bf9-
0fbb7e483086.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud"
dsn_uid = "vpq40294"
dsn_pwd = "2LZdL55bbMzhzKmr"
dsn_driver = "{IBM DB2 ODBC DRIVER}"
dsn_database = "bludb"
dsn_port = "32459"
dsn_protocol = "tcpip"

dsn = (
    "DRIVER={0};"
    "DATABASE={1};"
    "HOSTNAME={2};"
    "PORT={3};"
    "PROTOCOL={4};"
    "UID={5};"
    "PWD={6};"
).format(dsn_driver, dsn_database, dsn_hostname, dsn_port, dsn_protocol,
dsn_uid, dsn_pwd)
"""
```

```
app.config['database'] = 'bludb'
app.config['hostname'] = '9938aec0-8105-433e-8bf9-
0fbb7e483086.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud'
app.config['port'] = '32459'
app.config['protocol'] = 'tcpip'
app.config['uid'] = 'vpq40294'
app.config['pwd'] = '2LZdL55bbMzhzKmr'
app.config['security'] = 'SSL'
try:
    mysql = DB2(app)

    conn_str='database=bludb;hostname=9938aec0-8105-433e-8bf9-
0fbb7e483086.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;\
            uid=vpq40294;pwd=2LZdL55bbMzhzKmr;security=SSL'
    ibm_db_conn = ibm_db.connect(conn_str,'','')

    print("Database connected without any error !!")
except:
    print("IBM DB Connection error   :     " + DB2.conn_errormsg())




#HOME--PAGE
@app.route("/base")
def home():
    return render_template("base1.html")

@app.route("/")
def add():
    return render_template("home1.html")



#SIGN--UP--OR--REGISTER


@app.route("/signup")
def signup():
    return render_template("signup1.html")



@app.route('/register', methods =['GET', 'POST'])
def register():
    msg = ''
    print("Break point1")
    if request.method == 'POST' :
```

```
        username = request.form['username']
        email = request.form['email']
        password = request.form['password']

        print("Break point2" + "name: " + username + "------" + email + "-----
-" + password)

        try:
            print("Break point3")
            connectionID = ibm_db_dbi.connect(conn_str, '', '')
            cursor = connectionID.cursor()
            print("Break point4")
        except:
            print("No connection Established")



        print("Break point5")
        sql = "SELECT * FROM register WHERE username = ?"
        stmt = ibm_db.prepare(ibm_db_conn, sql)
        ibm_db.bind_param(stmt, 1, username)
        ibm_db.execute(stmt)
        result = ibm_db.execute(stmt)
        print(result)
        account = ibm_db.fetch_row(stmt)
        print(account)

        param = "SELECT * FROM register WHERE username = " + "\'" + username +
"\'"
        res = ibm_db.exec_immediate(ibm_db_conn, param)
        print("---- ")
        dictionary = ibm_db.fetch_assoc(res)
        while dictionary != False:
            print("The ID is : ", dictionary["USERNAME"])
            dictionary = ibm_db.fetch_assoc(res)


        print("break point 6")
        if account:
            msg = 'Username already exists !'
        elif not re.match(r'[^@]+@[^@]+\.[^@]+', email):
            msg = 'Invalid email address !'
        elif not re.match(r'[A-Za-z0-9]+', username):
            msg = 'name must contain only characters and numbers !'
        else:
            sql2 = "INSERT INTO register (username, email,password) VALUES (?,
?, ?)"
            stmt2 = ibm_db.prepare(ibm_db_conn, sql2)
```

```
            ibm_db.bind_param(stmt2, 1, username)
            ibm_db.bind_param(stmt2, 2, email)
            ibm_db.bind_param(stmt2, 3, password)
            ibm_db.execute(stmt2)
            msg = 'You have successfully registered !'
        return render_template('signup.html', msg = msg)




 #LOGIN--PAGE

@app.route("/signin")
def signin():
    return render_template("login1.html")

@app.route('/login',methods =['GET', 'POST'])
def login():
    global userid
    msg = ''


    if request.method == 'POST' :
        username = request.form['username']
        password = request.form['password']


        sql = "SELECT * FROM register WHERE username = ? and password = ?"
        stmt = ibm_db.prepare(ibm_db_conn, sql)
        ibm_db.bind_param(stmt, 1, username)
        ibm_db.bind_param(stmt, 2, password)
        result = ibm_db.execute(stmt)
        print(result)
        account = ibm_db.fetch_row(stmt)
        print(account)

        param = "SELECT * FROM register WHERE username = " + "\'" + username +
"\'" + " and password = " + "\'" + password + "\'"
        res = ibm_db.exec_immediate(ibm_db_conn, param)
        dictionary = ibm_db.fetch_assoc(res)

        # sendmail("hello","lokhitarajan@gmail.com")

        if account:
            session['loggedin'] = True
            session['id'] = dictionary["ID"]
            userid = dictionary["ID"]
            session['username'] = dictionary["USERNAME"]
```

```
            session['email'] = dictionary["EMAIL"]

            return redirect('/home1')
        else:
            msg = 'Incorrect username / password !'

    return render_template('login1.html', msg = msg)









#ADDING----DATA


@app.route("/add1")
def adding():
    return render_template('add1.html')


@app.route('/addexpense',methods=['GET', 'POST'])
def addexpense():

    date = request.form['date']
    expensename = request.form['expensename']
    amount = request.form['amount']
    paymode = request.form['paymode']
    category = request.form['category']

    print(date)
    p1 = date[0:10]
    p2 = date[11:13]
    p3 = date[14:]
    p4 = p1 + "-" + p2 + "." + p3 + ".00"
    print(p4)


    sql = "INSERT INTO expenses (userid, date, expensename, amount, paymode,
category) VALUES (?, ?, ?, ?, ?, ?)"
    stmt = ibm_db.prepare(ibm_db_conn, sql)
    ibm_db.bind_param(stmt, 1, session['id'])
    ibm_db.bind_param(stmt, 2, p4)
    ibm_db.bind_param(stmt, 3, expensename)
    ibm_db.bind_param(stmt, 4, amount)
    ibm_db.bind_param(stmt, 5, paymode)
```

```
    ibm_db.bind_param(stmt, 6, category)
    ibm_db.execute(stmt)

    print("Expenses added")

    # email part

    param = "SELECT * FROM expenses WHERE userid = " + str(session['id']) + "
AND MONTH(date) = MONTH(current timestamp) AND YEAR(date) = YEAR(current
timestamp) ORDER BY date DESC"
    res = ibm_db.exec_immediate(ibm_db_conn, param)
    dictionary = ibm_db.fetch_assoc(res)
    expense = []
    while dictionary != False:
        temp = []
        temp.append(dictionary["ID"])
        temp.append(dictionary["USERID"])
        temp.append(dictionary["DATE"])
        temp.append(dictionary["EXPENSENAME"])
        temp.append(dictionary["AMOUNT"])
        temp.append(dictionary["PAYMODE"])
        temp.append(dictionary["CATEGORY"])
        expense.append(temp)
        print(temp)
        dictionary = ibm_db.fetch_assoc(res)

    total=0
    for x in expense:
          total += x[4]

    param = "SELECT id, limitss FROM limits WHERE userid = " +
str(session['id']) + " ORDER BY id DESC LIMIT 1"
    res = ibm_db.exec_immediate(ibm_db_conn, param)
    dictionary = ibm_db.fetch_assoc(res)
    row = []
    s = 0
    while dictionary != False:
        temp = []
        temp.append(dictionary["LIMITSS"])
        row.append(temp)
        dictionary = ibm_db.fetch_assoc(res)
        s = temp[0]

    if total > int(s):
        msg = "Hello " + session['username'] + " , " + "you have crossed the
monthly limit of Rs. " + s + "/- !!!" + "\n" + "Thank you, " + "\n" + "Team
Personal Expense Tracker."
        sendmail(msg,session['email'])
```

```
    return redirect("/display1")



#DISPLAY---graph

@app.route("/display1")
def display():
    print(session["username"],session['id'])



    param = "SELECT * FROM expenses WHERE userid = " + str(session['id']) + "
ORDER BY date DESC"
    res = ibm_db.exec_immediate(ibm_db_conn, param)
    dictionary = ibm_db.fetch_assoc(res)
    expense = []
    while dictionary != False:
        temp = []
        temp.append(dictionary["ID"])
        temp.append(dictionary["USERID"])
        temp.append(dictionary["DATE"])
        temp.append(dictionary["EXPENSENAME"])
        temp.append(dictionary["AMOUNT"])
        temp.append(dictionary["PAYMODE"])
        temp.append(dictionary["CATEGORY"])
        expense.append(temp)
        print(temp)
        dictionary = ibm_db.fetch_assoc(res)

    return render_template('display1.html' ,expense = expense)



#delete---the--data

@app.route('/delete/<string:id>', methods = ['POST', 'GET' ])
def delete(id):


    param = "DELETE FROM expenses WHERE  id = " + id
    res = ibm_db.exec_immediate(ibm_db_conn, param)

    print('deleted successfully')
    return redirect("/display1")
```

```
#UPDATE---DATA

@app.route('/edit/<id>', methods = ['POST', 'GET' ])
def edit(id):


    param = "SELECT * FROM expenses WHERE  id = " + id
    res = ibm_db.exec_immediate(ibm_db_conn, param)
    dictionary = ibm_db.fetch_assoc(res)
    row = []
    while dictionary != False:
        temp = []
        temp.append(dictionary["ID"])
        temp.append(dictionary["USERID"])
        temp.append(dictionary["DATE"])
        temp.append(dictionary["EXPENSENAME"])
        temp.append(dictionary["AMOUNT"])
        temp.append(dictionary["PAYMODE"])
        temp.append(dictionary["CATEGORY"])
        row.append(temp)
        print(temp)
        dictionary = ibm_db.fetch_assoc(res)

    print(row[0])
    return render_template('edi1t.html', expenses = row[0])




@app.route('/update/<id>', methods = ['POST'])
def update(id):
  if request.method == 'POST' :

      date = request.form['date']
      expensename = request.form['expensename']
      amount = request.form['amount']
      paymode = request.form['paymode']
      category = request.form['category']



      p1 = date[0:10]
      p2 = date[11:13]
      p3 = date[14:]
      p4 = p1 + "-" + p2 + "." + p3 + ".00"

      sql = "UPDATE expenses SET date = ? , expensename = ? , amount = ?,
paymode = ?, category = ? WHERE id = ?"
      stmt = ibm_db.prepare(ibm_db_conn, sql)
```

```
      ibm_db.bind_param(stmt, 1, p4)
      ibm_db.bind_param(stmt, 2, expensename)
      ibm_db.bind_param(stmt, 3, amount)
      ibm_db.bind_param(stmt, 4, paymode)
      ibm_db.bind_param(stmt, 5, category)
      ibm_db.bind_param(stmt, 6, id)
      ibm_db.execute(stmt)

      print('successfully updated')
      return redirect("/display1")









 #limit
@app.route("/limit1" )
def limit():
       return redirect('/limitn')

@app.route("/limitnum" , methods = ['POST' ])
def limitnum():
     if request.method == "POST":
         number= request.form['number']
        #  cursor = mysql.connection.cursor()
        #  cursor.execute('INSERT INTO limits VALUES (NULL, % s, % s)
',(session['id'], number))
        #  mysql.connection.commit()

         sql = "INSERT INTO limits (userid, limitss) VALUES (?, ?)"
         stmt = ibm_db.prepare(ibm_db_conn, sql)
         ibm_db.bind_param(stmt, 1, session['id'])
         ibm_db.bind_param(stmt, 2, number)
         ibm_db.execute(stmt)

         return redirect('/limitn')


@app.route("/limitn")
def limitn():
    # cursor = mysql.connection.cursor()
    # cursor.execute('SELECT limitss FROM `limits` ORDER BY `limits`.`id` DESC
LIMIT 1')
    # x= cursor.fetchone()
    # s = x[0]
```

```
    param = "SELECT id, limitss FROM limits WHERE userid = " +
str(session['id']) + " ORDER BY id DESC LIMIT 1"
    res = ibm_db.exec_immediate(ibm_db_conn, param)
    dictionary = ibm_db.fetch_assoc(res)
    row = []
    s = " /-"
    while dictionary != False:
        temp = []
        temp.append(dictionary["LIMITSS"])
        row.append(temp)
        dictionary = ibm_db.fetch_assoc(res)
        s = temp[0]

    return render_template("limit1.html" , y= s)

#REPORT

@app.route("/today1")
def today():

      param1 = "SELECT TIME(date) as tn, amount FROM expenses WHERE userid = "
+ str(session['id']) + " AND DATE(date) = DATE(current timestamp) ORDER BY
date DESC"
      res1 = ibm_db.exec_immediate(ibm_db_conn, param1)
      dictionary1 = ibm_db.fetch_assoc(res1)
      texpense = []

      while dictionary1 != False:
          temp = []
          temp.append(dictionary1["TN"])
          temp.append(dictionary1["AMOUNT"])
          texpense.append(temp)
          print(temp)
          dictionary1 = ibm_db.fetch_assoc(res1)



      param = "SELECT * FROM expenses WHERE userid = " + str(session['id']) +
" AND DATE(date) = DATE(current timestamp) ORDER BY date DESC"
      res = ibm_db.exec_immediate(ibm_db_conn, param)
      dictionary = ibm_db.fetch_assoc(res)
      expense = []
      while dictionary != False:
          temp = []
          temp.append(dictionary["ID"])
          temp.append(dictionary["USERID"])
          temp.append(dictionary["DATE"])
```

```
        temp.append(dictionary["EXPENSENAME"])
        temp.append(dictionary["AMOUNT"])
        temp.append(dictionary["PAYMODE"])
        temp.append(dictionary["CATEGORY"])
        expense.append(temp)
        print(temp)
        dictionary = ibm_db.fetch_assoc(res)


    total=0
    t_food=0
    t_entertainment=0
    t_business=0
    t_rent=0
    t_EMI=0
    t_other=0


    for x in expense:
        total += x[4]
        if x[6] == "food":
            t_food += x[4]

        elif x[6] == "entertainment":
            t_entertainment  += x[4]

        elif x[6] == "business":
            t_business  += x[4]
        elif x[6] == "rent":
            t_rent  += x[4]

        elif x[6] == "EMI":
            t_EMI  += x[4]

        elif x[6] == "other":
            t_other  += x[4]

    print(total)

    print(t_food)
    print(t_entertainment)
    print(t_business)
    print(t_rent)
    print(t_EMI)
    print(t_other)
```

```
      return render_template("today1.html", texpense = texpense, expense =
expense,  total = total ,
                           t_food = t_food,t_entertainment =  t_entertainment,
                           t_business = t_business,  t_rent =  t_rent,
                           t_EMI =  t_EMI,  t_other =  t_other )


@app.route("/month1")
def month():


      param1 = "SELECT DATE(date) as dt, SUM(amount) as tot FROM expenses
WHERE userid = " + str(session['id']) + " AND MONTH(date) = MONTH(current
timestamp) AND YEAR(date) = YEAR(current timestamp) GROUP BY DATE(date) ORDER
BY DATE(date)"
      res1 = ibm_db.exec_immediate(ibm_db_conn, param1)
      dictionary1 = ibm_db.fetch_assoc(res1)
      texpense = []

      while dictionary1 != False:
          temp = []
          temp.append(dictionary1["DT"])
          temp.append(dictionary1["TOT"])
          texpense.append(temp)
          print(temp)
          dictionary1 = ibm_db.fetch_assoc(res1)




      param = "SELECT * FROM expenses WHERE userid = " + str(session['id']) +
" AND MONTH(date) = MONTH(current timestamp) AND YEAR(date) = YEAR(current
timestamp) ORDER BY date DESC"
      res = ibm_db.exec_immediate(ibm_db_conn, param)
      dictionary = ibm_db.fetch_assoc(res)
      expense = []
      while dictionary != False:
          temp = []
          temp.append(dictionary["ID"])
          temp.append(dictionary["USERID"])
          temp.append(dictionary["DATE"])
          temp.append(dictionary["EXPENSENAME"])
          temp.append(dictionary["AMOUNT"])
          temp.append(dictionary["PAYMODE"])
          temp.append(dictionary["CATEGORY"])
          expense.append(temp)
          print(temp)
          dictionary = ibm_db.fetch_assoc(res)
```

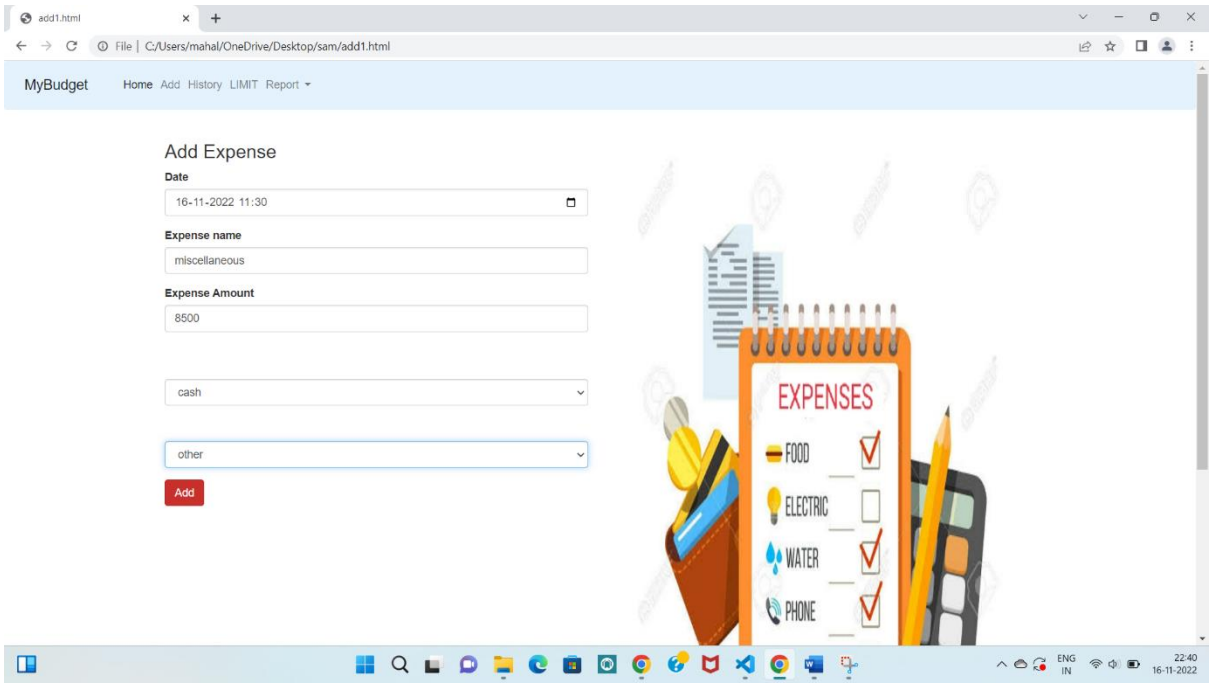
```
    total=0
    t_food=0
    t_entertainment=0
    t_business=0
    t_rent=0
    t_EMI=0
    t_other=0


    for x in expense:
        total += x[4]
        if x[6] == "food":
            t_food += x[4]

        elif x[6] == "entertainment":
            t_entertainment  += x[4]

        elif x[6] == "business":
            t_business  += x[4]
        elif x[6] == "rent":
            t_rent  += x[4]

        elif x[6] == "EMI":
            t_EMI  += x[4]

        elif x[6] == "other":
            t_other  += x[4]

    print(total)

    print(t_food)
    print(t_entertainment)
    print(t_business)
    print(t_rent)
    print(t_EMI)
    print(t_other)



    return render_template("today1.html", texpense = texpense, expense =
expense,  total = total ,
                           t_food = t_food,t_entertainment =  t_entertainment,
                           t_business = t_business,  t_rent =  t_rent,
                           t_EMI =  t_EMI,  t_other =  t_other )

@app.route("/year1")
def year():
```

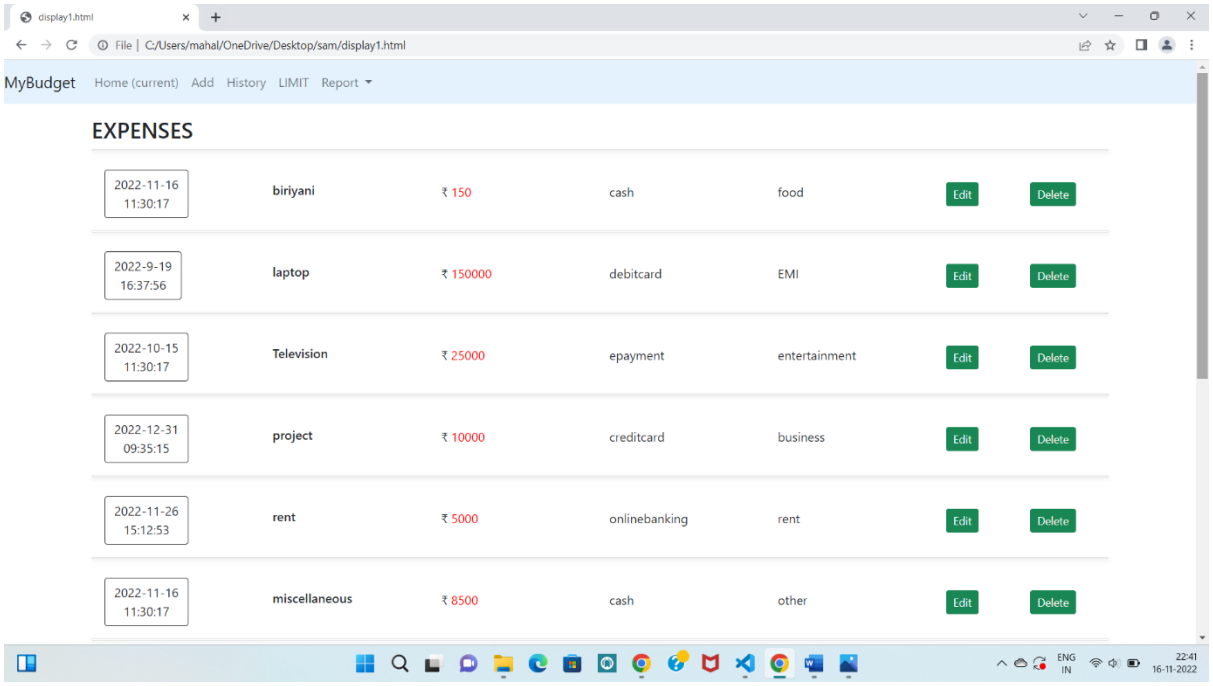
```
      param1 = "SELECT MONTH(date) as mn, SUM(amount) as tot FROM expenses
WHERE userid = " + str(session['id']) + " AND YEAR(date) = YEAR(current
timestamp) GROUP BY MONTH(date) ORDER BY MONTH(date)"
      res1 = ibm_db.exec_immediate(ibm_db_conn, param1)
      dictionary1 = ibm_db.fetch_assoc(res1)
      texpense = []

      while dictionary1 != False:
          temp = []
          temp.append(dictionary1["MN"])
          temp.append(dictionary1["TOT"])
          texpense.append(temp)
          print(temp)
          dictionary1 = ibm_db.fetch_assoc(res1)




      param = "SELECT * FROM expenses WHERE userid = " + str(session['id']) +
" AND YEAR(date) = YEAR(current timestamp) ORDER BY date DESC"
      res = ibm_db.exec_immediate(ibm_db_conn, param)
      dictionary = ibm_db.fetch_assoc(res)
      expense = []
      while dictionary != False:
          temp = []
          temp.append(dictionary["ID"])
          temp.append(dictionary["USERID"])
          temp.append(dictionary["DATE"])
          temp.append(dictionary["EXPENSENAME"])
          temp.append(dictionary["AMOUNT"])
          temp.append(dictionary["PAYMODE"])
          temp.append(dictionary["CATEGORY"])
          expense.append(temp)
          print(temp)
          dictionary = ibm_db.fetch_assoc(res)


      total=0
      t_food=0
      t_entertainment=0
      t_business=0
      t_rent=0
      t_EMI=0
      t_other=0


      for x in expense:
```

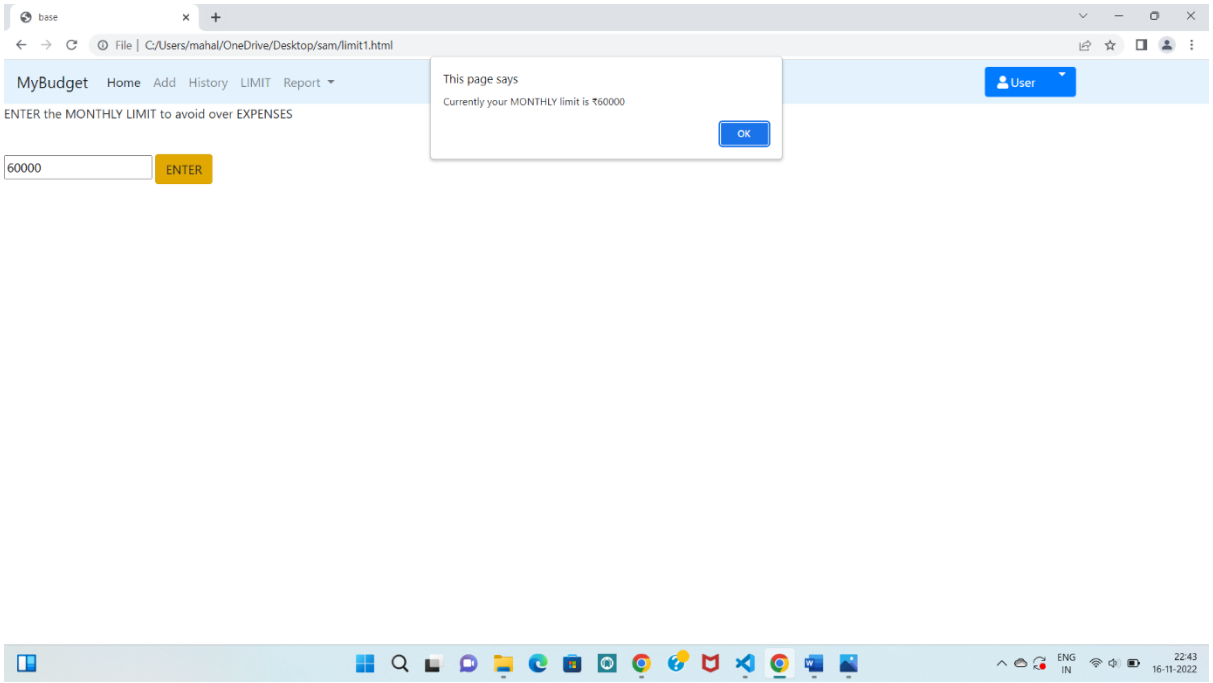
```
          total += x[4]
          if x[6] == "food":
              t_food += x[4]

          elif x[6] == "entertainment":
              t_entertainment  += x[4]

          elif x[6] == "business":
              t_business  += x[4]
          elif x[6] == "rent":
              t_rent  += x[4]

          elif x[6] == "EMI":
              t_EMI  += x[4]

          elif x[6] == "other":
              t_other  += x[4]

      print(total)

      print(t_food)
      print(t_entertainment)
      print(t_business)
      print(t_rent)
      print(t_EMI)
      print(t_other)



      return render_template("today1.html", texpense = texpense, expense =
expense,  total = total ,
                           t_food = t_food,t_entertainment =  t_entertainment,
                           t_business = t_business,  t_rent =  t_rent,
                           t_EMI =  t_EMI,  t_other =  t_other )

#log-out

@app.route('/logout')

def logout():
   session.pop('loggedin', None)
   session.pop('id', None)
   session.pop('username', None)
   session.pop('email', None)
   return render_template('home1.html')


port = os.getenv('VCAP_APP_PORT', '8080')
if __name__ == "__main__":
```

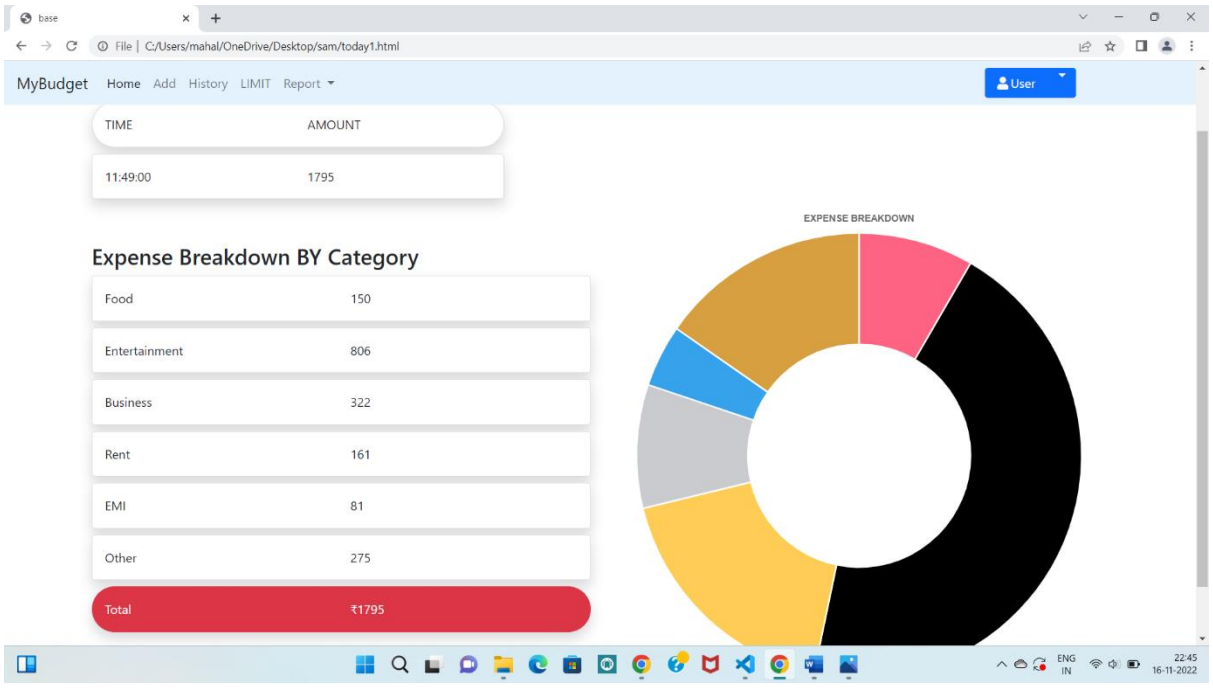
```
    app.secret_key = os.urandom(12)
    app.run(debug=True, host='0.0.0.0', port=port)
```

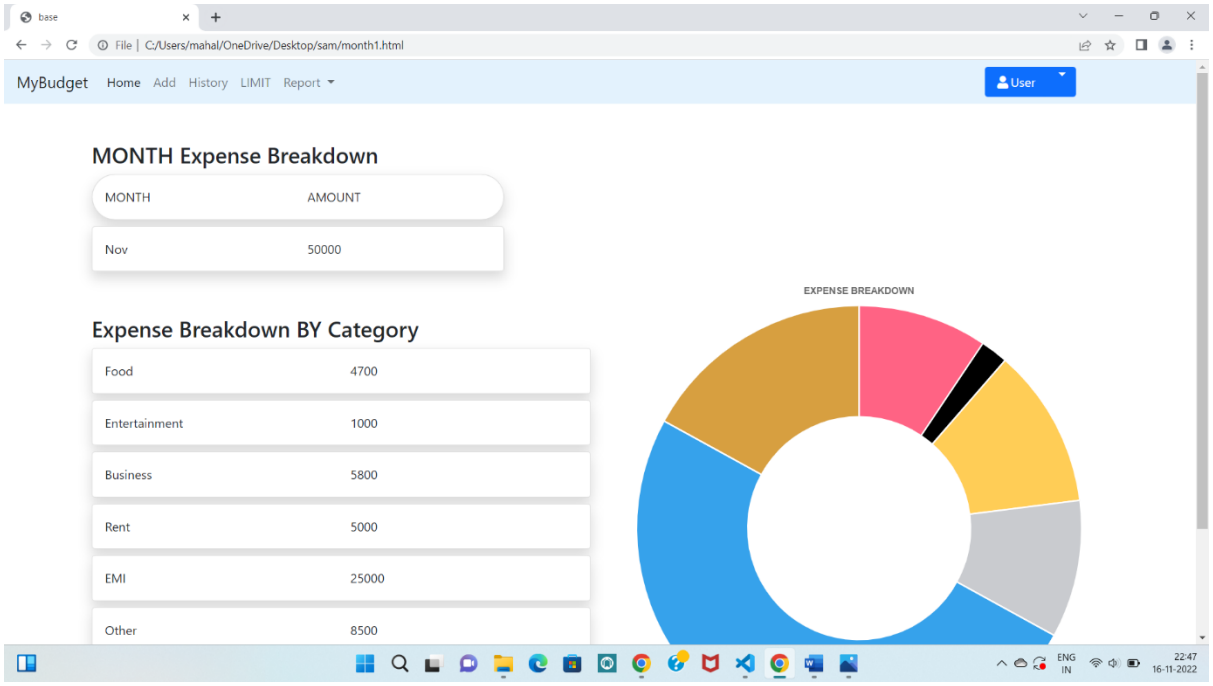
OUTPUT:

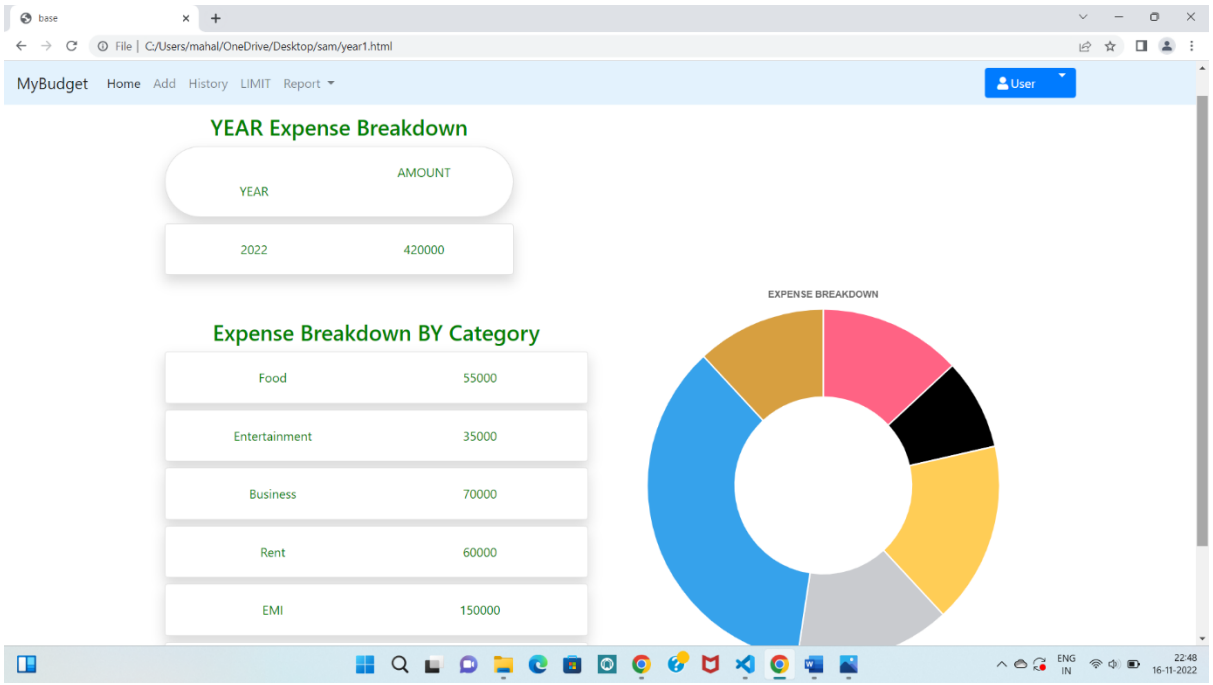





base
File | C:/Users/mahal/OneDrive/Desktop/sam/limit1.html
MyBudget
Home
Add
History
LIMIT
Report
User
This page says
Currently your MONTHLY limit is ₹60000
OK
ENTER the MONTHLY LIMIT to avoid over EXPENSES
60000
ENTER


base
File | C:/Users/mahal/OneDrive/Desktop/sam/today1.html
MyBudget
Home
Add
History
LIMIT
Report
User
TIME
AMOUNT
11:49:00
1795
Expense Breakdown BY Category
Food
150
Entertainment
806
Business
322
Rent
161
EMI
81
Other
275
Total
₹1795
EXPENSE BREAKDOWN


base
File | C:/Users/mahal/OneDrive/Desktop/sam/month1.html
MyBudget
Home
Add
History
LIMIT
Report
User
MONTH Expense Breakdown
MONTH
AMOUNT
Nov
50000
Expense Breakdown BY Category
Food
4700
Entertainment
1000
Business
5800
Rent
5000
EMI
25000
Other
8500
EXPENSE BREAKDOWN
ENG
IN
22:47
16-11-2022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File | C:/Users/mahal/OneDrive/Desktop/sam/year1.html
MyBudget
Home
Add
History
LIMIT
Report
User
YEAR Expense Breakdown
YEAR
AMOUNT
2022
420000
Expense Breakdown BY Category
Food
55000
Entertainment
35000
Business
70000
Rent
60000
EMI
150000
EXPENSE BREAKDOWN
ENG
IN
22:48
16-11-2022