```
# -*- coding: utf-8 -*-
Spyder Editor
This is a temporary script file.
from flask import Flask, render_template, request, redirect, session
# from flask_mysqldb import MySQL
# import MySQLdb.cursors
import re
from flask_db2 import DB2
import ibm_db
import ibm_db_dbi
from sendemail import sendgridmail, sendmail
# from gevent.pywsgi import WSGIServer
import os
app = Flask(__name___)
app.secret_key = 'a'
# app.config['MYSQL_HOST'] = 'remotemysql.com'
# app.config['MYSQL_USER'] = 'D2DxDUPBii'
# app.config['MYSQL_PASSWORD'] = 'r8XBO4GsMz'
# app.config['MYSQL_DB'] = 'D2DxDUPBii'
```

```
dsn_hostname = "ba99a9e6-d59e-4883-8fc0-
d6a8c9f7a08f.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud"
dsn_uid = "vmk08423"
dsn_pwd = "3KfJl6HGDtPdbIWy"
dsn_driver = "{IBM DB2 ODBC DRIVER}"
dsn_database = "bludb"
dsn_port = "31321"
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)
111111
# app.config['DB2 DRIVER'] = '{IBM DB2 ODBC DRIVER}'
app.config['database'] = 'bludb'
app.config['hostname'] = 'ba99a9e6-d59e-4883-8fc0-
d6a8c9f7a08f.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud'
app.config['port'] = '31321'
app.config['protocol'] = 'tcpip'
app.config['uid'] = 'vmk084230'
app.config['pwd'] = '3KfJI6HGDtPdbIWy'
app.config['security'] = 'SSL'
try:
  mysql = DB2(app)
```

```
conn_str='database=bludb;hostname=ba99a9e6-d59e-4883-8fc0-
d6a8c9f7a08f.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;port=31321;protocol=tcpip; \\ \\ \\
      uid=vmk08423;pwd=3KfJl6HGDtPdbIWy;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())
#app.config["]
# mysql = MySQL(app)
#HOME--PAGE
@app.route("/home")
def home():
  return render_template("homepage.html")
@app.route("/")
def add():
  return render_template("home.html")
#SIGN--UP--OR--REGISTER
@app.route("/signup")
def signup():
  return render_template("signup.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")
    # cursor = mysql.connection.cursor()
    # with app.app_context():
    # print("Break point3")
    # cursor = ibm_db_conn.cursor()
    # print("Break point4")
    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)
# dictionary = ibm_db.fetch_assoc(result)
# cursor.execute(stmt)
# account = cursor.fetchone()
# print(account)
# while ibm_db.fetch_row(result) != False:
# # account = ibm_db.result(stmt)
# print(ibm_db.result(result, "username"))
# print(dictionary["username"])
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)
      # cursor.execute('INSERT INTO register VALUES (NULL, % s, % s, % s)', (username,
email,password))
      # mysql.connection.commit()
      msg = 'You have successfully registered!'
    return render_template('signup.html', msg = msg)
#LOGIN--PAGE
@app.route("/signin")
def signin():
  return render_template("login.html")
@app.route('/login',methods =['GET', 'POST'])
def login():
  global userid
  msg = "
  if request.method == 'POST':
```

```
username = request.form['username']
    password = request.form['password']
    # cursor = mysql.connection.cursor()
    # cursor.execute('SELECT * FROM register WHERE username = % s AND password = % s',
(username, password),)
    # account = cursor.fetchone()
    # print (account)
    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 sakthi", "sivasakthisairam@gmail.com")
    if account:
      session['loggedin'] = True
      session['id'] = dictionary["ID"]
      userid = dictionary["ID"]
      session['username'] = dictionary["USERNAME"]
      session['email'] = dictionary["EMAIL"]
      return redirect('/home')
```

```
msg = 'Incorrect username / password !'
  return render_template('login.html', msg = msg)
#ADDING----DATA
@app.route("/add")
def adding():
  return render_template('add.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)
```

else:

```
p1 = date[0:10]
  p2 = date[11:13]
  p3 = date[14:]
  p4 = p1 + "-" + p2 + "." + p3 + ".00"
  print(p4)
  # cursor = mysql.connection.cursor()
  # cursor.execute('INSERT INTO expenses VALUES (NULL, % s, % s, % s, % s, % s, % s, % s)', (session['id']
,date, expensename, amount, paymode, category))
  # mysql.connection.commit()
  # print(date + " " + expensename + " " + amount + " " + paymode + " " + category)
  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):
   "/-!!!" + "\n" + "Thank you, " + "\n" + "Team Personal Expense Tracker."
```

```
sendmail(msg,session['email'])
  return redirect("/display")
#DISPLAY---graph
@app.route("/display")
def display():
  print(session["username"],session['id'])
  # cursor = mysql.connection.cursor()
  # cursor.execute('SELECT * FROM expenses WHERE userid = % s AND date ORDER BY
`expenses`.`date` DESC',(str(session['id'])))
  # expense = cursor.fetchall()
  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('display.html' ,expense = expense)
#delete---the--data
@app.route('/delete/<string:id>', methods = ['POST', 'GET'])
def delete(id):
  # cursor = mysql.connection.cursor()
  # cursor.execute('DELETE FROM expenses WHERE id = {0}'.format(id))
  # mysql.connection.commit()
  param = "DELETE FROM expenses WHERE id = " + id
  res = ibm_db.exec_immediate(ibm_db_conn, param)
  print('deleted successfully')
  return redirect("/display")
#UPDATE---DATA
@app.route('/edit/<id>', methods = ['POST', 'GET'])
def edit(id):
  # cursor = mysql.connection.cursor()
  # cursor.execute('SELECT * FROM expenses WHERE id = %s', (id,))
  # row = cursor.fetchall()
```

```
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('edit.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']
  # cursor = mysql.connection.cursor()
  # cursor.execute("UPDATE `expenses` SET `date` = % s , `expensename` = % s , `amount` = % s,
'paymode' = % s, 'category' = % s WHERE 'expenses'.'id' = % s ",(date, expensename, amount,
str(paymode), str(category),id))
  # mysql.connection.commit()
   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("/display")
```

```
#limit
@app.route("/limit")
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("limit.html", y= s)
#REPORT
@app.route("/today")
def today():
  # cursor = mysql.connection.cursor()
  # cursor.execute('SELECT TIME(date) , amount FROM expenses WHERE userid = %s AND
DATE(date) = DATE(NOW()) ',(str(session['id'])))
  # texpense = cursor.fetchall()
  # print(texpense)
   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)
  # cursor = mysql.connection.cursor()
  # cursor.execute('SELECT * FROM expenses WHERE userid = % s AND DATE(date) = DATE(NOW())
AND date ORDER BY 'expenses'.'date' DESC',(str(session['id'])))
  # expense = cursor.fetchall()
   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)
```

```
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("today.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("/month")
def month():
  # cursor = mysql.connection.cursor()
  # cursor.execute('SELECT DATE(date), SUM(amount) FROM expenses WHERE userid= %s AND
MONTH(DATE(date))= MONTH(now()) GROUP BY DATE(date) ORDER BY DATE(date)
',(str(session['id'])))
  # texpense = cursor.fetchall()
  # print(texpense)
   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)
  # cursor = mysql.connection.cursor()
  # cursor.execute('SELECT * FROM expenses WHERE userid = % s AND MONTH(DATE(date))=
MONTH(now()) AND date ORDER BY 'expenses'.'date' DESC',(str(session['id'])))
  # expense = cursor.fetchall()
   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("today.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("/year")
def year():
  # cursor = mysql.connection.cursor()
  # cursor.execute('SELECT MONTH(date), SUM(amount) FROM expenses WHERE userid= %s AND
YEAR(DATE(date))= YEAR(now()) GROUP BY MONTH(date) ORDER BY MONTH(date)
',(str(session['id'])))
  # texpense = cursor.fetchall()
  # print(texpense)
   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)
  # cursor = mysql.connection.cursor()
  # cursor.execute('SELECT * FROM expenses WHERE userid = % s AND YEAR(DATE(date))=
YEAR(now()) AND date ORDER BY 'expenses'. 'date' DESC',(str(session['id'])))
  # expense = cursor.fetchall()
   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)
```

```
return render_template("today.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('home.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)
```

print(t_other)