Sprint 3 PROJECT_DEVELOPMENT_PHASE

Date	12 November 2022
Team ID	PNT2022TMID49592
Project Name	Project - Personal expense tracker application

Code:

```
app.py(updated)
from flask import Flask, render template, request, redirect, url for, session
import ibm_db
import re
from flask import *
from flask import Flask
from random import *
from flask_mail import Mail, Message
app = Flask( name )
mail = Mail(app) # instantiate the mail class
# configuration of mail
app.config['MAIL SERVER']='smtp.gmail.com'
app.config['MAIL PORT'] = 465
app.config['MAIL USERNAME'] = 'shrikumar13102001@gmail.com'
app.config['MAIL PASSWORD'] = 'mlzuhzieegwenrhc'
app.config['MAIL_USE_TLS'] = False
app.config['MAIL_USE_SSL'] = True
mail = Mail(app)
otp = randint(000000,9999999)
app.secret_key = 'a'
conn =
ibm_db.connect("DATABASE=bludb;HOSTNAME=b1bc1829-6f45-4cd4-bef4-10cf081900bf.c1o
qi3sd0tqtu0lqde00.databases.appdomain.cloud;PORT=32304;SECURITY=SSL;SSLServerCerti
ficate=DigiCertGlobalRootCA.crt;UID=jpg92341;PWD=5HWT2ImD7POkuLnv",",")
@app.route("/")
def home():
 return render_template('index.html')
@app.route('/login', methods =['GET', 'POST'])
def login():
  global userid
  msq = "
  if request.method == 'POST'and 'email' in request.form and 'password1' in request.form:
    email = request.form['email']
```

```
password1 = request.form['password1']
     stmt = ibm_db.prepare(conn, 'SELECT * FROM regi WHERE email = ? AND password1 =
?')
     ibm db.bind param(stmt,1,email)
     ibm db.bind param(stmt,2,password1)
     ibm db.execute(stmt)
     account = ibm db.fetch tuple(stmt)
     if account:
       session['id'] = account[0]
       userid = account[0]
       session['email'] = account[1]
       msg = 'Logged in successfully!'
       return render template('button.html', msg = msg)
     else:
       msg = 'Incorrect username / password!'
  return render_template('login.html', msg = msg)
@app.route('/button')
def button():
  return render_template('button.html')
@app.route('/limit', methods=["POST", "GET"])
def limit():
  if request.method == "POST" and 'id' in session:
     keys = ['hos', 'ent', 'shop', 'groc', 'edu']
     values = []
    for k in keys:
       try:
          values.append(int(request.form[k]))
       except ValueError:
          return render_template('limit.html', status="Missing Expenses")
     print("Executing INSERT into LIMIT")
     uid = session['id']
     exist = ibm_db.prepare(conn, 'SELECT uid FROM limit WHERE uid = ?')
     ibm db.bind param(exist,1, session['id'])
     ibm_db.execute(exist)
     stmt = ""
     if ibm_db.fetch_tuple(exist) == False:
       print("Creating New")
```

```
stmt = ibm db.prepare(conn, 'INSERT INTO limit (hos, ent, shop, groc, edu, uid)
VALUES (?, ?, ?, ?, ?, ?)')
     else:
       print("Updating")
       stmt = ibm db.prepare(conn, 'UPDATE limit SET \
       hos = ?, \
       ent = ?, \
       shop = ?, \
       groc = ?, \
       edu = ? \
       WHERE uid = ?')
    for i in range(1, 6):
       ibm_db.bind_param(stmt, i, values[i - 1])
     ibm db.bind param(stmt, 6, uid)
     ibm_db.execute(stmt)
     return render_template('limit.html', status="Success")
  return render template('limit.html')
@app.route('/stat')
def stat():
  if 'id' in session:
     stmt = ibm db.prepare(conn, 'SELECT expense, expensedate FROM expense WHERE
uid = ?'
     ibm_db.bind_param(stmt,1,session['id'])
     ibm db.execute(stmt)
    tb = ibm_db.fetch_tuple(stmt)
    months = {}
    while tb != False:
       sliced = tb[1].strftime("%b")
       if sliced in months:
          months[sliced] += tb[0]
          continue
       months[sliced] = tb[0]
       tb = ibm_db.fetch_tuple(stmt)
     print(months)
     return render_template('stat.html', data=months)
  return 'Not Authed Please Login'
@app.route('/display')
def display():
  if 'id' in session:
```

```
stmt = ibm db.prepare(conn, 'SELECT amount, income, expense, expensedate, category
FROM expense WHERE uid = ?')
    ibm db.bind param(stmt,1,session['id'])
    ibm db.execute(stmt)
    tb = ibm db.fetch assoc(stmt)
    data = []
    while tb != False:
       data.append(tb)
       tb = ibm db.fetch assoc(stmt)
    print(data)
    return render template('display.html',data=data)
  return 'Not Authed'
@app.route('/wallet')
def wallet():
  return render_template('design.html')
@app.route('/income', methods =['GET', 'POST'])
def income():
  if 'id' in session and request.method == 'POST' and ('amount' in request.form) and ('income' in
request.form) and ('expense' in request.form) and ('expensedate' in request.form )and
('category' in request.form):
       msg = "
       print(request.form['category'])
       uid = session['id']
       amount = request.form['amount']
       income = request.form['income']
       expense = request.form['expense']
       expensedate = request.form['expensedate']
       category = request.form['category']
       stmt = ibm db.prepare(conn, 'SELECT * FROM regi WHERE id = ?')
       ibm db.bind param(stmt,1,uid)
       ibm db.execute(stmt)
       ibm db.fetch tuple(stmt)
       prep stmt = ibm db.prepare(conn, "INSERT INTO
expense(uid,amount,income,expense,expensedate,category) VALUES (?,?,?,?,?,?)")
       ibm db.bind param(prep stmt, 1, uid)
       ibm_db.bind_param(prep_stmt, 2, amount)
       ibm db.bind param(prep stmt, 3, income)
       ibm db.bind param(prep stmt, 4, expense)
       ibm_db.bind_param(prep_stmt, 5, expensedate)
       ibm db.bind param(prep stmt, 6, category)
       ibm_db.execute(prep_stmt)
```

```
msg = 'You have successfully added!'
       return render_template('add.html', a = msg)
  return render template('add.html')
@app.route('/register', methods =['GET', 'POST'])
def register():
  msg = "
  if request.method == 'POST':
     firstname = request.form['firstname']
     lastname = request.form['lastname']
     email = request.form['email']
     password1 = request.form['password1']
     cpassword = request.form['cpassword']
     birthdate = request.form['birthdate']
     phonenumber = request.form['phonenumber']
     job = request.form['job']
     income = request.form['income']
     sql = "SELECT * FROM regi WHERE email = ? "
     stmt = ibm_db.prepare(conn,sql)
     ibm db.bind param(stmt,1,email)
     ibm db.execute(stmt)
     account = ibm_db.fetch_assoc(stmt)
     print(account)
     if account:
       msg = 'Account already exists!'
     elif not re.match(r'[^@]+@[^@]+\.[^@]+', email):
       msg = 'Invalid email address!'
     elif not re.match(r'[A-Za-z0-9]+', firstname):
       msg = 'firstname must contain only characters and numbers !'
     elif not email or not firstname or not password1:
       msg = 'Please fill out the form!'
     else:
       insert sql = "INSERT INTO
regi(firstname,lastname,email,password1,cpassword,birthdate,phonenumber,job,income)
VALUES (?, ?, ?, ?, ?, ?, ?, ?)"
       stmt = ibm db.prepare(conn,insert sql)
       ibm_db.bind_param(stmt, 1, firstname)
       ibm db.bind param(stmt, 2, lastname)
       ibm_db.bind_param(stmt, 3, email)
       ibm db.bind param(stmt, 4, password1)
       ibm db.bind param(stmt, 5, cpassword)
       ibm_db.bind_param(stmt, 6, birthdate)
       ibm db.bind param(stmt, 7, phonenumber)
       ibm_db.bind_param(stmt, 8, job)
```

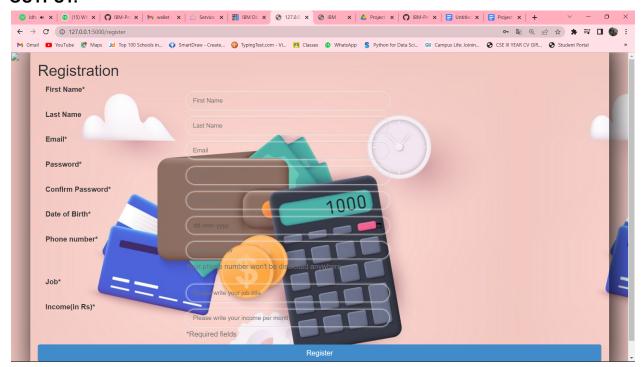
```
ibm db.bind param(stmt, 9, income)
       ibm_db.execute(stmt)
       msg = 'You have successfully registered!'
       return render template('email.html')
  elif request.method == 'POST':
     msg = 'Please fill out the form!'
  return render_template('register.html', msg = msg)
@app.route('/verify', methods=['GET', 'POST'])
def verify():
  if request.method == 'POST':
     email1 = request.form['email1']
     sql = "SELECT * FROM validate WHERE email1 = ? "
     stmt = ibm_db.prepare(conn,sql)
     ibm db.bind param(stmt,1,email1)
     ibm_db.execute(stmt)
     account = ibm_db.fetch_assoc(stmt)
     print(account)
     if account:
       msg = 'Account already exists!'
     else:
      insert_sql = "INSERT INTO validate VALUES (?)"
      stmt = ibm db.prepare(conn,insert sql)
      ibm db.bind param(stmt, 1, email1)
      ibm_db.execute(stmt)
      msg = Message('Hello',sender ='shrikumar13102001@gmail.com',recipients = [email1])
      msg.body = str(otp)
      mail.send(msg)
      return render_template('verify.html')
  else:
    return render template('verify.html')
@app.route('/validate',methods=['GET', 'POST'])
def validate():
user otp = request.form['otp']
if otp == int(user_otp):
   return render template('index.html')
if __name__ == '__main__':
  app.run(debug = True)
USN-8:
REGISTRATION(WEB USER)
register.html
<html>
```

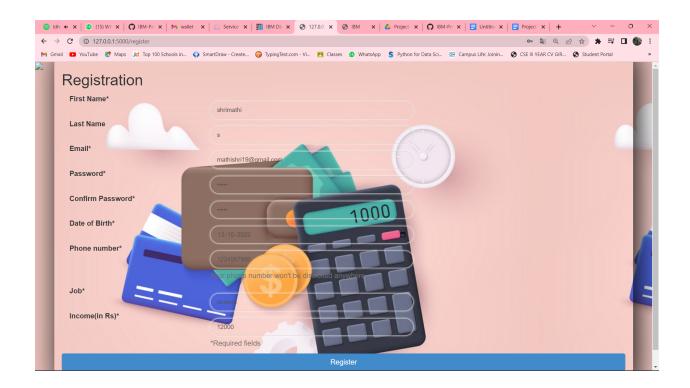
```
<head>
  k rel="stylesheet" href="{{ url for('static', filename='css/reg.css') }}">
k href="//maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
rel="stylesheet" id="bootstrap-css">
<script src="//maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
<script src="//cdnjs.cloudflare.com/ajax/libs/jquery/3.2.1/jquery.min.js"></script>
<!----- Include the above in your HEAD tag ------>
k href="//netdna.bootstrapcdn.com/bootstrap/3.2.0/css/bootstrap.min.css"
rel="stylesheet" id="bootstrap-css">
<script src="//netdna.bootstrapcdn.com/bootstrap/3.2.0/js/bootstrap.min.js"></script>
<script src="//code.iguery.com/jquery-2.1.3.min.is"></script>
<img src="{{ url for('static', filename='reg.jpg') }}" type=" ">
</head>
<body>
<form action="{{ url for('register') }}" method="post">
<!----- Include the above in your HEAD tag ------>
<div class="container" >
<form class="form-horizontal" role="form">
<h2>Registration</h2>
<div class="form-group">
<label for="firstname" class="col-sm-3 control-label" >First Name*</label>
<div class="col-sm-9">
<input type="text" id="firstname" name="firstname" placeholder="First Name"</pre>
minlength="5" required class="form-control" autofocus>
</div>
</div>
<div class="form-group">
<label for="lastname" class="col-sm-3 control-label">Last Name/label>
<div class="col-sm-9">
<input type="text" id="lastname" name="lastname" placeholder="Last Name"
class="form-control" autofocus>
</div>
</div>
<div class="form-group">
<label for="email" class="col-sm-3 control-label">Email* </label>
<div class="col-sm-9">
<input type="email" id="email" name="email" placeholder="Email" class="form-control"
name= "email" required>
</div>
</div>
```

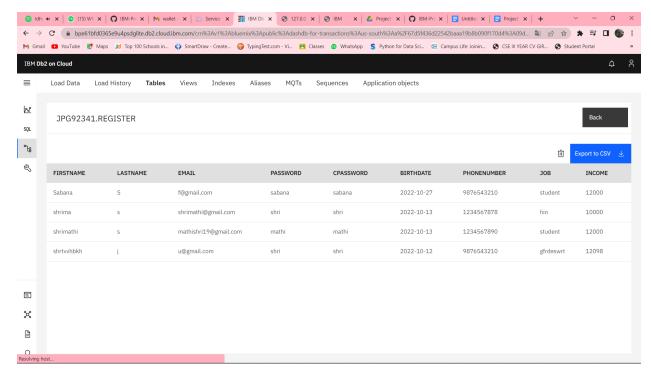
```
<div class="form-group">
<label for="password" class="col-sm-3 control-label">Password*</label>
<div class="col-sm-9">
<input type="password" id="password" name="password1" minlength="4" required
placeholder="Password" class="form-control" >
</div>
</div>
<div class="form-group">
<a href="cpassword" class="col-sm-3 control-label">Confirm Password*</label>
<div class="col-sm-9">
<input type="password" id="cpassword" name="cpassword" placeholder="Password"
class="form-control" required>
</div>
</div>
<div class="form-group">
<label for="birthdate" class="col-sm-3 control-label">Date of Birth*</label>
<div class="col-sm-9">
<input type="date" id="birthdate" name="birthdate" class="form-control" required>
</div>
</div>
<div class="form-group">
<label for="phonenumber" class="col-sm-3 control-label">Phone number* </label>
<div class="col-sm-9">
<input type="phonenumber" id="phonenumber" name="phonenumber"
pattern="[0-9]{10}" required placeholder="Phone number" class="form-control">
<span class="help-block">Your phone number won't be disclosed anywhere </span>
</div>
</div>
<div class="form-group">
<label for="job" class="col-sm-3 control-label">Job* </label>
<div class="col-sm-9">
<input type="text" id="job" name="job" placeholder="Please write your job title"
class="form-control" required>
</div>
</div>
<div class="form-group">
<label for="income" class="col-sm-3 control-label"</label>Income(in Rs)* </label>
<div class="col-sm-9">
<input type="number" id="income" name="income" placeholder="Please write your
income per month" class="form-control" min="0" required>
```

```
</div>
</div>
</div>
<div class="form-group">
<div class="col-sm-9 col-sm-offset-3">
<span class="help-block">*Required fields</span>
</div>
</div>
<button type="submit" class="btn btn-primary btn-block" action="{{ url_for('register') }}" method="post">Register</button>
</div>
</div>
</form> <!-- /form -->
</div> <!-- ./container -->
</form>
</body>
```

</html>







USN-9 LOGIN PAGE(WEB USER)

login.html:

<!DOCTYPE html>

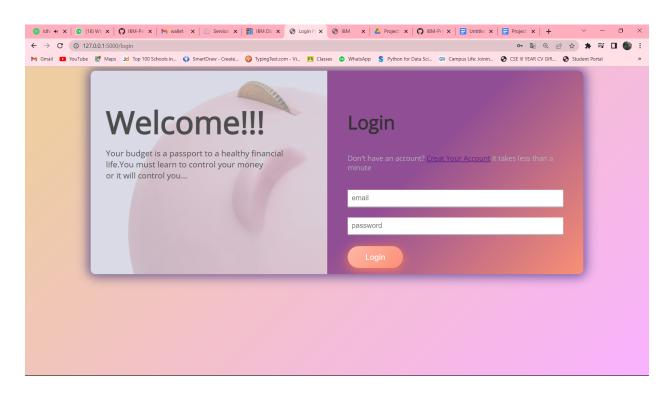
```
<html lang="en" >
<head>
<style>
body {
 background-image: linear-gradient(135deg, #eecda3 10%, #FAB2FF 100%);
 background-size: cover;
 background-repeat: no-repeat;
 background-attachment: fixed;
 font-family: "Open Sans", sans-serif;
 color: #333333;
.box-form {
 margin: 0 auto;
 width: 60%;
 height: 500px;
 background: #FFFFFF;
 border-radius: 10px;
 overflow: hidden;
 display: flex;
 flex: 1 1 100%;
 align-items: stretch;
 justify-content: space-between;
 box-shadow: 0 0 20px 6px #090b6f85;
@media (max-width: 750px) {
 .box-form {
  flex-flow: wrap;
  text-align: center;
  align-content: center;
  align-items: center;
 }
.box-form div {
 height: auto;
 top: 20%;
.box-form .left {
 color: #FFFFFF;
 background-size: cover;
```

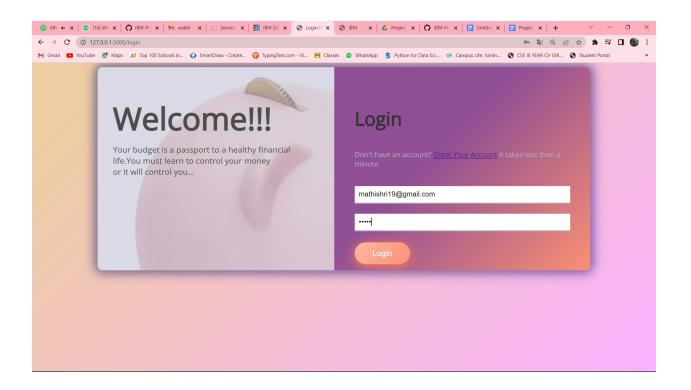
```
background-repeat: no-repeat;
 background: url("https://pngimg.com/uploads/piggy_bank/piggy_bank_PNG82.png");
 overflow: hidden:
.box-form .left .overlay {
 padding: 30px;
 width: 500px;
 height: 400px;
 background: #c7c8d8ad;
 overflow: hidden;
 box-sizing: border-box;
.box-form .left .overlay h1 {
 font-size: 5vmax;
 line-height: 1;
 font-weight: 900;
 margin-top: 40px;
 margin-bottom: 20px;
 color: #4c4c4c;
.box-form .left .overlay p {
 color: #4c4c4c;
.box-form .left .overlay span p {
 margin-top: 30px;
 font-weight: 900;
 color: #904e95;
.box-form .left .overlay span a {
 background: #3b5998;
 color: #FFFFFF;
 margin-top: 10px;
 padding: 14px 50px;
 border-radius: 100px;
 display: inline-block;
 box-shadow: 0 3px 6px 1px #042d4657;
.box-form .left .overlay span a:last-child {
 background: #1dcaff;
```

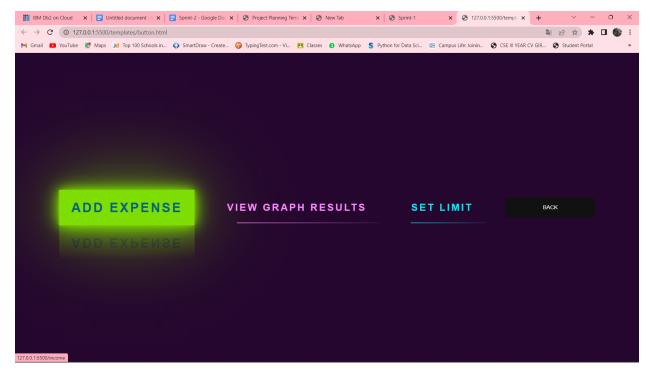
```
margin-left: 30px;
}
.box-form .right {
 padding: 40px;
 overflow: hidden;
 background-image: linear-gradient(135deg, #904e95 40%, #fa9075 100%);
@media (max-width: 980px) {
 .box-form .right {
  width: 300px;
  height: auto;
 }
.box-form .right h5 {
 font-size: 3vmax;
 line-height: 0;
.box-form .right p {
 font-size: 14px;
 color: #B0B3B9;
.box-form .right .inputs {
 overflow: hidden;
.box-form .right input {
 width: 100%;
 padding: 8px;
 margin-top: 20px;
 font-size: 14px;
 border: none;
 outline: none;
 border-bottom: 2px solid #B0B3B9;
}
.box-form .right button {
 color: #fff;
 font-size: 16px;
 padding: 12px 35px;
 border-radius: 50px;
```

```
display: inline-block;
 border: 0;
 outline: 0;
 box-shadow: 0px 4px 20px 0px #ff7d5c;
 background-image: linear-gradient(135deg, #ffb4a1 10%, #fa9075 100%);
}
label {
 display: block;
 position: relative;
 margin-left: 30px;
}
label::before {
 content: '\f00c';
 position: absolute;
 font-family: FontAwesome;
 background: transparent;
 border: 3px solid #70F570;
 border-radius: 4px;
 color: transparent;
 left: -30px;
 transition: all 0.2s linear;
}
label:hover::before {
 font-family: FontAwesome;
 content: '\f00c';
 color: #fff;
 cursor: pointer;
 background: #70F570;
}
label:hover::before .text-checkbox {
 background: #70F570;
}
label span.text-checkbox {
 display: inline-block;
 height: auto;
```

```
position: relative;
 cursor: pointer;
 transition: all 0.2s linear;
}
label input[type="checkbox"] {
 display: none;
}
</style>
 <meta charset="UTF-8">
 <title>Login Page</title>
 k href="https://fonts.googleapis.com/css?family=Open+Sans" rel="stylesheet">
link
href="https://maxcdn.bootstrapcdn.com/font-awesome/4.7.0/css/font-awesome.min.css"
rel="stylesheet"
integrity="sha384-wvfXpqpZZVQGK6TAh5PVIGOfQNHSoD2xbE+QkPxCAFINEevoEH3
Sl0sibVcOQVnN" crossorigin="anonymous"><link rel="stylesheet" href="./style.css">
</head>
<body>
<form action="{{ url_for('login') }}" method="post">
<!-- partial:index.partial.html -->
<div class="box-form">
      <div class="left">
             <div class="overlay">
             <h1>Welcome!!!</h1>
             Your budget is a passport to a healthy financial <br/>br>life. You must learn
to control your money <br/>or it will control you...
             </div>
      </div>
             <div class="right">
             <h5>Login</h5>
             >Don't have an account? <a href="{{ url for('register') }}">Creat Your
Account</a> it takes less than a minute
             <div class="inputs">
```





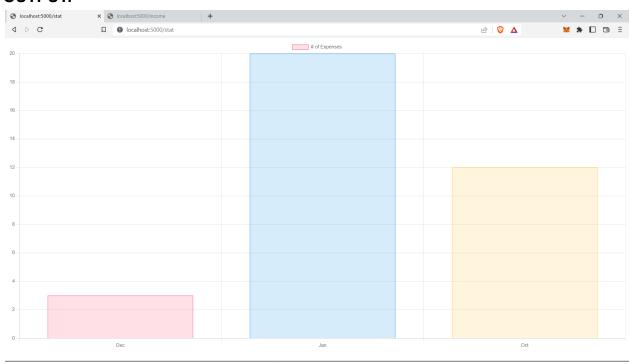


USN-10 GRAPHICAL VIEW:

stat.html

```
<body>
  <header>
    <button href="/button">Back</button>
  </header>
 </body>
<canvas id="myChart"></canvas>
<script src="https://cdnjs.cloudflare.com/ajax/libs/Chart.js/3.9.1/chart.min.js"></script>
<script>
const ctx = document.getElementById('myChart').getContext('2d');
const months = JSON.parse('{{ data | tojson | safe}}');
const monKeys = [];
const vals = [];
for(let val in months){
  monKeys.push(val);
  vals.push(months[val]);
}
// vals.reverse();
// monKeys.reverse();
console.log(months);
const myChart = new Chart(ctx, {
  type: 'bar',
  data: {
     labels: monKeys,
     datasets: [{
       label: '# of Expenses',
        data: vals,
       backgroundColor: [
          'rgba(255, 99, 132, 0.2)',
          'rgba(54, 162, 235, 0.2)',
          'rgba(255, 206, 86, 0.2)',
          'rgba(75, 192, 192, 0.2)',
          'rgba(153, 102, 255, 0.2)',
          'rgba(255, 159, 64, 0.2)'
       borderColor: [
          'rgba(255, 99, 132, 1)',
```

```
'rgba(54, 162, 235, 1)',
          'rgba(255, 206, 86, 1)',
          'rgba(75, 192, 192, 1)',
          'rgba(153, 102, 255, 1)',
          'rgba(255, 159, 64, 1)'
       ],
       borderWidth: 1
     }]
  },
  options: {
     scales: {
       y: {
          beginAtZero: true
     }
  }
});
</script>
```

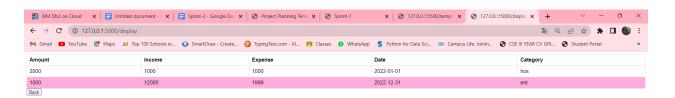


Users can able to view their monthly expenses in a graphical form.

HISTORY TABLE:

display.html

```
<head>
  <style>
    table {
 font-family: arial, sans-serif;
 border-collapse: collapse;
 width: 100%;}
  td, th {
    border: 1px solid #dddddd;
    text-align: left;
    padding: 8px;
   tr:nth-child(even) {
 background-color: #ffacdc;
}
.fadeIn {
 opacity: 0;
transform: translate3d(0, 20px, 0);
 transition: 0.25s all ease-in-out;
}
.fadeIn:hover {
 opacity: 1;
 transform: translate3d(0, 0, 0);
  </style>
</head>
<!-- <div class="fadeIn"> -->
  <thead>
       Amount
       Income
       Expense
       Date
       Category
    </thead>
```





Users can able to view their history details in this web application

SETTING LIMIT PAGE limit.html <!DOCTYPE html>

```
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
k rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.c
ss">
<style>
* {box-sizing: border-box;}
body {
 margin: 0;
 font-family: Arial, Helvetica, sans-serif;
#navbar {
 overflow: hidden;
 background-image: linear-gradient(120deg, #d4fc79 0%, #96e6a1 100%);
 padding: 90px 10px;
 transition: 0.4s;
 position: fixed;
 width: 100%;
 top: 0;
 z-index: 99;
}
#navbar a {
 float: left;
 color:black;
 text-align: center;
 padding: 12px;
 text-decoration: none;
 font-size: 18px;
 line-height: 25px;
 border-radius: 4px;
#navbar #logo {
 font-size: 35px;
 font-weight: bold;
 transition: 0.4s;
}
```

```
#navbar a:hover {
 background-color: #ddd;
 color: black;
#navbar a.active {
 background-color: dodgerblue;
 color: white;
#navbar-right {
 float: right;
@media screen and (max-width: 580px) {
 #navbar {
  padding: 20px 10px !important;
 #navbar a {
  float: none;
  display: block;
  text-align: left;
 #navbar-right {
  float: none;
 }
.content {
 padding: 16px;
.sticky {
 position: fixed;
 top: 0;
 width: 100%;
.sticky + .content {
 padding-top: 60px;
```

```
.input-container {
 display: -ms-flexbox; /* IE10 */
 display: flex;
 width: 100%;
 margin-bottom: 30px;
.icon {
 padding: 10px;
 background-image: linear-gradient(120deg, #d4fc79 0%, #96e6a1 100%);
 color: white;
 min-width: 70px;
 text-align: center;
.input-field {
 width: 100%;
 padding: 10px;
 outline: none;
}
.input-field:focus {
  background-image: linear-gradient(120deg, #d4fc79 0%, #96e6a1 100%);
}
/* Set a style for the submit button */
.btn {
  background-image: linear-gradient(120deg, #d4fc79 0%, #96e6a1 100%);
 padding: 15px 20px;
 border: none;
 cursor: pointer;
 width: 100%;
 opacity: 0.9;
.btn:hover {
 opacity: 1;
</style>
```

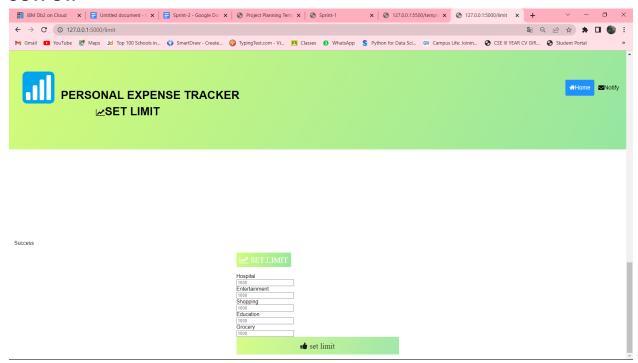
```
</head>
<body>
<div id="navbar">
 <a href="#default" id="logo"><span
style='font-size:100px;'>📶</span>PERSONAL EXPENSE
TRACKER<br><i class="fa fa-line-chart" style="font-size:24px"></i>SET LIMIT</a>
 <div id="navbar-right">
  <a class="active" href="#index"><i class="fa fa-home"></i>Home</a>
  <a href="#contact"><i class="fa fa-envelope"></i>Notify</a>
 </div>
</div>
<div style="margin-top:210px;padding:15px 15px 2500px;font-size:30px">
</div>
<body>
<div class="content">
      {{status}}
  <form action="{{ url for('limit') }}" method="post"
style="max-width:500px;margin:auto">
    <h2><i class="fa fa-line-chart icon"> SET LIMIT</i></h2>
      <label for="hos">Hospital</label> <br>
    <input type="number" id="hos" name="hos" placeholder="1000">
      <br>
      <label for="ent">Entertainment</label> <br>
    <input type="number" id="ent" name="ent" placeholder="1000">
      <br>
      <label for="shop">Shopping</label> <br>
    <input type="number" id="shop" name="shop" placeholder="1000">
      <br>
      <label for="edu">Education</label> <br>
    <input type="number" id="edu" name="edu" placeholder="1000">
      <br>
      <label for="groc">Grocery</label> <br>
```

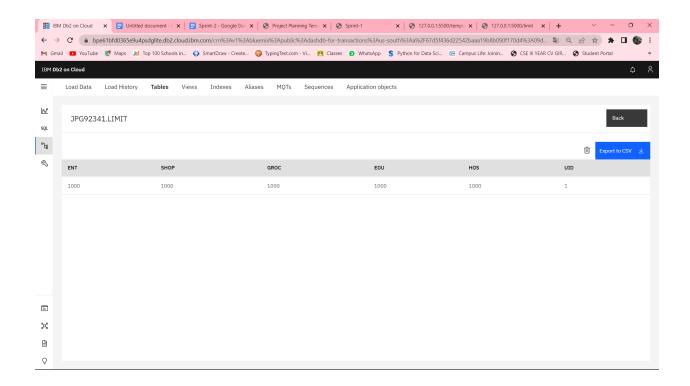
<input type="number" id="groc" name="groc" placeholder="1000">

</body>

</html>

OUTPUT:





Users can able to set the limit for some categories to avoid financial problems.