

Assignment -2
Flask Application Development

Assignment Date	10 October 2022
Student Name	Arokia Nivin A
Student Roll Number	412519104010
Maximum Marks	2 Marks

Question-1:

Create a Flask App

[Solution:](#)

[app.py:](#)

```
from flask import Flask

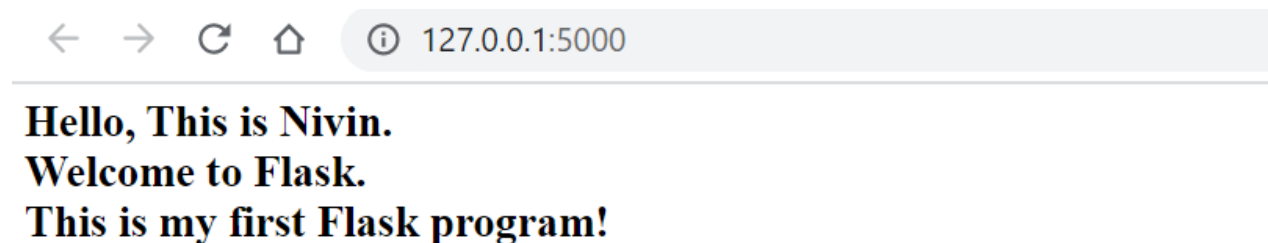
app = Flask(__name__)

@app.route("/")

def hello_world():

    return "<h1>Hello, This is Nivin. <br> Welcome to Flask.
    <br>This is my first Flask program!</h1>"
```

Output:



Question-2:

Add the Home page, About Page

[Solution:](#)

[app.py:](#)

```
from flask import Flask
from flask import render_template
```

```

app = Flask(__name__)

@app.route("/")
def hello_world():
    return "<h1>Hello, This is Nivin. <br> Welcome to Flask.
<br>This is a Flask program!</h1>"

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

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

@app.route("/profiles/<username>")
def profile(username):
    return " <h1>Hello,  "+ username  +".  Welcome  to  Flask
Programming!</h1>"

```

home.html:

```

<!DOCTYPE html>
<head>
    <title>
        Home
    </title>
    <link rel="stylesheet" href="static\css\home.css">
</head>
<body>
    <div class="titlediv">
        <h1>Home Page</h1>
    </div>
    <div class="bodydiv">
        <h3>
            This is home page for create home page assignment
        </h3>
    </div>
    
</body>
</html>

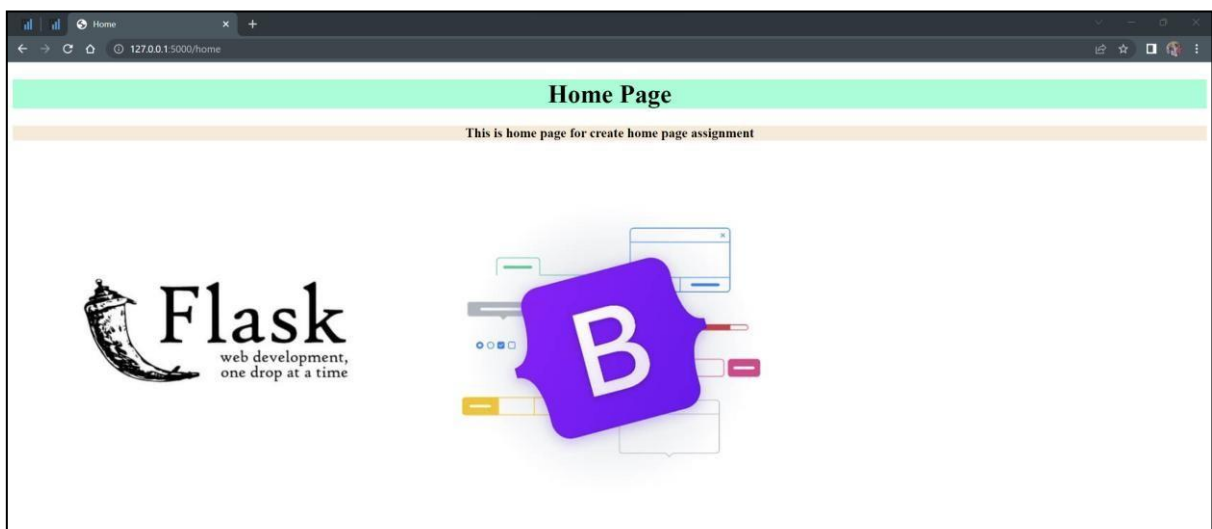
```

[about.html:](#)

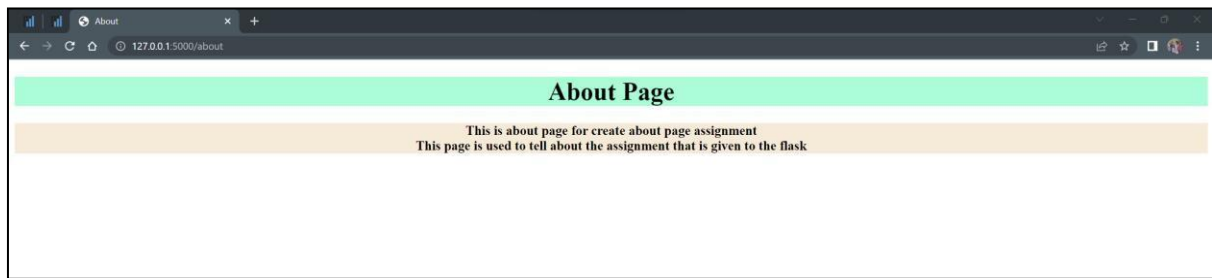
```
<!DOCTYPE html>
<head>
  <title>
    About
  </title>
  <link rel="stylesheet" href="static\css\about.css">
</head>
<body>
  <div class="titlediv">
    <h1>About Page</h1>
  </div>
  <div class="bodydiv">
    <h3>
      This is about page for create about page assignment
    <br>
      This page is used to tell about the assignment that is
given to the flask
    <br>
    </h3>
  </div>
</body>
</html>
```

Output:

Home Page:



About Page:



Question-3:

Add the Bootstrap

Solution:

app.py:

```
from flask import Flask
from flask import render_template

app = Flask(__name__)

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

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

@app.route("/withoutbootstrap")
def withoutbootstrap():
    return render_template('withoutbootstrap.html')
```

base.html:

```
<!DOCTYPE html>
<head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1">
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/css/bootstrap
.min.css" rel="stylesheet">
```

```

    <link
href="https://getbootstrap.com/docs/5.2/assets/css/docs.css"
rel="stylesheet">
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/js/bootstrap.bundle.min.js"></script>
    {% block head %} {% endblock %}
</head>
<body>
    <body background="static/images/signup.png">
    <div class="shadow p-3 mb-5 rounded">
        <nav class="navbar navbar-expand-md navbar-dark bg-dark">
            <div class="container-fluid">
                <div class="navbar-collapse collapse w-100 order-1
order-md-0 dual-collapse2">
                    <ul class="navbar-nav me-auto">
                        <li class="nav-item active">
                            <a class="nav-link" href="home">Home</a>
                        </li>
                        <li class="nav-item">
                            <a class="nav-link"
href="about">About</a>
                        </li>
                    </ul>
                </div>
                <div class="mx-auto order-0">
                    <a class="navbar-brand mx-auto"
href="home">Personal Expense Tracker Application</a>
                    <button class="navbar-toggler" type="button"
data-bs-toggle="collapse" data-bs-target=".dual-collapse2">
                        <span class="navbar-toggler-icon"></span>
                    </button>
                </div>
                <div class="navbar-collapse collapse w-100 order-3
dual-collapse2">
                    <ul class="navbar-nav ms-auto">
                        <li class="nav-item">
                            <a class="nav-link"
href="signin">Login</a>
                        </li>
                        <li class="nav-item">
                            <a class="nav-link"
href="signup">Register</a>
                        </li>
                    </ul>
                </div>
            </div>
        </nav>
    </div>

```

```
        </div>
    </nav>
</div>
{% block body %} {% endblock %}
</body></html>
```

home.html:

```
{% extends "base.html" %}

{% block head %}
    <title>Home</title>
{% endblock %}

{% block body %}
    <div style="text-align:center;" >
        
    </div>
{% endblock %}
```

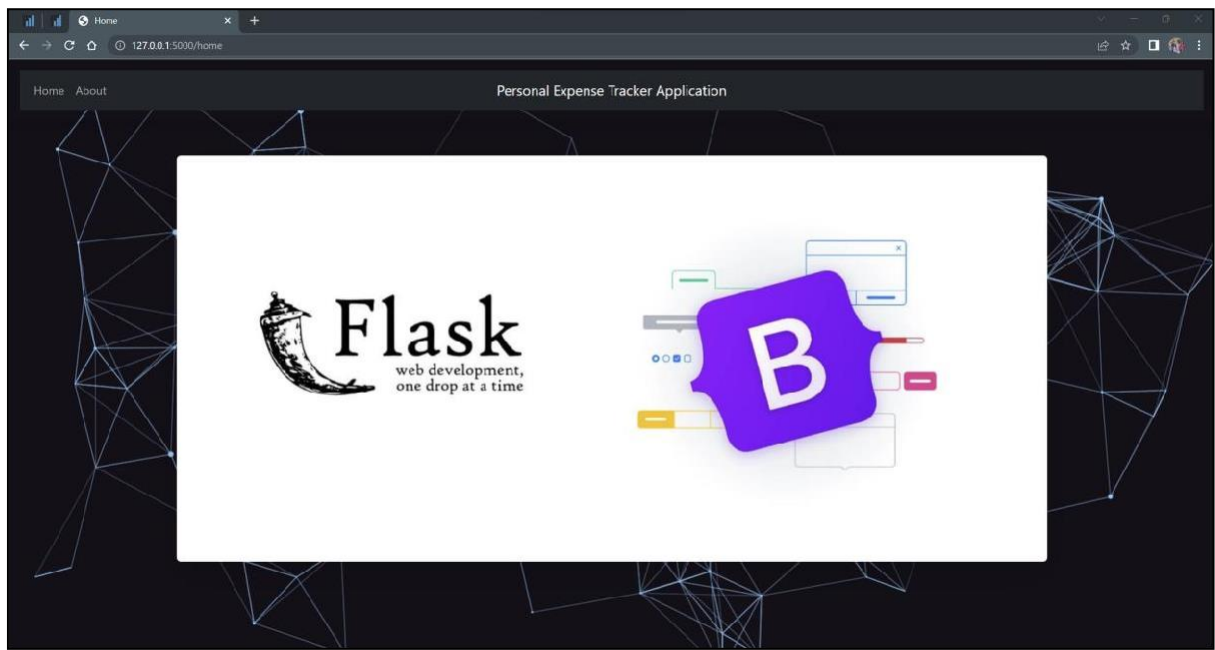
about.html:

```
{% block head %}
    <title>About</title>
{% endblock %}

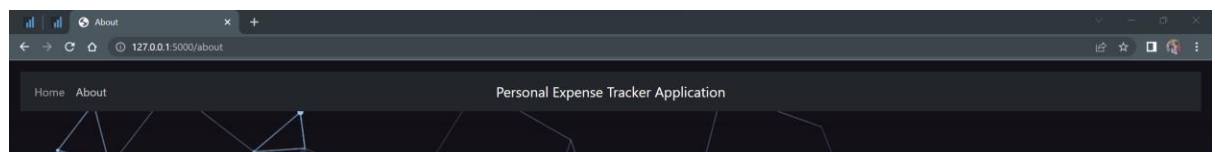
{% block body %}
    <div class="shadow-lg p-3 mb-5 bg-body rounded p-3 mx-auto">
        <h1 class="d-flex justify-content-center">About Page</h1>
        <h3>
            This is about page for create about page assignment
            <br>
            This page is used to tell about the assignment that is
given to the flask
            <br>
        </h3>
    </div>
{% endblock %}
```

Output:

Home Page:

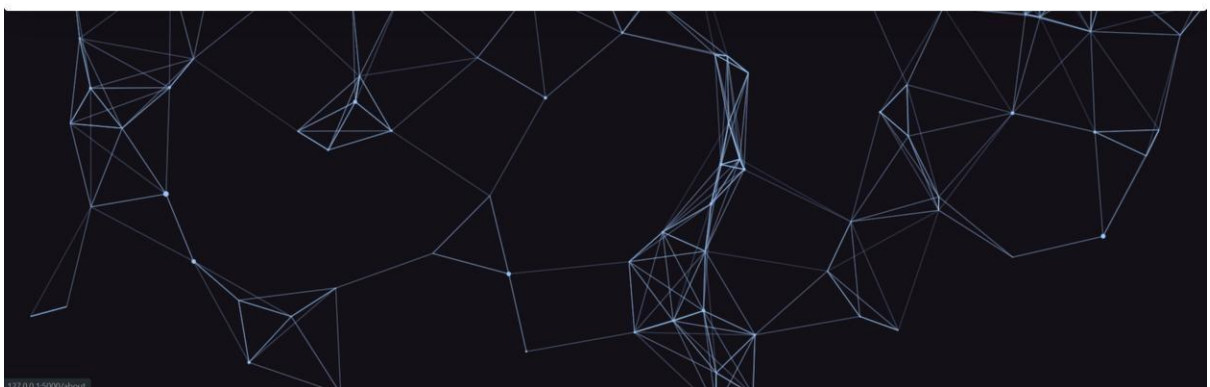


About Page:



About Page

This is about page for create about page usings Bootstrap assignment
This page is used to tell about the assignment that is given to the flask



Question-4,5:

4. Add the Sign in page and add the Signup Page with database connectivity

5. Use IBM Db2 as Database.

Solution:

app.py:

```
from flask import Flask, render_template, request, url_for, flash,
redirect
import ibm_db

app = Flask(__name__)
app.debug=True

conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=54a2f15b-5c0f-46df-
8954-
7e38e612c2bd.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=327
33;SECURITY=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=cj
177846;PWD=k3WDjLvi6S4zsDZi", '', '')

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

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

@app.route("/signup", methods=('GET', 'POST'))
def signup():
    if request.method == 'POST':
        name = request.form['firstname']
        email = request.form['femail']
        username = request.form['username']
        mobile = request.form['mobile']
        password = request.form['password']

        sql = "SELECT * FROM users WHERE name =? and username=?"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.bind_param(stmt,1,name)
        ibm_db.bind_param(stmt,2,username)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)

        if account:
```



```

        return render_template('registered.html')
    else:
        insert_sql = "INSERT INTO users VALUES (?, ?, ?, ?, ?)"
        prep_stmt = ibm_db.prepare(conn, insert_sql)
        ibm_db.bind_param(prepare_stmt, 1, name)
        ibm_db.bind_param(prepare_stmt, 2, email)
        ibm_db.bind_param(prepare_stmt, 3, username)
        ibm_db.bind_param(prepare_stmt, 4, mobile)
        ibm_db.bind_param(prepare_stmt, 5, password)
        ibm_db.execute(prepare_stmt)
        return render_template('success.html')

    return render_template('signup.html')

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

@app.route("/signin" , methods=('GET', 'POST'))
def signin():
    if request.method == 'POST':
        femail = request.form['femail']
        fpassword = request.form['password']

        sql = "SELECT * FROM users WHERE email =? and password=?"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.bind_param(stmt,1,femail)
        ibm_db.bind_param(stmt,2,fpassword)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)

        if account:
            return render_template('loginsuccess.html')
        else:
            return render_template('loginfailure.html')
    return render_template('signin.html')

if __name__ == '__main__':
    app.run()

```

base.html:

```

<!DOCTYPE html>
<head>
    <meta charset="utf-8">

```

```

    <meta name="viewport" content="width=device-width, initial-
scale=1">
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/css/bootstrap
.min.css" rel="stylesheet">
    <link
href="https://getbootstrap.com/docs/5.2/assets/css/docs.css"
rel="stylesheet">
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/js/bootstrap.b
undle.min.js"></script>
    {% block head %} {% endblock %}
</head>
<body>
    <body background="static/images/signup.png">
    <div class="shadow p-3 mb-5 rounded">
        <nav class="navbar navbar-expand-md navbar-dark bg-dark">
            <div class="container-fluid">
                <div class="navbar-collapse collapse w-100 order-1
order-md-0 dual-collapse2">
                    <ul class="navbar-nav me-auto">
                        <li class="nav-item active">
                            <a class="nav-link" href="home">Home</a>
                        </li>
                        <li class="nav-item">
                            <a class="nav-link"
href="about">About</a>
                        </li>
                    </ul>
                </div>
                <div class="mx-auto order-0">
                    <a class="navbar-brand mx-auto"
href="home">Personal Expense Tracker Application</a>
                    <button class="navbar-toggler" type="button"
data-bs-toggle="collapse" data-bs-target=".dual-collapse2">
                        <span class="navbar-toggler-icon"></span>
                    </button>
                </div>
                <div class="navbar-collapse collapse w-100 order-3
dual-collapse2">
                    <ul class="navbar-nav ms-auto">
                        <li class="nav-item">
                            <a class="nav-link"
href="signin">Login</a>
                        </li>
                        <li class="nav-item">

```

```

                                <a class="nav-link"
href="signup">Register</a>
                                </li>
                                </ul>
                                </div>
                                </div>
                                </nav>
                                </div>
                                {% block body %} {% endblock %}
</body>
</html>

```

signin.html:

```

{% extends "base.html"%}

{% block head %}
    <title>Sign In</title>
    <link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.13.0/css/all.min.css">
{% endblock %}

{% block body %}
    <form class="row g-3 needs-validation" novalidate novalidate
action = "{{ url_for('signin') }}" method = "POST">
        <div class="w-25 p-3 mx-auto shadow-lg p-3 mb-5 bg-body
rounded">
            <div class="mb-3" name="formpad">

                <label for="femail" class="form-label">Email:
</label>

                <input type="email" class="form-control"
name="femail" placeholder="Your Email" required>
                <div class="invalid-feedback">
                    Please enter valid email
                </div><br>

                <label for="password" class="form-label">Password :
</label>

                <input type="password" class="form-control"
name="password" placeholder="Your Password" required>
                <div class="invalid-feedback">
                    Please enter your password
                </div><br>

```

```

        <div class="col-12">
            <button class="btn btn-primary"
type="submit">Login</button>
        </div>
    </div>
</div>
</form>

<script>
    (function()
    {
        'use strict';
        window.addEventListener('load', function()
        {
            var forms = document.getElementsByClassName('needs-
validation');
            var validation = Array.prototype.filter.call(forms,
function(form)
            {
                form.addEventListener('submit', function(event)
                {
                    if (form.checkValidity() === false)
                    {
                        event.preventDefault();
                        event.stopPropagation();
                    }
                    form.classList.add('was-validated');
                }, false);
            });
        }, false);
    })();
</script>
{% endblock %}

```

signup.html:

```

{% extends "base.html"%}

{% block head %}
    <title>Signup</title>
{% endblock %}

{% block body %}
    <form class="row g-3 needs-validation" novalidate action = "{{
url_for('signup') }}" method = "POST">

```

```

<div class="shadow-lg p-3 mb-5 bg-body rounded w-25 p-3
mx-auto">
    <div class="mb-3" name="formpad">
        <label for="firstname" class="form-label">Name :
    </label>

        <input type="text" class="form-control"
name="firstname" placeholder="Your Name" required>
        <div class="invalid-feedback">
            Please enter your name
        </div><br>

        <label for="femail" class="form-label">Email:
    </label>

        <input type="email" class="form-control"
name="femail" placeholder="Your Email" required>
        <div class="invalid-feedback">
            Please enter valid email
        </div><br>

        <label for="username" class="form-label">Username
: </label>

        <input type="text" class="form-control"
name="username" placeholder="Your User Name" required>
        <div class="invalid-feedback">
            Please enter your username
        </div><br>

        <label for="mobile" class="form-label">Mobile :
    </label>

        <input type="text" class="form-control"
name="mobile" placeholder="Your mobile number" required>
        <div class="invalid-feedback">
            Please enter your mobile
        </div><br>

        <label for="password" class="form-label">Password
: </label>

        <input type="password" class="form-control"
name="password" placeholder="Your Password" onkeyup='check();'
required>

        <div class="invalid-feedback">
            Please enter your password
        </div><br>

        <label for="repassword" class="form-label">Re-
type password : </label>

```

```

        <input type="password" class="form-control"
name="repassword" placeholder="Re-type your Password"
onkeyup='check();'required>
        <div class="invalid-feedback">
            Please retype your password
        </div><br>

        <div class="col-12">
            <button class="btn btn-primary" type="submit"
onclick="matchPassword()">Register</button>
        </div>
    </div>
</div>
</form>

<script>
    (function()
    {
        'use strict';
        window.addEventListener('load', function()
        {
            var forms = document.getElementsByClassName('needs-
validation');
            var validation = Array.prototype.filter.call(forms,
function(form)
            {
                form.addEventListener('submit', function(event)
                {
                    if (form.checkValidity() === false)
                    {
                        event.preventDefault();
                        event.stopPropagation();
                    }
                    form.classList.add('was-validated');
                }, false);
            });
        }, false);
    });

</script>
{% endblock %}

```

SQL Code :

```

CREATE TABLE users (
    NAME VARCHAR(255),

```

```
email VARCHAR(255),  
username VARCHAR(255),  
mobile VARCHAR(255),  
password VARCHAR(255)  
);
```

Output:

Signin Page:

The screenshot shows a web browser window with the URL `127.0.0.1:5000/signin`. The page features a dark background with a white geometric pattern. At the top, there is a navigation bar with links for "Home" and "About", the application title "Personal Expense Tracker Application", and links for "Login" and "Register". The main content area contains a white login form with the following fields: "Email:" with a placeholder "Your Email", "Password:" with a placeholder "Your Password", and a blue "Login" button.

Signup Page:

The screenshot shows a web browser window with the URL `127.0.0.1:5000/signup`. The page features a dark background with a white geometric pattern. At the top, there is a navigation bar with links for "Home" and "About", the application title "Personal Expense Tracker Application", and links for "Login" and "Register". The main content area contains a white registration form with the following fields: "Name:" with a placeholder "Your Name", "Email:" with a placeholder "Your Email", "Username:" with a placeholder "Your User Name", "Mobile:" with a placeholder "Your mobile number", "Password:" with a placeholder "Your Password", and "Re-type password:" with a placeholder "Re-type your Password". A blue "Register" button is located at the bottom of the form.

Database Details:

The screenshot displays the IBM Db2 on Cloud web interface. The top navigation bar includes 'Load Data', 'Load History', 'Tables', 'Views', 'Indexes', 'Aliases', 'MQTs', 'Sequences', and 'Application objects'. The 'Tables' tab is active, showing a search bar and a table list. The 'USERS' table is selected, and its details are shown on the right.

Name	Schema	Properties
USERS	LYR80423	...

Table definition for 'USERS' (Approximate 1 rows (32.0 KB), Updated on 2022-11-21 19:09:18):

Name	Data type	Nullable	Length	Scale
NAME	VARCHAR	Y	255	0
EMAIL	VARCHAR	Y	255	0
USERNAME	VARCHAR	Y	255	0
MOBILE	VARCHAR	Y	255	0
PASSWORD	VARCHAR	Y	255	0

Buttons: 'New table', 'view data'.

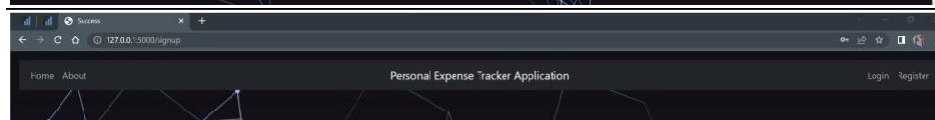
Registration Process:

If New User:

The screenshot shows the 'Personal Expense Tracker Application' registration page. The form fields are as follows:

- Name: Prem Kashyap Chalakamathi
- Email: nmani3008@gmail.com
- Username: Prem0046
- Mobile: 96606454
- Password: (masked with asterisks)
- Re-type password: (masked with asterisks)

A 'Register' button is located at the bottom of the form.



Registration successful...
Proceed to Login Page to sign in



If already registered User:

The image shows two screenshots of a web application. The top screenshot is the registration page, titled 'Personal Expense Tracker Application'. It features a dark background with a white geometric pattern. A white registration form is centered, containing fields for Name, Email, Username, Mobile, Password, and Re-type password, along with a 'Register' button. The bottom screenshot shows the 'Already Registered.....' message, followed by the instruction 'Proceed to Login Page to sign in' and a large image of the same white geometric pattern on a dark background.

Personal Expense Tracker Application

Home About Login Register

Name :
Prem Kashyap Chalakamarthi

Email:
nmmani3008@gmail.com

Username :
Prem0046

Mobile :
96686454

Password :

Re-type password :

Register

Already Registered.....
Proceed to Login Page to sign in

Login Process:

If already registered User:

The image shows a screenshot of the login page, titled 'Personal Expense Tracker Application'. It features a dark background with a white geometric pattern. A white login form is centered, containing fields for Email and Password, along with a 'Login' button.

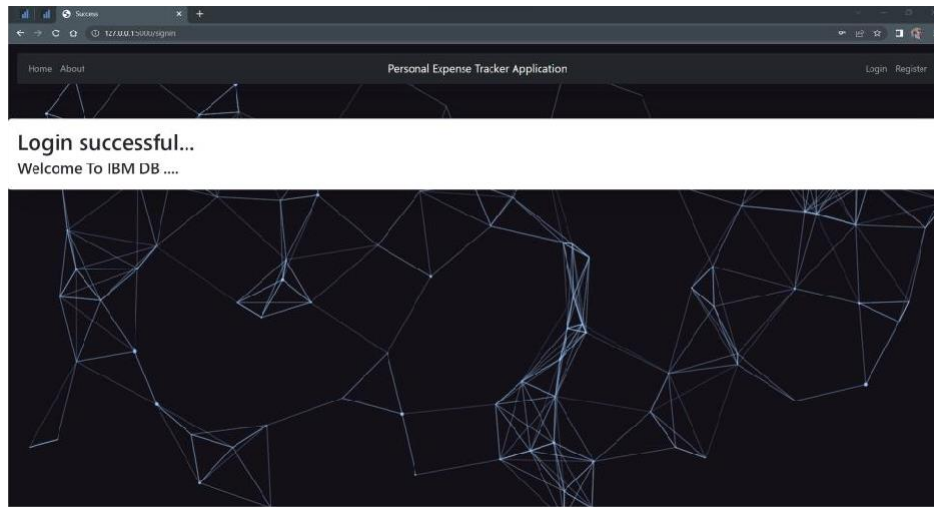
Personal Expense Tracker Application

Home About Login Register

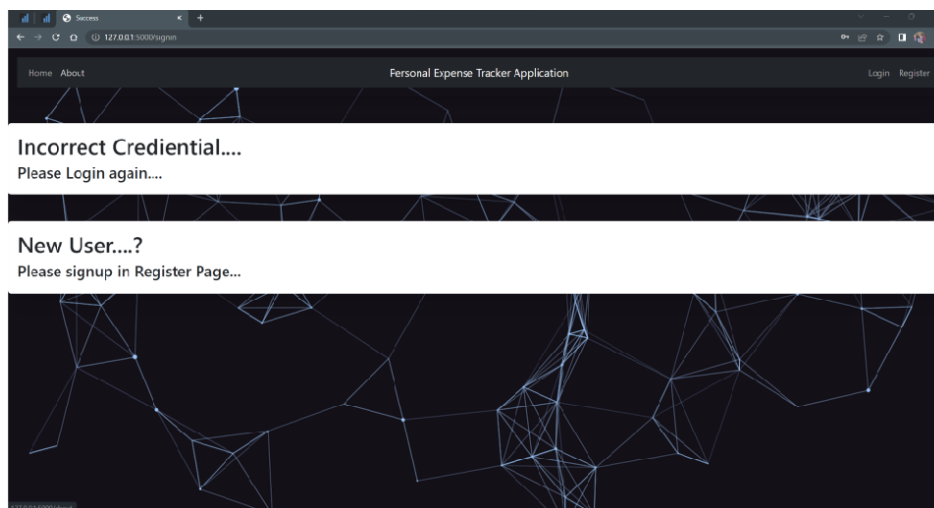
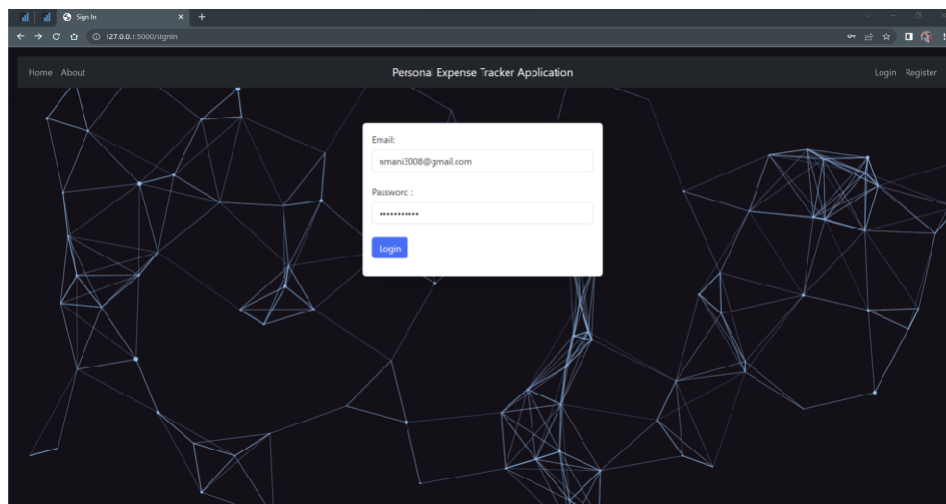
Email:
nmmani3008@gmail.com

Password :

Login



If Not Registered or Invalid Credentials:



Some User Deatails in IBM-db2:

IBM Db2 on Cloud

Load DataLoad HistoryTablesViewsIndexesAliasesMQIsSequencesApplication objects

LXY80423.USERS

Back

Export to CSV

NAME	EMAIL	USERNAME	MOBILE	PASSWORD
Dinosh Kumar	Dkkumar@gmail.com	Dinosh_445	669788796	safsaf
Nivin	Amxin@gmail.com	Aroliu_3243	5677699	sftrtsft
Prem Kashyap Chilikamarthi	amari3008@gmail.com	Frem0046	96686454	retete:town
Sai	sai@gamil.com	Sai_123	456748	sdfsf
prem	hello@gmail.com	Fre#4	453452	sfa