

**Assignment -2**  
Flask Application Development

Assignment Date	10 October 2022
Student Name	Chilakamarthi Prem Kashyap
Student Roll Number	412519104023
Maximum Marks	2 Marks

**Question-1:**

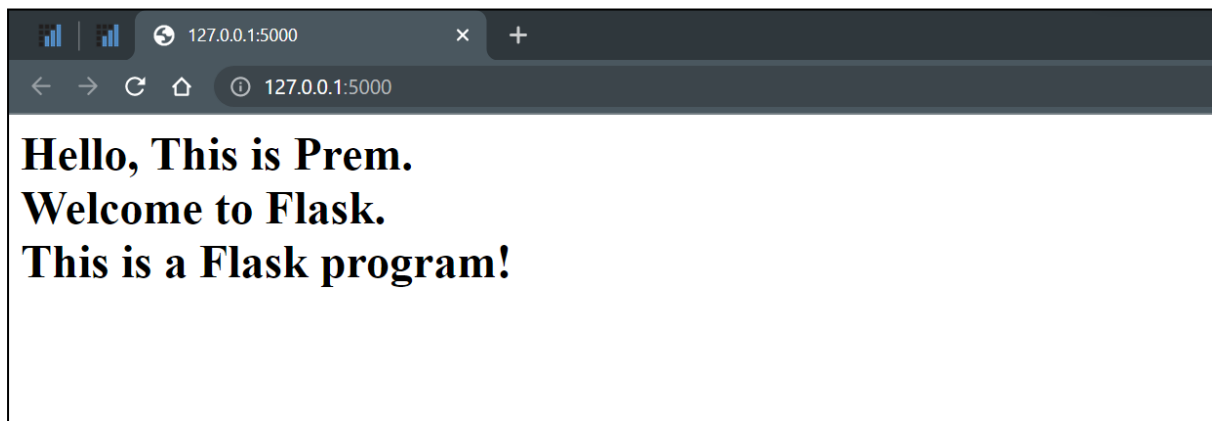
Create a Flask App

[Solution:](#)

[app.py:](#)

```
from flask import Flask
app = Flask(__name__)
@app.route("/")
def hello_world():
    return "<h1>Hello, This is Prem. <br> Welcome to Flask.
    <br>This is a 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 Prem. <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>

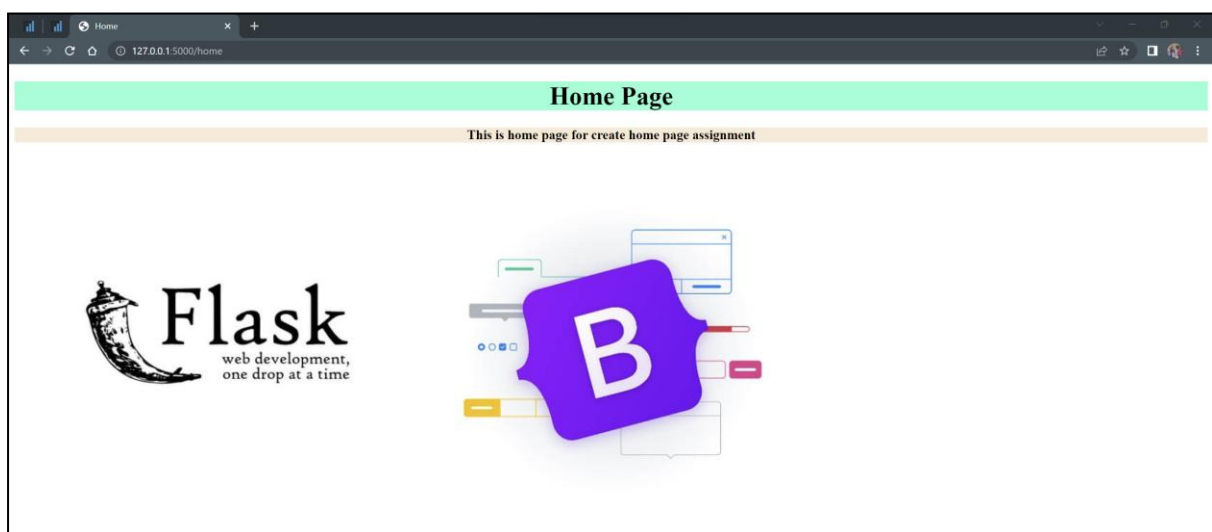
```

[about.html:](#)

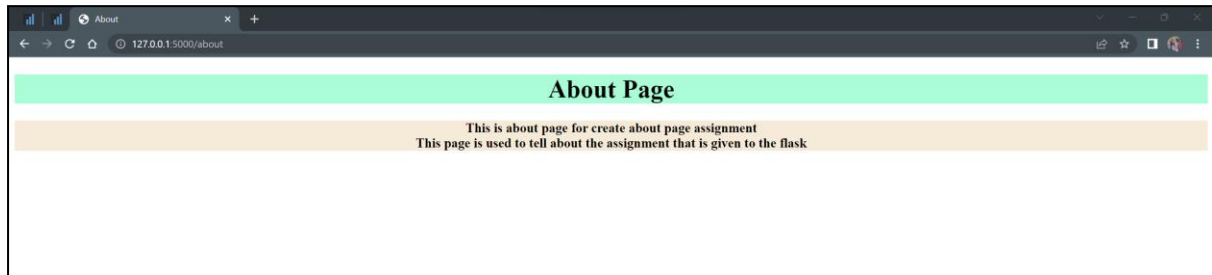
```
<!DOCTYPE html>
<head>
  <title>
    About
  </title>
  <link rel="stylesheet" href="static\css\about.css">
</head>
<body>
  <div class="titlediv">
    <h1>About Page</h1>
  </div>
  <div class="bodydiv">
    <h3>
      This is about page for create about page assignment
    <br>
      This page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

```

```
        </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 %}
```

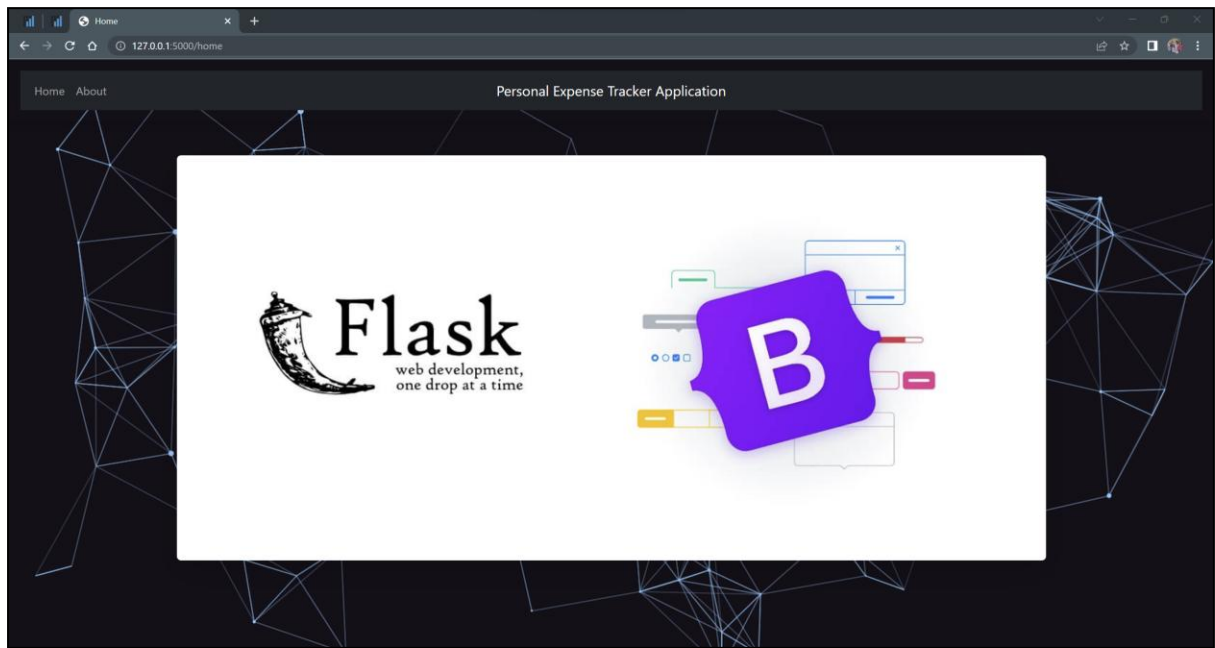
#### about.html:

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

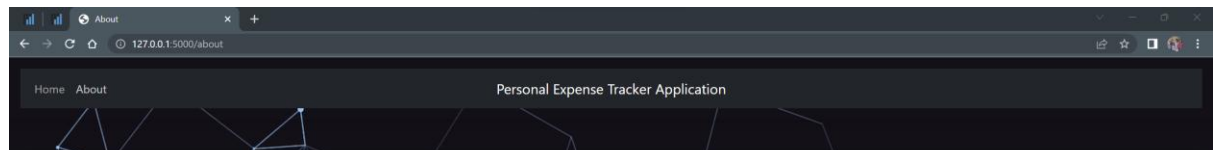
{% block body %}
    <div class="shadow-lg p-3 mb-5 bg-body rounded p-3 mx-auto">
        <h1 class="d-flex justify-content-center">About Page</h1>
        <h3>
            This is about page for create about page assignment
        <br>
            This page is used to tell about the assignment that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

**Output:**

**Home Page:**

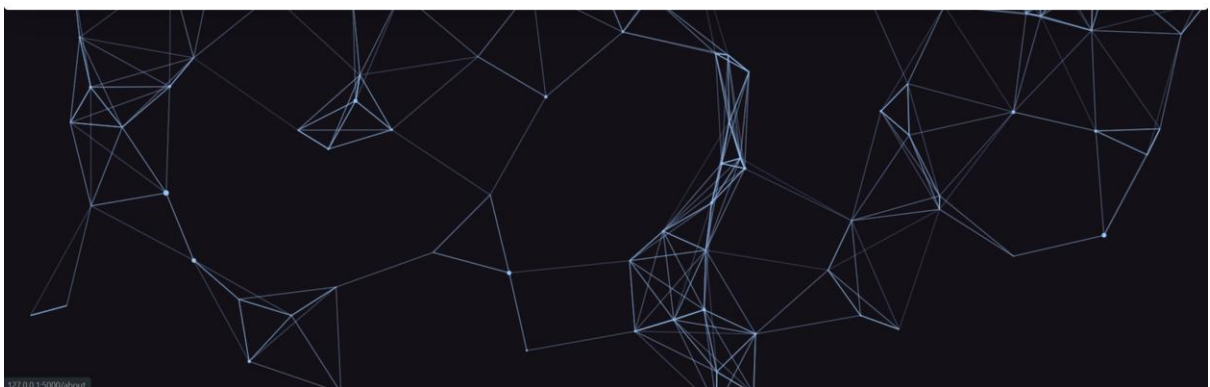


**About Page:**



### 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=ba99a9e6-d59e-4883-
8fc0-
d6a8c9f7a08f.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=3132
1;SECURITY=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=lx8
0423;PWD=mVc9qsjCCpp7hTCi", '', '')

@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 has a dark background with a white geometric pattern. At the top, there is a navigation bar with links for `Home`, `About`, and `Login Register`. The main content area features a white login form with the following fields: `Email:` (with placeholder `Your Email`), `Password :` (with 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 has a dark background with a white geometric pattern. At the top, there is a navigation bar with links for `Home`, `About`, and `Login Register`. The main content area features a white registration form with the following fields: `Name :` (with placeholder `Your Name`), `Email:` (with placeholder `Your Email`), `Username :` (with placeholder `Your User Name`), `Mobile :` (with placeholder `Your mobile number`), `Password :` (with placeholder `Your Password`), `Re-type password :` (with placeholder `Re-type your Password`), and a blue `Register` button.

## 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 definition is shown on the right.

**Table definition**

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

Approximate 1 rows (32.0 KB)  
Updated on 2022-11-01 19:09:18

View data

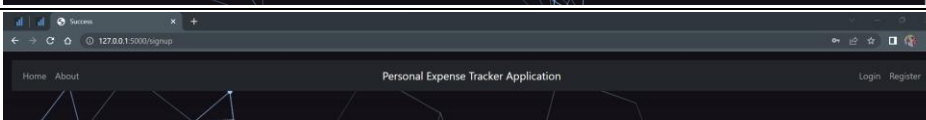
## Registration Process:

### If New User:

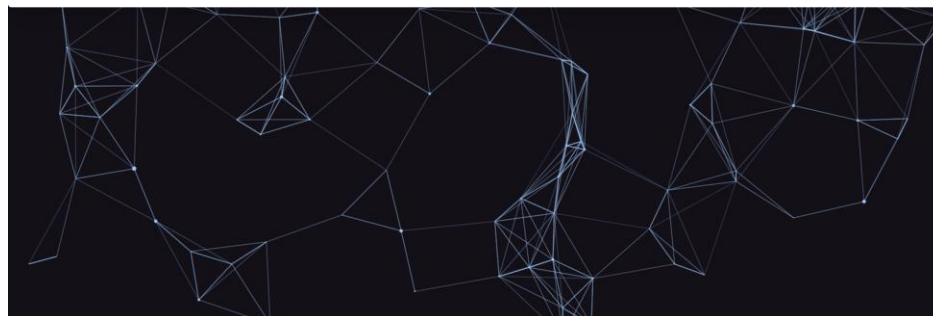
The screenshot shows the registration form of the 'Personal Expense Tracker Application'. The form is titled 'Personal Expense Tracker Application' and has a 'Login Register' link. The form fields are:

- Name: Prem Kashyap Chilakamarthi
- Email: rmani3008@gmail.com
- Username: Prem0046
- Mobile: 96686454
- Password: \*\*\*\*\*
- Re-type password: \*\*\*\*\*

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



Registration successful...  
Proceed to Login Page to signin ....

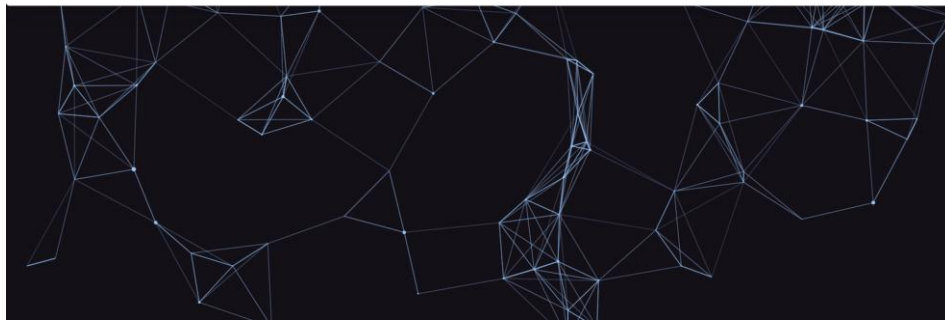




### If already registered User:

The screenshot shows a web browser window with the URL 127.0.0.1:5000/signup. The page title is "Personal Expense Tracker Application". The navigation bar includes "Home", "About", "Login", and "Register". The registration form is displayed with the following fields: Name (Prem Kasyap Chilakamarthi), Email (nmani3008@gmail.com), Username (Prem0046), Mobile (96686454), Password (masked with asterisks), and Re-type password (masked with asterisks). A blue "Register" button is at the bottom of the form.

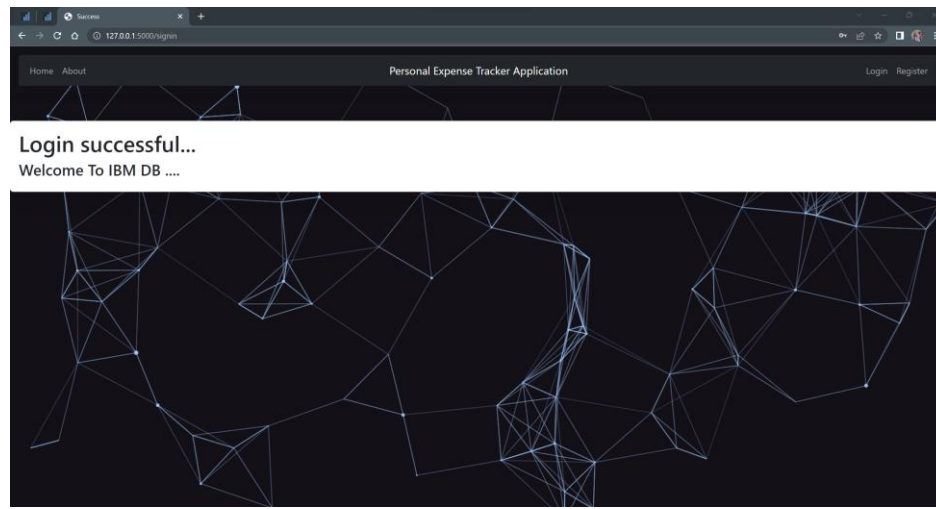
Already Registered.....  
Proceed to Login Page to sign in ....



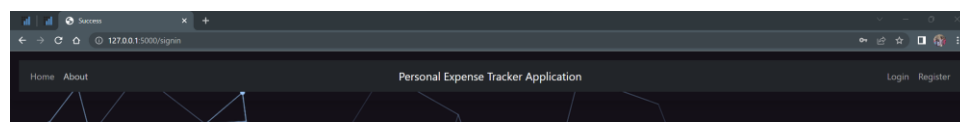
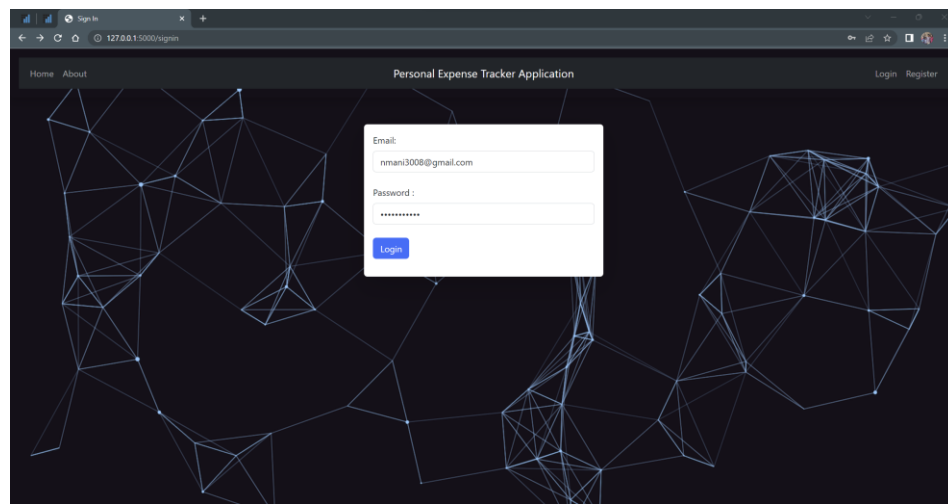
### Login Process:

### If already registered User:

The screenshot shows a web browser window with the URL 127.0.0.1:5000/signin. The page title is "Personal Expense Tracker Application". The navigation bar includes "Home", "About", "Login", and "Register". The login form is displayed with the following fields: Email (nmani3008@gmail.com) and Password (masked with asterisks). A blue "Login" button is at the bottom of the form.



### If Not Registered or Invalid Credentials:



Some User Deatails in IBM-db2:

IBM Db2 on Cloud

Load DataLoad HistoryTablesViewsIndexesAliasesMQTSSequencesApplication objects

LXY80423.USERS

Back

Export to CSV

NAME	EMAIL	USERNAME	MOBILE	PASSWORD
Dinesh Kumar	Dkkumar@gmail.com	Dinesh_445	689788796	safsaff
Nivin	Arokia@gmail.com	Arolia_3243	5677699	safdasff
Prem Kashyap Chilakamarthi	nmani3008@gmail.com	Prem0046	96686454	reterertewt
Sai	sai@gamil.com	Sai_123	456748	sdafsf
prem	hello@gmail.com	Pre#4	453452	sfa