

Assignment -2

IBM CLOUD DB2

Assignment Date	29 SEPTEMBER 2022
Student Name	SRIJISH R
Student Roll Number	1905138
Maximum Marks	2 Marks

Questions:

1. Create User table with user with email, username, roll number, password.

The screenshot shows the IBM Db2 on Cloud console. The 'Tables' tab is selected, displaying a list of tables. A table named 'USER' is listed under the schema 'DRQ17778'. The 'Table definition' panel on the right shows the structure of the 'USER' table:

Name	Data type	Nullable	Length	Scale
EMAIL	CHAR	Y	100	0
USERNAME	CHAR	Y	100	0
ROLLNUMBER	INTEGER	Y		0
PASSWORD	VARCHAR	Y	32	0

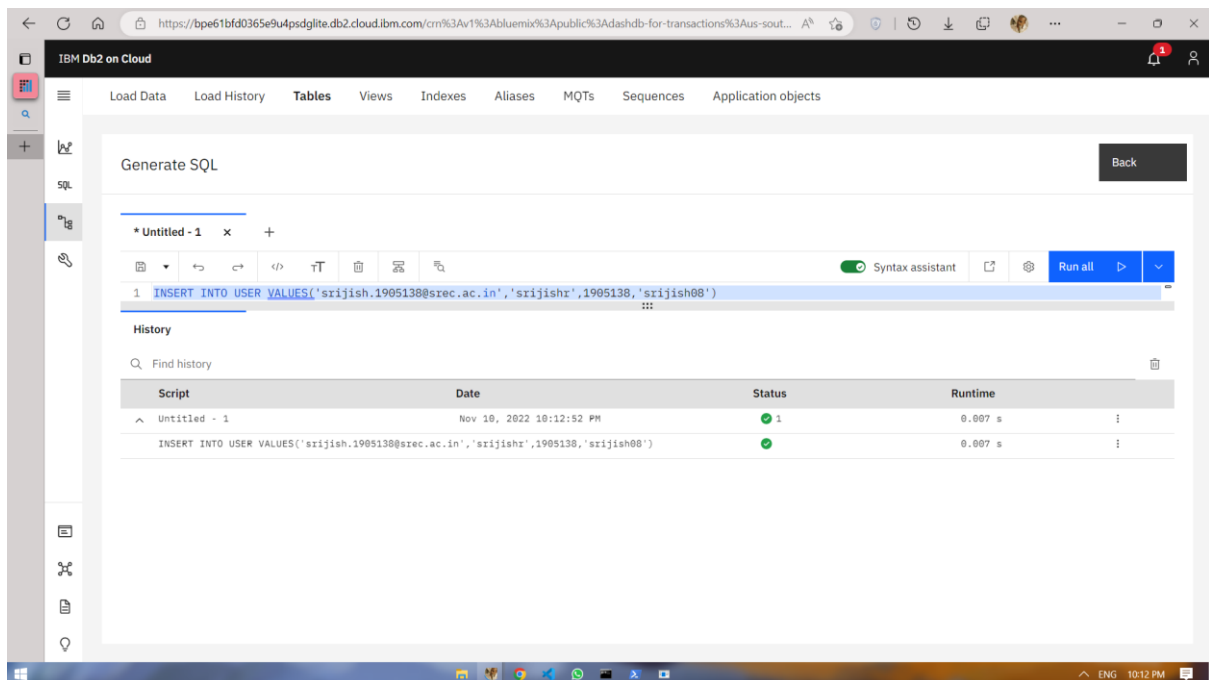
The screenshot shows the IBM Db2 on Cloud console. The 'Table definition' panel for the 'USER' table is displayed. The table structure is shown as follows:

EMAIL	USERNAME	ROLLNUMBER	PASSWORD
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Below the table structure, there is a message: "There is no data here yet".

2. Perform UPDATE, DELETE Queries with user table.

UPDATE TABLE:-



IBM Db2 on Cloud

Load Data Load History **Tables** Views Indexes Aliases MQTs Sequences Application objects

Generate SQL Back

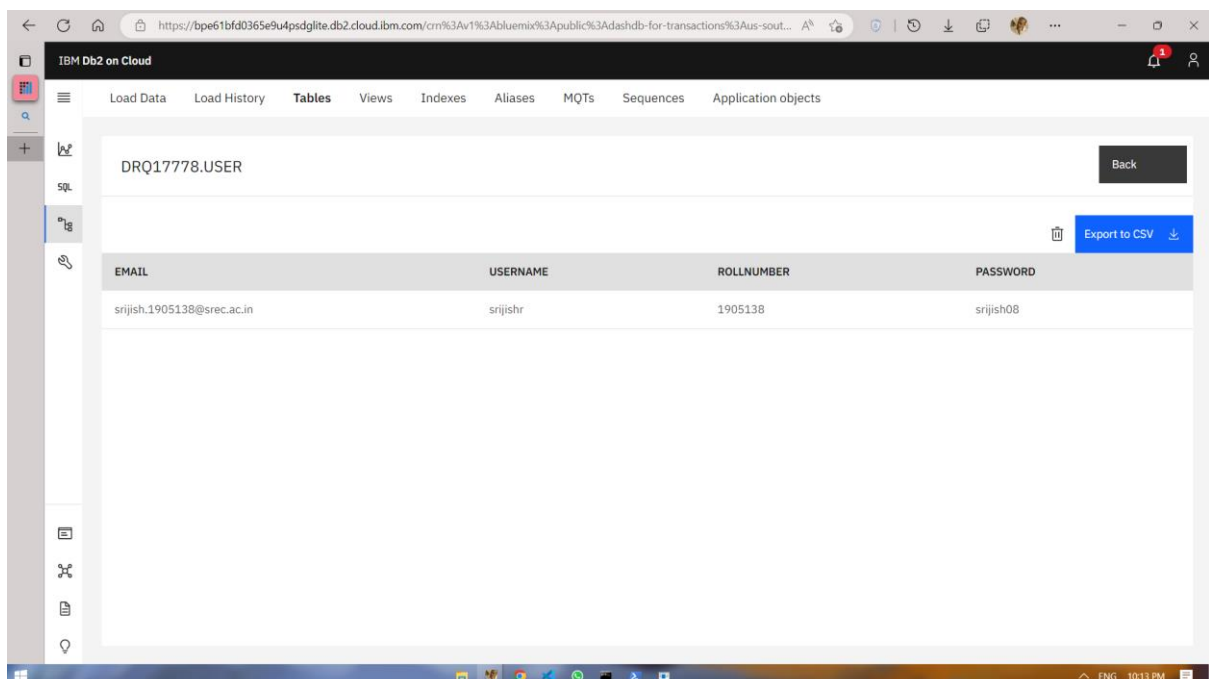
*Untitled - 1 x +

1 INSERT INTO USER VALUES('srijish.1905138@srec.ac.in','srijishr',1905138,'srijish08')

History

Find history

Script	Date	Status	Runtime
Untitled - 1	Nov 10, 2022 10:12:52 PM	1	0.007 s
INSERT INTO USER VALUES('srijish.1905138@srec.ac.in','srijishr',1905138,'srijish08')			0.007 s



IBM Db2 on Cloud

Load Data Load History **Tables** Views Indexes Aliases MQTs Sequences Application objects

DRQ17778.USER Back

Export to CSV

EMAIL	USERNAME	ROLLNUMBER	PASSWORD
srijish.1905138@srec.ac.in	srijishr	1905138	srijish08

DELETE TABLE:-

The screenshot shows 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 selected, displaying a table named 'DRQ17778.USER'. The table has four columns: 'EMAIL', 'USERNAME', 'ROLLNUMBER', and 'PASSWORD'. A single row of data is visible.

EMAIL	USERNAME	ROLLNUMBER	PASSWORD
srijish.1905138@srec.ac.in	srijishr	1905138	srijish08

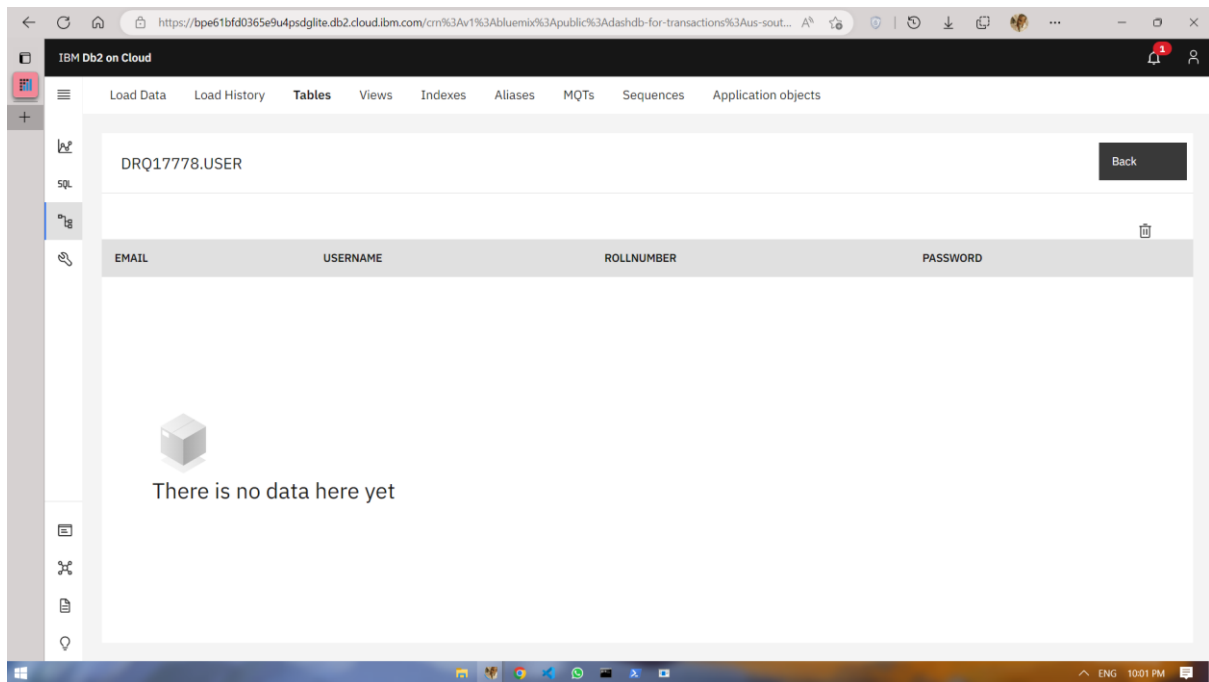
Buttons for 'Back' and 'Export to CSV' are visible in the top right corner of the table view.

The screenshot shows the 'Generate SQL' screen in the IBM Db2 on Cloud web interface. The 'Syntax assistant' is enabled. The SQL editor contains the following statement:

```
1 DELETE FROM USER WHERE ROLLNUMBER = 1905138;
```

Below the editor is a 'History' table showing the execution of the script.

Script	Date	Status	Runtime
Untitled - 1	Nov 10, 2022 10:14:35 PM	1	0.006 s
DELETE FROM USER WHERE ROLLNUMBER = 1905138			0.006 s



3. Connect python code to db2.

NOTE: - Question 4 contains Question 3 answer

4. Create a flask app with registration page, login page and welcome page. By default load the registration page once the user enters all the fields store the data in database and navigate to login page authenticate user username and password. If the user is valid show the welcome page

Answers

App.py

```

File Edit Selection View Go Run Terminal Help
app.py - SRC2 - Visual Studio Code (Administrator)

1 from flask import Flask, render_template, request, redirect, url_for, session
2 import ibm_db
3 import re
4
5 app = Flask(__name__)
6
7 app.secret_key = 'a'
8
9 conn = ibm_db.connect("DATABASE=#;HOSTNAME=#;PORT=#;USERNAME=#;PASSWORD=#;SECURITY=SSL;SSLSERVERCERTIFICATE=DigitCertGlobalRootCA.crt", "", "")
10
11 @app.route('/', methods=['GET', 'POST'])
12 def register():
13     msg = ''
14     if request.method == 'POST':
15         username = request.form['username']
16         email = request.form['email']
17         password = request.form['password']
18         sql = "SELECT * FROM users WHERE username =?"
19         stmt = ibm_db.prepare(conn, sql)
20         ibm_db.bind_param(stmt, 1, username)
21         ibm_db.execute(stmt)
22         account = ibm_db.fetch_assoc(stmt)
23         print(account)
24         if account:
25             msg = 'Account already exists !'
26         elif not re.match(r'([a-z0-9]+@[a-z0-9]+\.[a-z]+)', email):
27             msg = 'Invalid email address !'
28         elif not re.match(r'[A-Za-z0-9]+', username):
29             msg = 'name must contain only characters and numbers !'
30         else:
31             insert_sql = "INSERT INTO users VALUES (?, ?, ?)"
32             prep_stmt = ibm_db.prepare(conn, insert_sql)
33             ibm_db.bind_param(prepare_stmt, 1, username)
34             ibm_db.bind_param(prepare_stmt, 2, email)
35             ibm_db.bind_param(prepare_stmt, 3, password)
36             ibm_db.execute(prepare_stmt)
37             msg = 'You have successfully registered !'
38         elif request.method == 'POST':
39             msg = 'Please fill out the form !'
40         return render_template('register.html', msg=msg)
41
42
43 @app.route('/login', methods=['GET', 'POST'])
44 def login():
45     global userid
46     msg = ''
47

```

```
File Edit Selection View Go Run Terminal Help
app.py - SRC - Visual Studio Code [Administrator]

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15
16 msg = "Account already exists !"
17 elif re.match("[0-9]{4,10}@.*", email):
18     msg = "Invalid email address !"
19 elif not re.match("[A-Za-z0-9-]*", username):
20     msg = "Name must contain only characters and numbers !"
21 else:
22     insert_sql = "INSERT INTO users VALUES (?, ?, ?, ?)"
23     prep_stmt = db.cursor().prepare(insert_sql)
24     db.cursor().bind_param(prepare_stmt, 1, email)
25     db.cursor().bind_param(prepare_stmt, 2, username)
26     db.cursor().bind_param(prepare_stmt, 3, rollnumber)
27     db.cursor().bind_param(prepare_stmt, 4, password)
28     db.cursor().execute(prepare_stmt)
29     msg = "You have successfully registered !"
30
31 if request.method == "POST":
32     msg = "Please fill out the form !"
33     return render_template("register.html", msg=msg)
34
35 @app.route("/login", methods=['GET', 'POST'])
36 def login():
37     global sessid
38     msg = ""
39
40 if request.method == "POST":
41     username = request.form["username"]
42     password = request.form["password"]
43     sql = "SELECT * FROM users WHERE username = ? AND password = ?"
44     stat = db.cursor().prepare(sql)
45     db.cursor().bind_param(stat, 1, username)
46     db.cursor().bind_param(stat, 2, password)
47     db.cursor().execute(stat)
48     account = db.cursor().fetch_one(stat)
49     print(account)
50     if account:
51         session["loggedin"] = True
52         sessid = account["SESSIONID"]
53         session["username"] = account["USERNAME"]
54         msg = "logged in successfully !"
55     else:
56         msg = "Incorrect username / password !"
57     return render_template("login.html", msg=msg)
58
59 if __name__ == "__main__":
60     app.run(host="0.0.0.0")
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Login.html

```
login.html - SRC - Visual Studio Code [Administrator]
File Edit Selection View Go Run Terminal Help
login.html X register.html homepage.html app.py style.css style2.css style3.css
templates > login.html
1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5   <meta charset="UTF-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <meta name="viewport" content="width=device-width, initial-scale=1.0">
8   <title>Smart Fashion Recommender</title>
9   <!-- favicon -->
10  <!-- <link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-icon" -->
11  <!-- <link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon" -->
12  <link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-32x32.png">
13  <!-- bootstrap css cdn -->
14  <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
15    integrity="sha384-JcKb8q3XJjq0NqVXdqSOZvY63Pp8DmV2B518v1K01017nFQMjP2p4Qu51X" crossorigin="anonymous">
16  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.css">
17  <!-- css stylesheet -->
18  <link rel="stylesheet" href="/static/css/style2.css">
19  <!-- font styles cdn -->
20  <link rel="preconnect" href="https://fonts.gstatic.com">
21  <link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap" rel="stylesheet">
22  <link href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap" rel="stylesheet">
23 </head>
24 <body>
25   <div class="login text-center mt-5">
26     <form action="/login" method="post">
27       <h2 class="form-text-h2">Login</h2>
28       <br>
29       <div class="form-group mb-3">
30         <label class="label" for="username">Username</label>
31         <input type="text" class="form-control" placeholder="Username" name="username" required minlength="6">
32       </div>
33       <div class="form-group mb-3">
34         <label class="label" for="password">Password</label>
35         <input type="password" class="form-control" placeholder="Password" name="password" required minlength="6">
36       </div>
37       <div>
38         <button style="background-color: white;color:black;border-color:#dcdddc" type="submit" id="button" class="btn btn-primary"> login </button>
39       </div>
40       <div class="note mt-3 text-center">
41         <br>
42         <p> Don't have an account ? <a href="/"/>Click here to register </a> </p>
43       </div>
44     </form>
45   </div>
46 </body>
47 </html>
```

Style.css

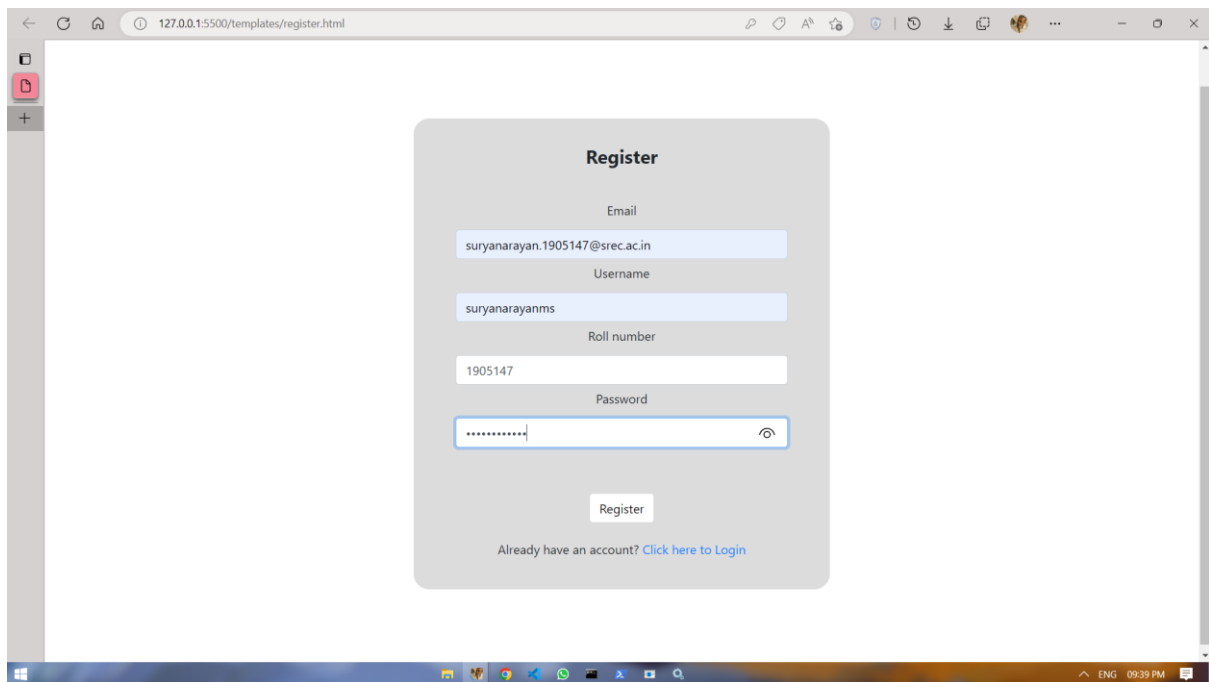
```
style.css - SRC - Visual Studio Code [Administrator]
File Edit Selection View Go Run Terminal Help
login.html X register.html homepage.html app.py style.css X style2.css style3.css
static > css > # style.css > form
1 {
2   margin: 0;
3   padding: 0;
4 }
5
6
7
8 body {
9   background-color: #ffffff;
10  display: flex;
11  flex-direction: column;
12  align-items: center;
13  justify-content: center;
14 }
15
16 form {
17  display: flex;
18  flex-direction: column;
19  align-items: center;
20  justify-content: center;
21  background-color: #dcdddc;
22  width: 400px;
23  height: 200px;
24  border-radius: 20px;
25  margin: 10px;
26  gap: 10px;
27 }
28
29 h2 {
30   font-size: large;
31   font-weight: bold;
32 }
33
34 input {
35   width: 80% !important;
36 }
37
38 div {
39   display: flex;
40   align-items: center;
41   justify-content: center;
42   flex-direction: column;
43   width: 80%;
44 }
45
46 .form-text-hk {
47   font-size: small;
48   padding-bottom: 10px;
49 }
50
51 .form-text-h2 {
52   font-size: x-large;
53   padding-top: 10px;
54 }
```

```
File Edit Selection View Go Run Terminal Help style2.css - SRC - Visual Studio Code [Administrator]
style2.css
1 {
2   margin: 0;
3   padding: 0;
4 }
5
6
7 body {
8   background-color: #white;
9   display: flex;
10  flex-direction: column;
11  align-items: center;
12  justify-content: center;
13 }
14
15 form {
16   display: flex;
17   flex-direction: column;
18   align-items: center;
19   justify-content: center;
20   background-color: #f0f0f0;
21   width: 400px;
22   height: 500px;
23   border-radius: 20px;
24   margin: 100px;
25   gap: 10px;
26 }
27
28
29 h2 {
30   font-size: larger;
31   font-weight: bolder;
32 }
33
34 input {
35   width: 80% !important;
36 }
37
38 div {
39   display: flex;
40
41   align-items: center;
42   justify-content: center;
43   flex-direction: column;
44   width: 80%;
45 }
46
47 .form-text-vk {
48   font-size: small;
49   padding-bottom: 10px;
50 }
51
52 .form-text-h2 {
53   font-size: x-large;
54   padding-top: 10px;
55 }
```

```
File Edit Selection View Go Run Terminal Help style3.css - SRC - Visual Studio Code [Administrator]
style3.css
1 {
2   margin: 0;
3   padding: 0;
4 }
5
6
7 body {
8   background-color: #white;
9   display: flex;
10  flex-direction: column;
11  align-items: center;
12  justify-content: center;
13 }
14
15 form {
16   display: flex;
17   flex-direction: column;
18   align-items: center;
19   justify-content: center;
20   background-color: #f0f0f0;
21   width: 400px;
22   height: 500px;
23   border-radius: 20px;
24   margin: 100px;
25   gap: 10px;
26 }
27
28
29 h2 {
30   font-size: larger;
31   font-weight: bolder;
32 }
33
34 input {
35   width: 80% !important;
36 }
37
38 div {
39   display: flex;
40
41   align-items: center;
42   justify-content: center;
43   flex-direction: column;
44   width: 80%;
45 }
46
47 .form-text-vk {
48   font-size: small;
49   padding-bottom: 10px;
50 }
51
52 .form-text-h2 {
53   font-size: x-large;
54   padding-top: 10px;
55 }
```

Output:-

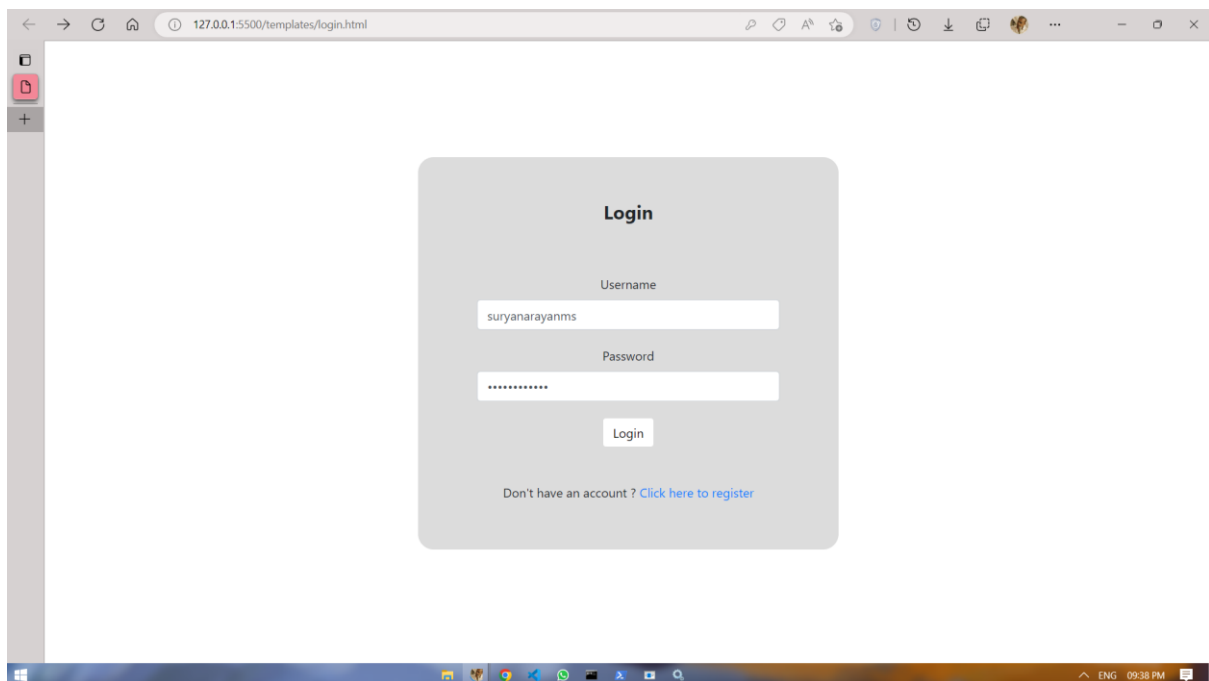
Registration page:-



The screenshot shows a web browser window with the address bar displaying "127.0.0.1:5500/templates/register.html". The browser interface includes a back button, a refresh button, and a search icon. The registration form is centered on the page and has a light gray background. It contains the following fields and elements:

- Register** (Section Header)
- Email** (Label):
- Username** (Label):
- Roll number** (Label):
- Password** (Label): (with an eye icon for toggling visibility)
- Register** (Submit Button)
- Already have an account? [Click here to Login](#)** (Link)

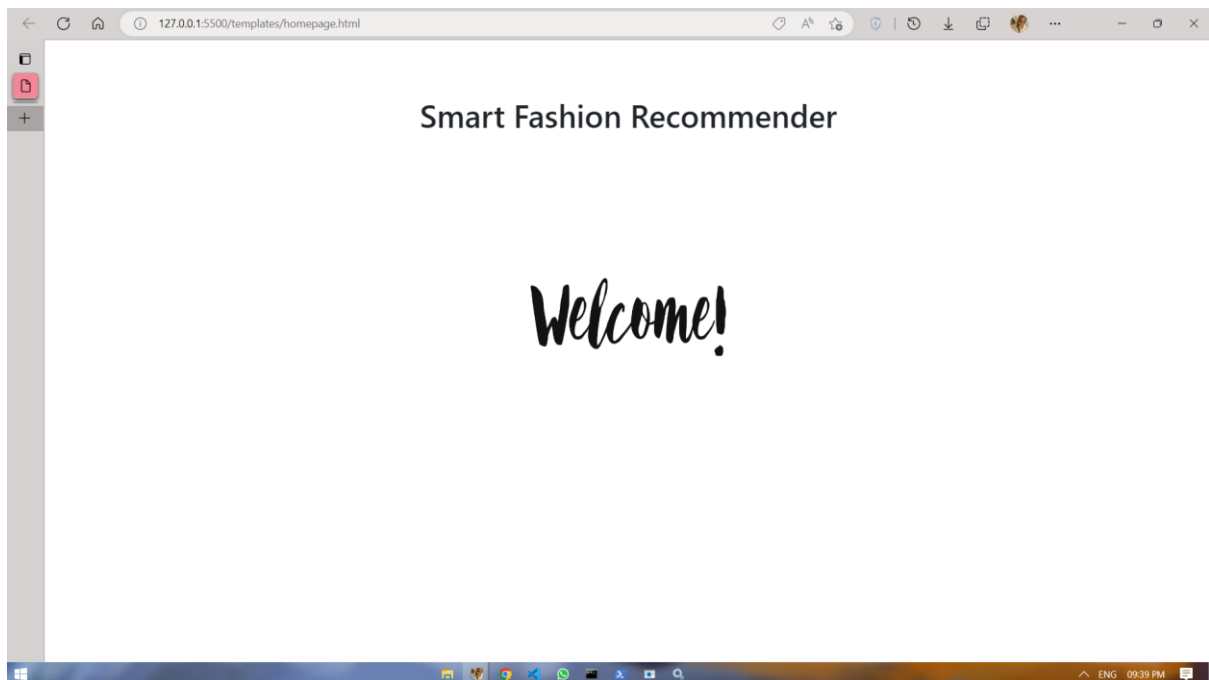
Login Page:-



The screenshot shows a web browser window with the address bar displaying "127.0.0.1:5500/templates/login.html". The browser interface includes a back button, a refresh button, and a search icon. The login form is centered on the page and has a light gray background. It contains the following fields and elements:

- Login** (Section Header)
- Username** (Label):
- Password** (Label):
- Login** (Submit Button)
- Don't have an account? [Click here to register](#)** (Link)

Welcome Page:-



Data Base Table:-

