

Assignment -2

IBM CLOUD DB2

Assignment Date	29 September 2022
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Maximum Marks	2 Marks

Questions:

The screenshot shows the IBM Db2 on Cloud web interface. The 'Tables' tab is active, displaying a list of tables in the VMX18183 schema. The 'USERTABLE' is selected. The 'Table definition' pane on the right shows the structure of 'USERTABLE' with the following columns:

Name	Data type	Nullable	Length	Scale
USERNAME	VARCHAR	Y	255	0
ROLLNUMBER	VARCHAR	Y	255	0
EMAIL	VARCHAR	Y	255	0
PWD	VARCHAR	Y	255	0

A 'View data' button is visible at the bottom of the table definition pane.

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

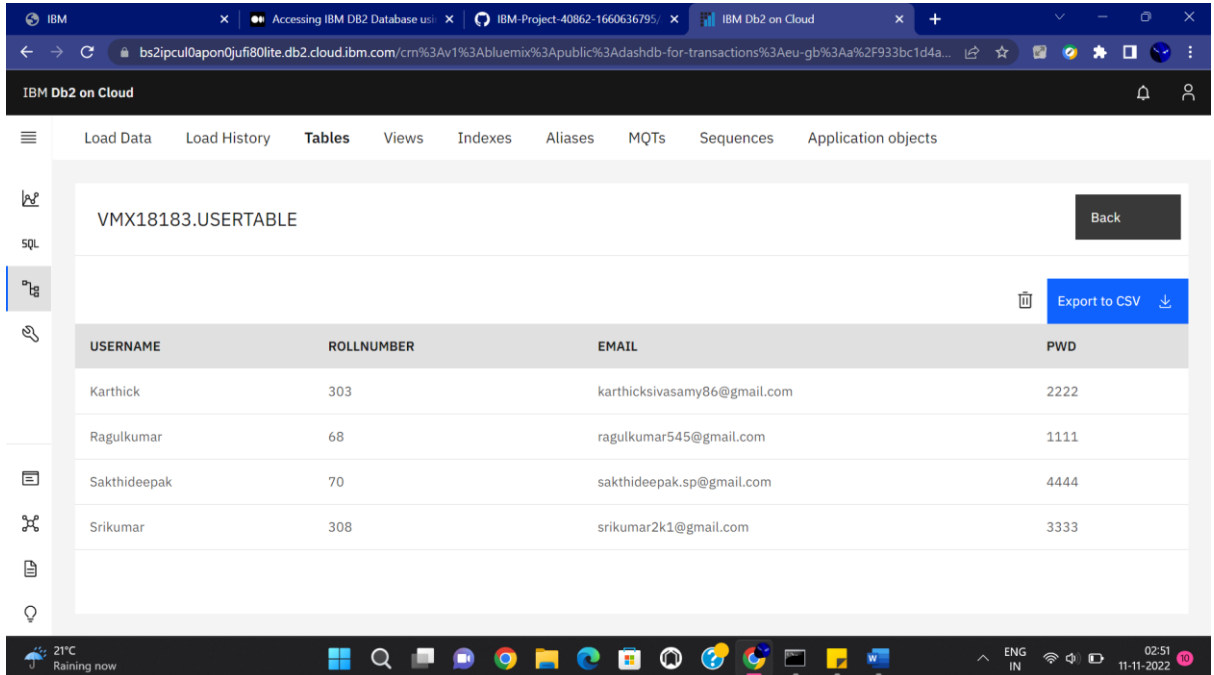
The screenshot shows the IBM Db2 on Cloud web interface with the SQL editor open. The editor contains the following SQL statement:

```
1 INSERT INTO usertable values ('Ragul Kumar',68,'ragulkumar545@gmail.com','1111');
2 INSERT INTO usertable values ('Karthick',303,'karthicksivasamy86@gmail.com','2222');
3 INSERT INTO usertable values ('Srikumar',308,'srikumar2k1@gmail.com','3333');
4 INSERT INTO usertable values ('Sakthideepak',70,'sakthideepak.sp@gmail.com','4444')
5
```

The 'History' tab is open, showing the execution history of the script. The table below summarizes the execution results:

Script	Date	Status	Runtime
ass-2	Nov 11, 2022 2:50:30 PM	✓ 4	0.024 s
INSERT INTO usertable values ('Ragul Kumar',68,'ragulku...		✓	0.008 s
INSERT INTO usertable values ('Karthick',303,'karthick...		✓	0.006 s
INSERT INTO usertable values ('Srikumar',308,'srikumar...		✓	0.005 s

2. Perform UPDATE,DELETE Queries with user 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 'VMX18183.USERTABLE'. The table has four columns: 'USERNAME', 'ROLLNUMBER', 'EMAIL', and 'PWD'. The table contains four rows of data. A 'Back' button is in the top right, and an 'Export to CSV' button is in the top right of the table area. The bottom of the screen shows a Windows taskbar with various application icons and a system tray showing the date and time.

USERNAME	ROLLNUMBER	EMAIL	PWD
Karthick	303	karthicksivasamy86@gmail.com	2222
Ragulkumar	68	ragulkumar545@gmail.com	1111
Sakthideepak	70	sakthideepak.sp@gmail.com	4444
Srikumar	308	srikumar2k1@gmail.com	3333

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

```
from flask import Flask, render_template, request, redirect, url_for, session
import ibm_db
import re

app = Flask(__name__)

app.secret_key = 'a'

conn = ibm_db.connect(
    "DATABASE=bludb;HOSTNAME=fbd88901-ebdb-4a4f-a32e-
    9822b9fb237b.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32731;USERNAM
```

```
E=dtP46044;PASSWORD=95soX0sZGhb4ToUj;SECURITY=SSL;SSLSERVERCERTIFICATE=DigiC  
ertGlobalRootCA.crt;","","")
```

```
@app.route("/", methods=['GET', 'POST'])  
def register():  
    msg = "  
    if request.method == 'POST':  
        username = request.form['username']  
        email = request.form['email']  
        password = request.form['password']  
        sql = "SELECT * FROM users WHERE username =?"  
        stmt = ibm_db.prepare(conn, sql)  
        ibm_db.bind_param(stmt, 1, username)  
        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]+', username):  
            msg = 'name must contain only characters and numbers !'  
        else:  
            insert_sql = "INSERT INTO users VALUES (?, ?, ?)"  
            prep_stmt = ibm_db.prepare(conn, insert_sql)  
            ibm_db.bind_param(prepare_stmt, 1, username)  
            ibm_db.bind_param(prepare_stmt, 2, email)  
            ibm_db.bind_param(prepare_stmt, 3, password)  
            ibm_db.execute(prepare_stmt)  
            msg = 'You have successfully registered !'  
    elif request.method == 'POST':  
        msg = 'Please fill out the form !'  
    return render_template('register.html', msg=msg)
```

```
@app.route('/login', methods=['GET', 'POST'])  
def login():  
    global userid  
    msg = "  
  
    if request.method == 'POST':  
        username = request.form['username']  
        password = request.form['password']  
        sql = "SELECT * FROM users WHERE username =? AND password=?"  
        stmt = ibm_db.prepare(conn, sql)  
        ibm_db.bind_param(stmt, 1, username)  
        ibm_db.bind_param(stmt, 2, password)
```

```

    ibm_db.execute(stmt)
    account = ibm_db.fetch_assoc(stmt)
    print(account)
    if account:
        session['loggedin'] = True
        session['id'] = account['USERNAME']
        userid = account['USERNAME']
        session['username'] = account['USERNAME']
        msg = 'Logged in successfully !'

        msg = 'Logged in successfully !'
        return render_template('dashboard.html', msg=msg)
    else:
        msg = 'Incorrect username / password !'
    return render_template('login.html', msg=msg)

if __name__ == '__main__':
    app.run(host='0.0.0.0')
# app.run(debug=True)

```

Register.html

```

<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Smart Fashion register</title>

    <!-- bootstrap css cdn -->
    <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
    <!-- css stylesheet -->
    <link rel="stylesheet" href="/static/css/style.css">
    <!-- font styles cdn -->
    <link rel="preconnect" href="https://fonts.gstatic.com">
    <link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">

```

```

    <link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>

<body>
    <!-- bootstrap navbar -->
    <!-- navbar ends -->
    <!-- Login form -->
    <div class="login text-center mt-5">

        <form action="/" method="post">
            <h2 class="form-text-h2"> Register Form </h2>
            <div class="msg">{{ msg }}</div>
            <input type="text" class="form-control" name="username" placeholder="Enter Your
Username" id="username"
                required>
            <input type="email" class="form-control" name="email" placeholder="Enter Your
Email ID" id="email" required>
            <input type="password" class="form-control" name="password"
placeholder="Enter Your Password" id="password"
                required>
            <button type="submit" id="button" class="btn btn-primary"> Register </button>
            <div class="note mt-3 text-center">
                <!--Register form -->
                <p> already have an account ? please login <a href="/login">login! </a> </p>

            </div>
        </form>

    </div>

</body>

</html>
Login.html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Smart Fashion Login</title>
    <!-- favicon -->
    <!-- <link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->

```

```

<!-- <link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-
32x32.png">
<!-- bootstrap css cdn -->
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
<!-- css stylesheet -->
<link rel="stylesheet" href="/static/css/style2.css">
<!-- font styles cdn -->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
<link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>

<body>

<div class="login text-center mt-5">

<form action="/login" method="post">
<h2 class="form-text-h2"> Login Form </h2>
<div class="msg">{{ msg }}</div>
<div class="form-group mb-3">
<label class="label" for="username">Username</label>
<input type="text" class="form-control" placeholder="Username"
name="username" required>
</div>
<div class="form-group mb-3">
<label class="label" for="password">Password</label>
<input type="password" class="form-control" placeholder="Password"
name="password" required>
</div>

<button type="submit" id="button" class="btn btn-primary"> Login </button>
<div class="note mt-3 text-center">
<!-- Register form -->
<p> Don't have an account yet? Click here to <a href="/">register! </a> </p>
</div>
</form>

```

```
</div>
```

```
</body>
```

```
</html>
```

Style.css

```
* {
```

```
  margin: 0;
```

```
  padding: 0;
```

```
}
```

```
body {
```

```
  background-color: aqua !important;
```

```
  display: flex;
```

```
  flex-direction: column;
```

```
  align-items: center;
```

```
  justify-content: center;
```

```
}
```

```
form {
```

```
  display: flex;
```

```
  flex-direction: column;
```

```
  align-items: center;
```

```
  justify-content: center;
```

```
  background-color: white;
```

```
  width: 40%;
```

```
  height: 450px;
```

```
  border-radius: 50px;
```

```
  margin: 100px;
```

```
  gap: 25px;
```

```
}
```

```
h2 {
```

```
  font-size: large;
```

```
  font-weight: bolder;
```

```
}
```

```
input {
```

```
  width: 80% !important;
```

```
}
```

```
div {
```

```
  display: flex;
```

```
  align-items: center;
```

```
  justify-content: center;
```

```

        flex-direction: column;
        width: 90%;
    }

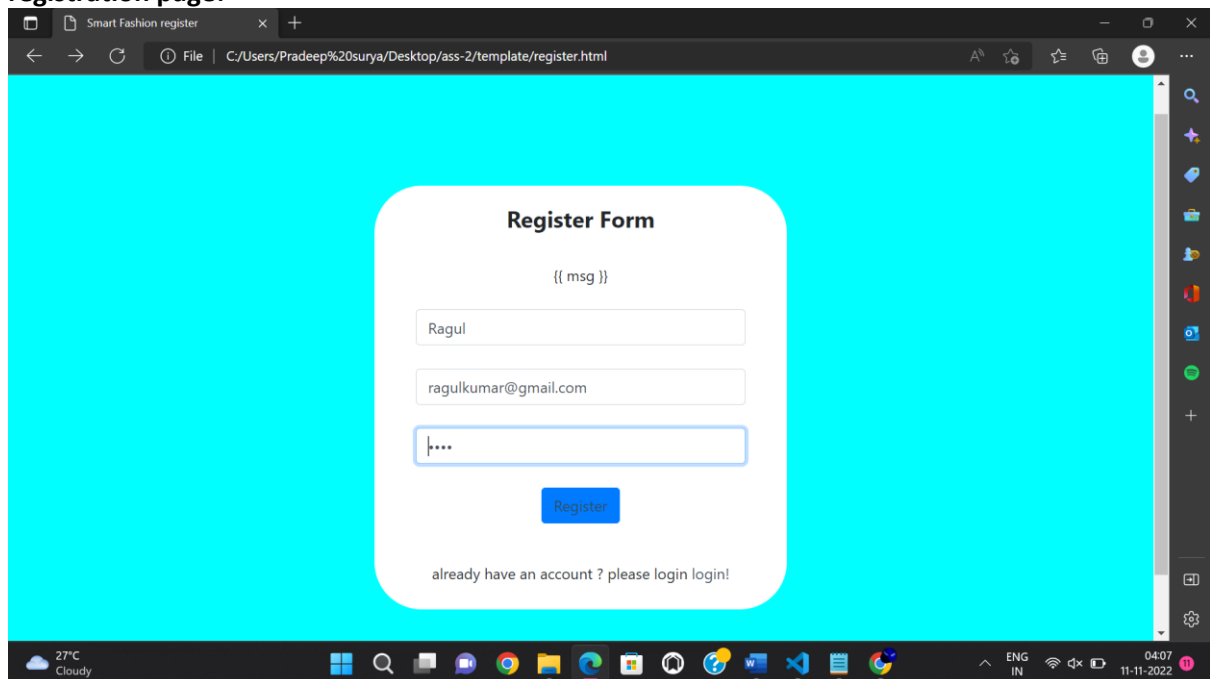
    .form-text-vk {
        font-size: small;
        padding-bottom: 10px;
    }

    .form-text-h2 {
        font-size: x-large;
        padding-top: 10px;
    }
}

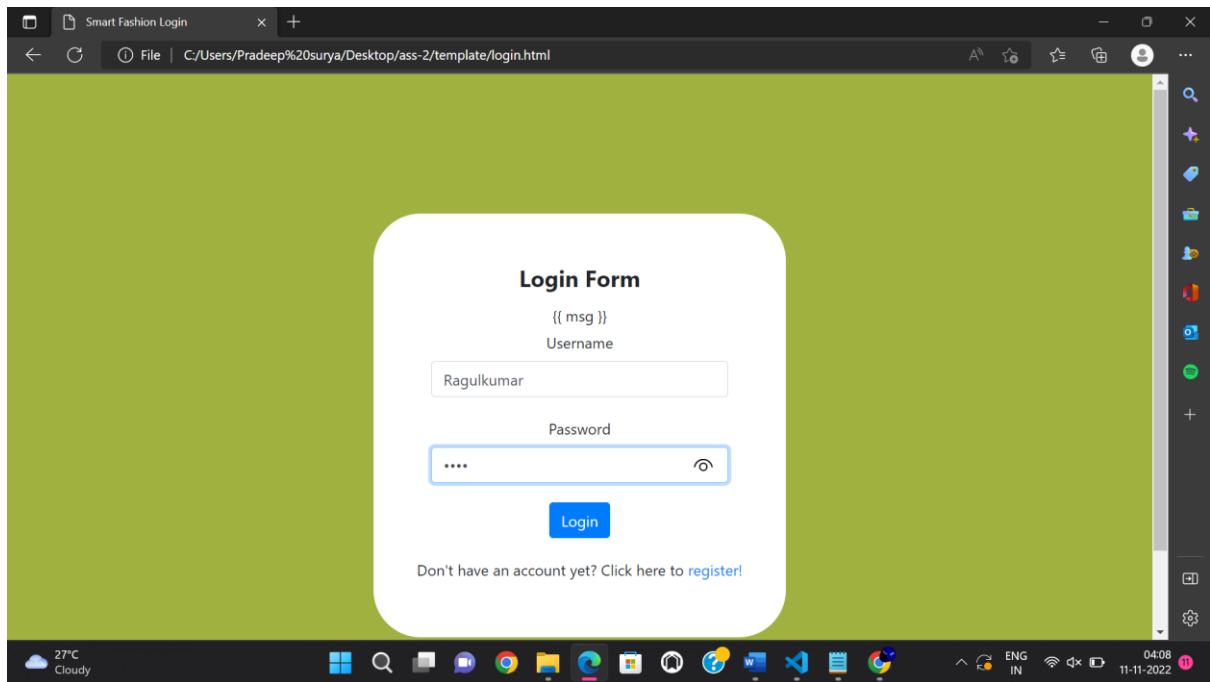
```

Output:-

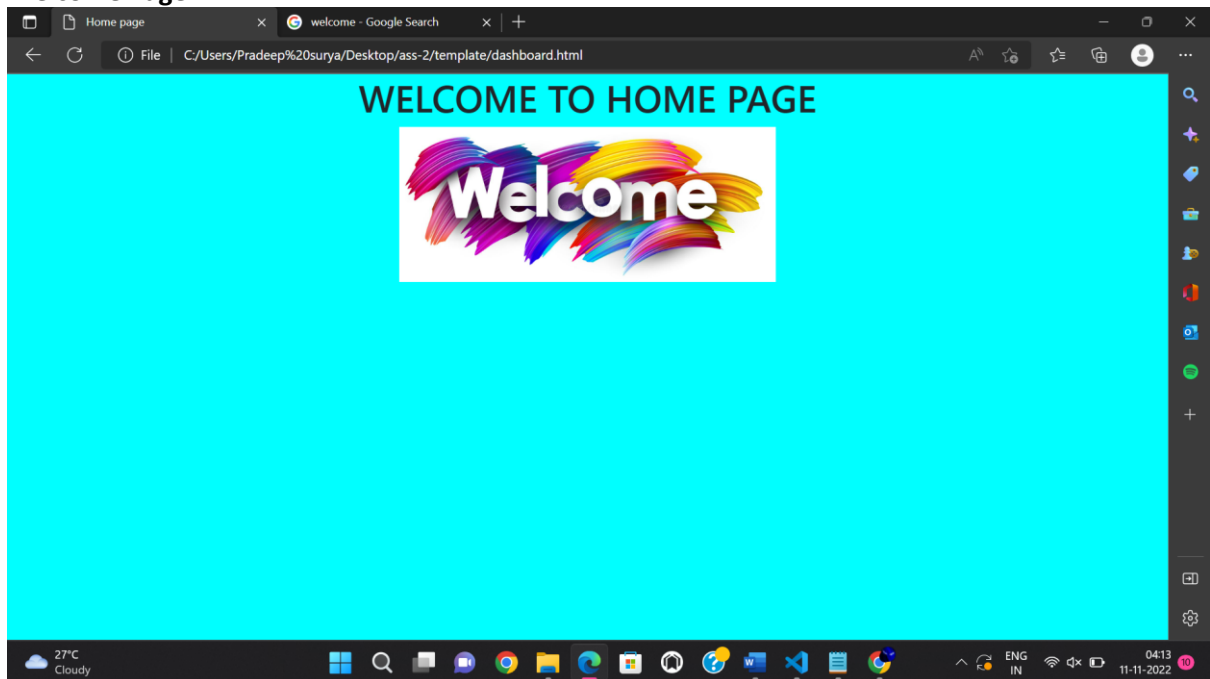
registration page:-



Login Page:-



Welcome Page:-



Data Base Table :-

IBM Db2 on Cloud

Load DataLoad HistoryTablesViewsIndexesAliasesMQTSSequencesApplication objects

VMX18183.USERTABLE

Back

Export to CSV

USERNAME	ROLLNUMBER	EMAIL	PWD
Karthick	303	karthicksivasamy86@gmail.com	2222
Ragulkumar	68	ragulkumar545@gmail.com	1111
Sakthideepak	70	sakthideepak.sp@gmail.com	4444
Srikumar	308	srikumar2k1@gmail.com	3333

27°C Cloudy

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