

Assignment -2

IBM CLOUD DB2

Assignment Date	26 OCTOBER 2022
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Maximum Marks	2 Marks

Questions:

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

The first screenshot shows the IBM Db2 on Cloud console interface. The 'Tables' tab is selected, and a search for 'USERTABLE' in schema 'DTP46044' has been performed. The table definition is displayed on the right, showing columns: USERNAME (CHAR, 5, nullable), ROLLNUMBER (INTEGER, nullable), EMAIL (CHAR, 5, nullable), and PASSWORD (VARCHAR, 32, nullable). A 'View data' button is visible at the bottom right of the table definition panel.

The second screenshot shows the 'View data' page for the table 'DTP46044.USERTABLE'. The table structure is shown with columns: USERNAME, ROLLNUMBER, EMAIL, and PASSWORD. Below the column headers, there is a message: 'There is no data here yet' accompanied by a person icon with a question mark, indicating that the table is currently empty.

2. Perform UPDATE,DELETE Queries with user table.

UPDATE TABLE:-

The screenshot shows the IBM Db2 on Cloud console. On the left, the 'Data objects' pane shows a database named 'DTP46044'. The main area is a script editor titled '*Untitled - 1' containing the following SQL query:

```
1 INSERT INTO USERTABLE VALUES ('VK',21,'VK@gamil.com','1234')
```

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

Script	Date	Status	Runtime
Untitled - 1	Oct 10, 2022 12:51:13 PM	✓ 1	0.018 s
INSERT INTO USERTABLE VALUES ('VK',21,'VK@gamil.com','1234')		✓	0.018 s

The screenshot shows the IBM Db2 on Cloud console displaying the contents of the 'DTP46044.USERTABLE' table. The table has four columns: USERNAME, ROLLNO, EMAIL, and PASSWORD. The data is as follows:

USERNAME	ROLLNO	EMAIL	PASSWORD
VK	21	VK@gamil.com	1234

DELETE TABLE:-

The screenshot shows the IBM Db2 on Cloud console interface. The top navigation bar includes tabs for Load Data, Load History, Tables, Views, Indexes, Aliases, MQTs, Sequences, and Application objects. The 'Tables' tab is selected, displaying the table 'DTP46044.USERTABLE'. A 'Back' button is visible in the top right corner. Below the table name, there is an 'Export to CSV' button. The table structure is shown with columns: USERNAME, ROLLNO, EMAIL, and PASSWORD. The data rows are as follows:

USERNAME	ROLLNO	EMAIL	PASSWORD
PARAMESH	21	VK@gamil.com	1234
VK	23	VK@gamil.com	12034

The screenshot shows the IBM Db2 on Cloud console interface with the SQL editor open. The 'Data objects' tab is selected, showing the table 'DTP46044'. The SQL editor contains the following statement:

```
1 DELETE FROM USERTABLE WHERE ROLLNO = 23 ;
```

The 'History' tab is selected, showing the execution history of the script. The history table is as follows:

Script	Date	Status	Runtime
Untitled - 1	Oct 10, 2022 1:02:49 PM	1	0.006 s
DELETE FROM USERTABLE WHERE ROLLNO = 23			0.006 s
Untitled - 1	Oct 10, 2022 1:00:11 PM	1	0.007 s
INSERT INTO USERTABLE VALUES ('VK',23,'VK@gamil.com','12034')			0.007 s
Untitled - 1	Oct 10, 2022 12:59:55 PM	1	0.044 s

IBM Db2 on Cloud

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

DTP46044.USERTABLE Back

Export to CSV

USERNAME	ROLLNO	EMAIL	PASSWORD
PARAMESH	21	VK@gmail.com	1234

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

app = Flask(__name__)
app.secret_key = 'a'

conn = ibm_db.connect(
    "DATABASE=b1udb;HOSTNAME=fbd88901-ebdb-4a4f-a32e-9822b9fb237b.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32731;USERNAM
E=dtp46044;PASSWORD=95soX0sZGhb4ToUj;SECURITY=SSL;SSLSERVERCERTIFICATE=DigiCer
tGlobalRootCA.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/fontawesome/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/favicon32x32.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/fontawesome/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;
}

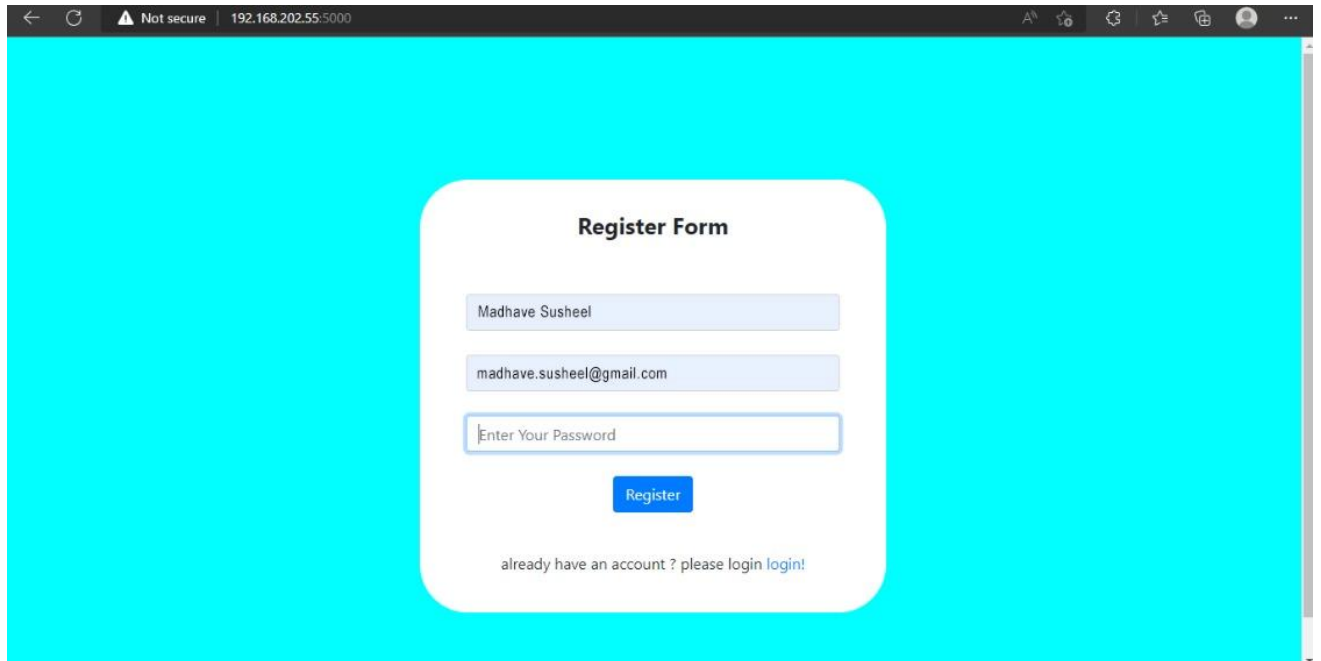
body {
background-color: aqua
!important; display: flex;
flex-direction: column; align-
items: center; justify-content:
center;
} form {
display:
flex; flex-direction:
column; align-items:
center; justify-
content: center;
background-color: white;
width: 40%; height:
450px; border-radius:
50px; margin: 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;
}
```

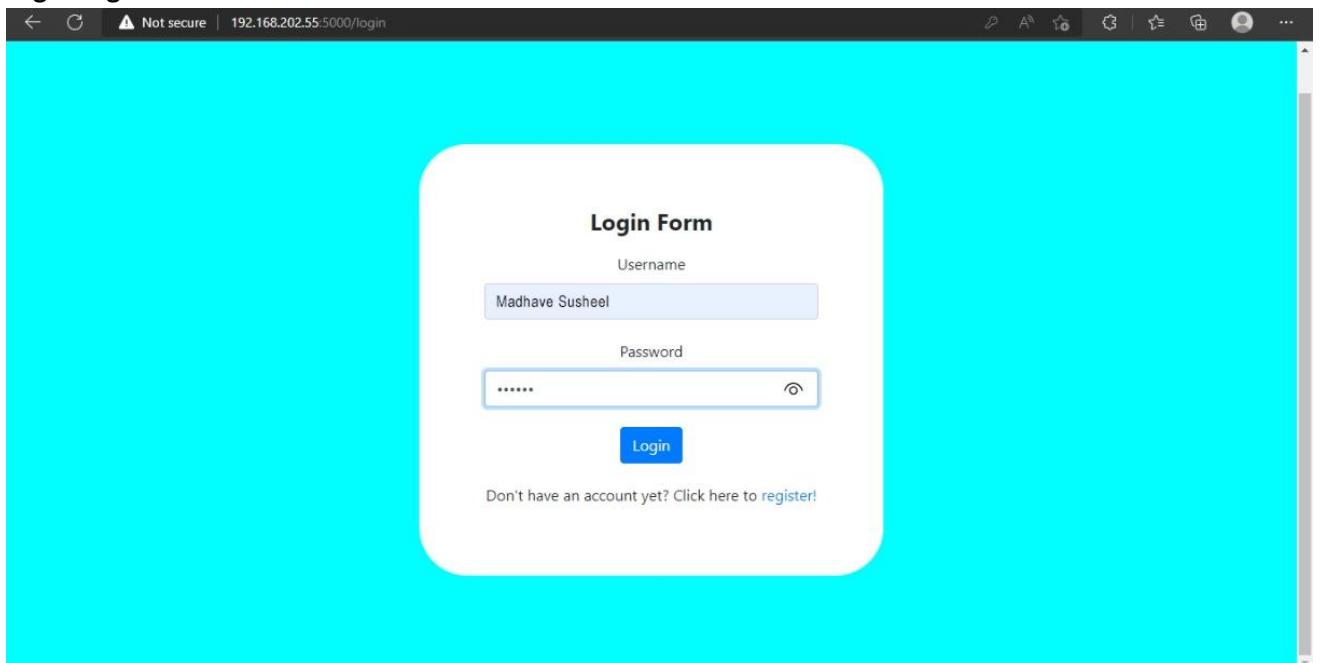
```
.form-text-h2 {    font-size: x-large;    padding-top: 10px;
}
```

Output:- registration page:-



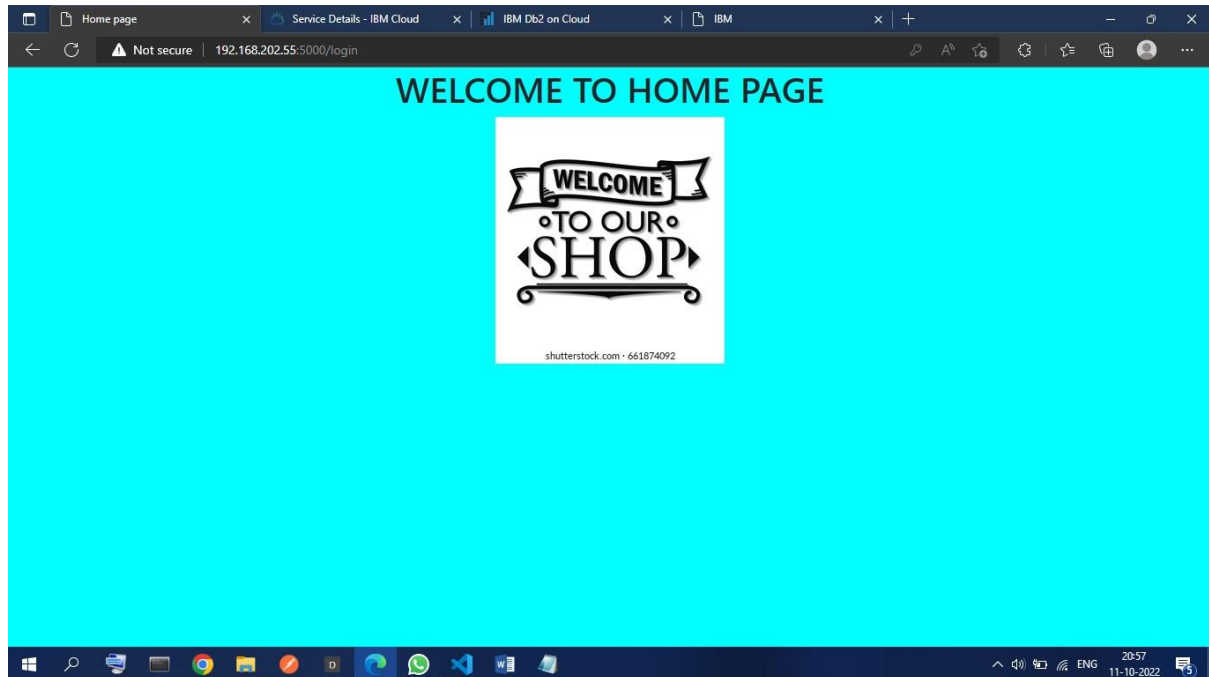
A screenshot of a web browser displaying a registration form. The browser's address bar shows "192.168.202.55:5000". The form is titled "Register Form" and is centered on a light blue background. It contains three input fields: the first is filled with "Madhave Susheel", the second with "madhave.susheel@gmail.com", and the third is labeled "Enter Your Password". Below the inputs is a blue "Register" button. At the bottom of the form, there is a link that says "already have an account ? please login login!".

Login Page:-



A screenshot of a web browser displaying a login form. The browser's address bar shows "192.168.202.55:5000/login". The form is titled "Login Form" and is centered on a light blue background. It contains two input fields: the first is labeled "Username" and filled with "Madhave Susheel", and the second is labeled "Password" and filled with "*****". Below the inputs is a blue "Login" button. At the bottom of the form, there is a link that says "Don't have an account yet? Click here to register!".

Welcome Page:-



Data Base Table :-

IBM Db2 on Cloud

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

DTP46044.USERS [Back](#)

[Export to CSV](#) [Download](#)

USERNAME	EMAIL	PASSWORD
Madhave Susheel S	madhave.susheel@gmail.com	123432