

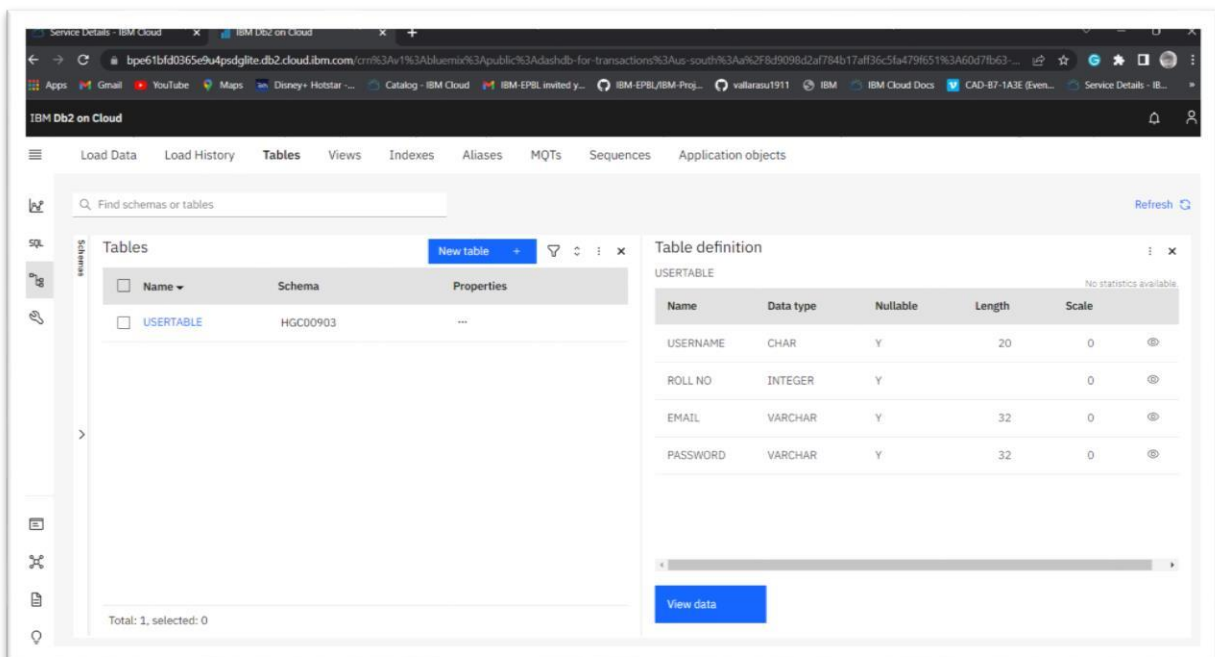
## Assignment -2

### IBM CLOUD DB2

Student Name	Ananthakumar S
Student Roll Number	712219104005
Maximum Marks	2 Marks

#### Questions:

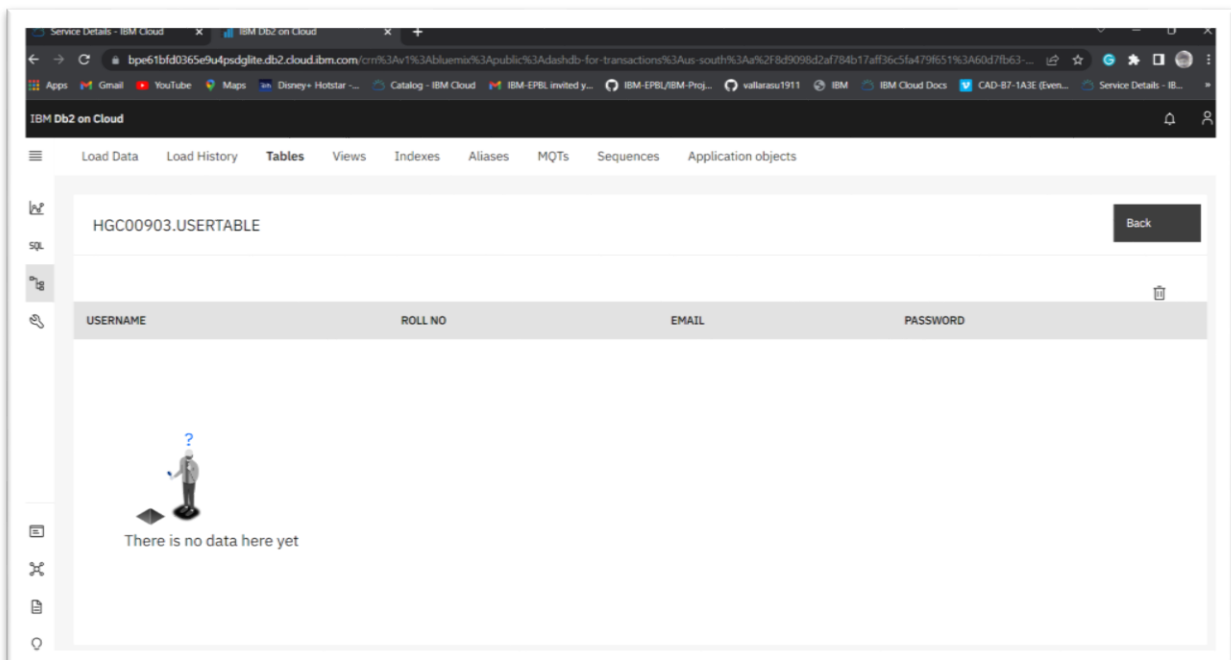
1. Create User table with user with email, username, roll number, password.



The screenshot shows the IBM Db2 on Cloud console. The 'Tables' tab is selected, and a 'New table' dialog is open. The table name is 'USERTABLE' and the schema is 'HGC00903'. The 'Table definition' panel shows the following columns:

Name	Data type	Nullable	Length	Scale
USERNAME	CHAR	Y	20	0
ROLL NO	INTEGER	Y		0
EMAIL	VARCHAR	Y	32	0
PASSWORD	VARCHAR	Y	32	0

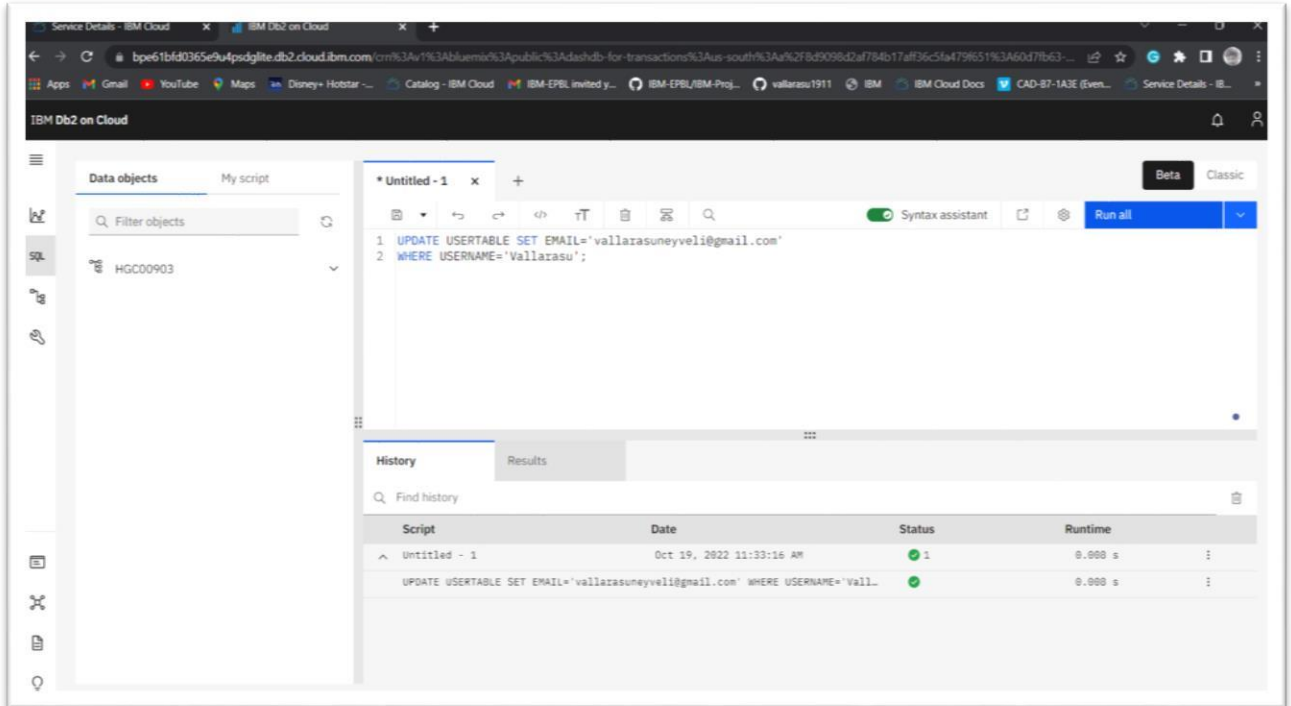
A 'View data' button is visible at the bottom of the table definition panel.



The screenshot shows the IBM Db2 on Cloud console displaying the 'HGC00903.USERTABLE' table. The table has four columns: 'USERNAME', 'ROLL NO', 'EMAIL', and 'PASSWORD'. The table is currently empty, and a message at the bottom states 'There is no data here yet'.

2. Perform UPDATE,DELETE Queries with user table.

### UPDATE TABLE:-

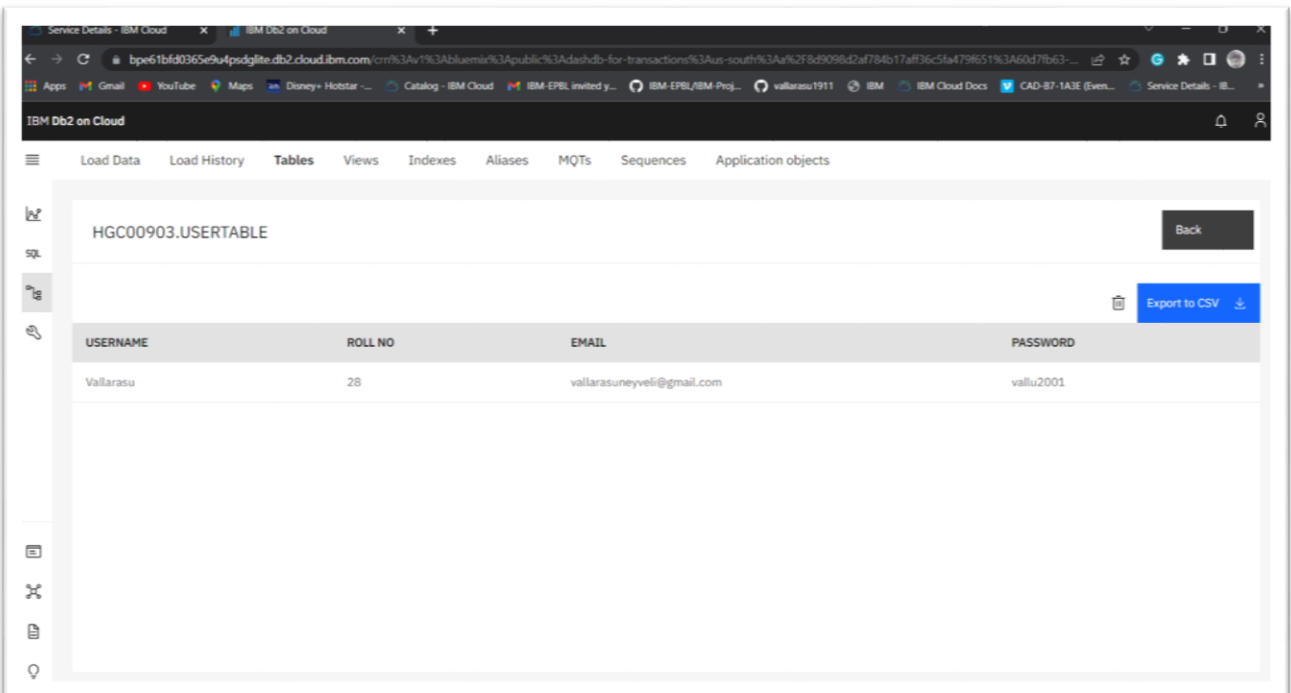


The screenshot shows the IBM Db2 on Cloud console. On the left, the 'Data objects' panel shows a table named 'HGC00903'. The main area displays an SQL script in a text editor with the following content:

```
1 UPDATE USERTABLE SET EMAIL='vallarasuneyveli@gmail.com'  
2 WHERE USERNAME='Vallarasu';
```

Below the script editor, the 'History' tab is active, showing a table of executed scripts:

Script	Date	Status	Runtime
Untitled - 1	Oct 19, 2022 11:33:16 AM	✓ 1	0.008 s
UPDATE USERTABLE SET EMAIL='vallarasuneyveli@gmail.com' WHERE USERNAME='Vall...		✓	0.008 s



The screenshot shows the IBM Db2 on Cloud console with the 'Tables' tab selected. The table 'HGC00903.USERTABLE' is displayed. The table structure and data are as follows:

USERNAME	ROLL NO	EMAIL	PASSWORD
Vallarasu	28	vallarasuneyveli@gmail.com	vallu2001

### DELETE TABLE:-

Service Details - IBM Cloud x IBM Db2 on Cloud

bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com/cm%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Aa%2F8d9096d2af784b17af36c5fa479651%3A60d7fb63-...

IBM Db2 on Cloud

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

HGC00903.USERTABLE Back

Export to CSV

USERNAME	ROLL NO	EMAIL	PASSWORD
Mahadevan	15	mmahaii777@gmail.com	maha2000
Tamilarasan	27	limatking@gmail.com	tamil2000
Vallarasu	28	vallarasuneyveli@gmail.com	vallu2001

Service Details - IBM Cloud x IBM Db2 on Cloud

bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com/cm%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Aa%2F8d9096d2af784b17af36c5fa479651%3A60d7fb63-...

IBM Db2 on Cloud

Data objects My script

Filter objects

HGC00903

\*Untitled - 1 x + Beta Classic

Syntax assistant Run all

```

1 DELETE FROM USERTABLE WHERE USERNAME='Tamilarasan';
2

```

History Results

Find history

Script	Date	Status	Runtime
Untitled - 1	Oct 19, 2022 11:45:22 AM	1	0.007 s
DELETE FROM USERTABLE WHERE USERNAME='Tamilarasan'			0.007 s
Untitled - 1	Oct 19, 2022 11:38:53 AM	1	0.006 s
Untitled - 1	Oct 19, 2022 11:36:47 AM	1	0.007 s
Untitled - 1	Oct 19, 2022 11:33:16 AM	1	0.008 s

USERNAME	ROLL NO	EMAIL	PASSWORD
Mahadevan	15	mmahaii777@gmail.com	maha2000
Vallarasu	28	vallarasuneyveli@gmail.com	vallu2001

3. Connect python code to db2.

```
import ibm_db
conn=ibm_db.connect
("DATABASE=b1udb;HOSTNAME=b1bc1829-6f45-4cd4-bef4-10cf081900bf.clogj3sd0tgtu0Lqde00.databases.appdomain.cloud; PORT=32304; SECURITY=SSL;
SSLserverCertificate=DigiCertGlobalRootCA;UID=hgc00903;PWD=UzumT0ZHCXvHur30;", "", "")
print(conn)
print("connection successfully...")
```

**NOTE:-** Question 4 also contains Question 3 answer because to connect with ibm\_db2.

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=b1udb;HOSTNAME=b1bc1829-6f45-4cd4-bef4-10cf081900bf.clogj3sd0tgtu0Lqde00.databases.appdomain.cloud;PORT=32304;USERNAME=hgc00903;
'PASSWORD=UzumT0ZHCXvHur30;SECURITY=SSL;SSLSERVERCERTIFICATE=DigiCertGlobalRootCA.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>registration page</title>
    <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
        integrity="sha384-JckB8q3iqJ61gNV9KGb8thSsNjPL088PARN9HuZOnIxN0hoP+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/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>
  <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>Login page</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/style1.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>

```

## Dashboard.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>Dashboard page</title>
  <meta charset="UTF-8">

  <!-- 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/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>
  <h1>WELCOME TO DASHBOARD</h1>
  <h3>SMART FASHION RECOMMENDER</h3>
</body>

</html>
```

## Style.css:-

```
* {
  margin: 0;
  padding: 0;
}

body {
  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: #cccccc;
  width: 40%;
  height: 450px;
  border-radius: 50px;
  margin: 100px;
  gap: 25px;
}

h2 {
  font-size: large;
  font-weight: bolder;
}

input {
  width: 80% !important;
}
```

```

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;
}

```

## Style1.css:-

```

* {
  margin: 0;
  padding: 0;
}

body {
  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: #2b2b2b;
  width: 40%;
  height: 450px;
  border-radius: 50px;
  margin: 100px;
  gap: 5px;
}

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;
}

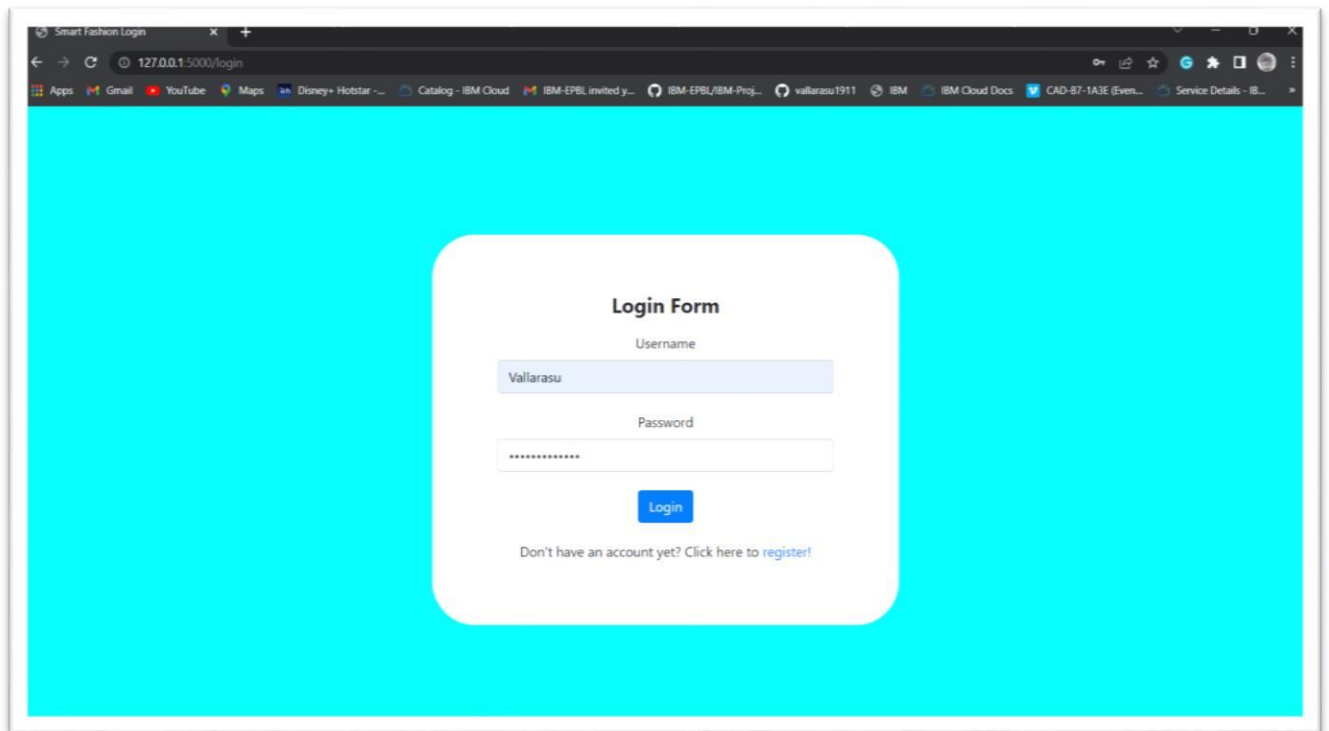
.form-text-h2 {
  font-size: x-large;
  padding-top: 10px;
}
```

**Output:-**

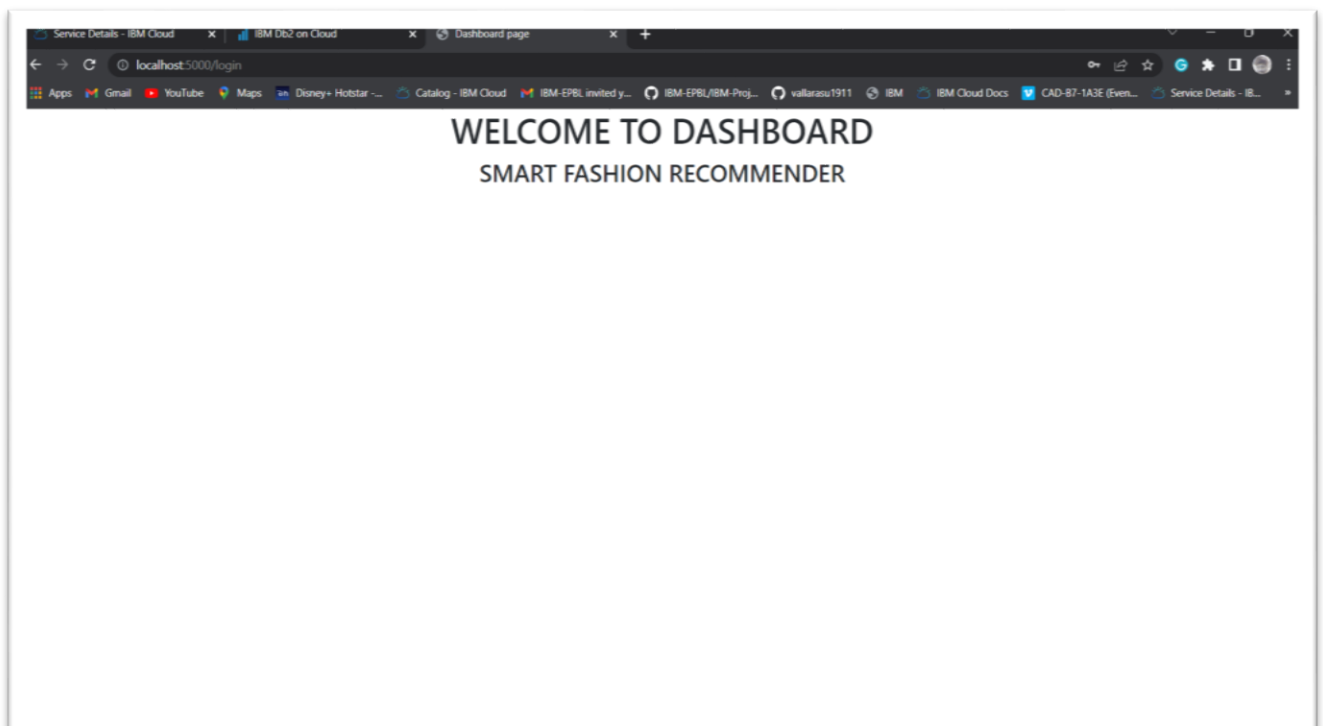
**Registration page:**

The screenshot shows a web browser window with the address bar displaying 'localhost:5000'. The page contains a 'Register Form' centered on a light gray background. The form has a title 'Register Form' and a message 'You have successfully registered !'. Below the message are three input fields: 'Enter Your Username', 'Enter Your Email ID', and 'Enter Your Password'. A blue 'Register' button is positioned below the password field. At the bottom of the form, there is a link: 'already have an account ? please login [login](#)'.

**Login page:-**



**Dashboard page:-**



## Database Table :-

IBM Db2 on Cloud

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

HGCO0903.USERS [Back](#)

[Export to CSV](#)

USERNAME	EMAIL	PASSWORD
mahadevan	mmahiii731@gmail.com	maha2000
sivabalan	sivabalanv453@gamil.com	siva2002
tamilarasan	limatking@gmail.com	tamil2000
vallarasu	vallarasuneyveli@gmail.com	vallu2001