

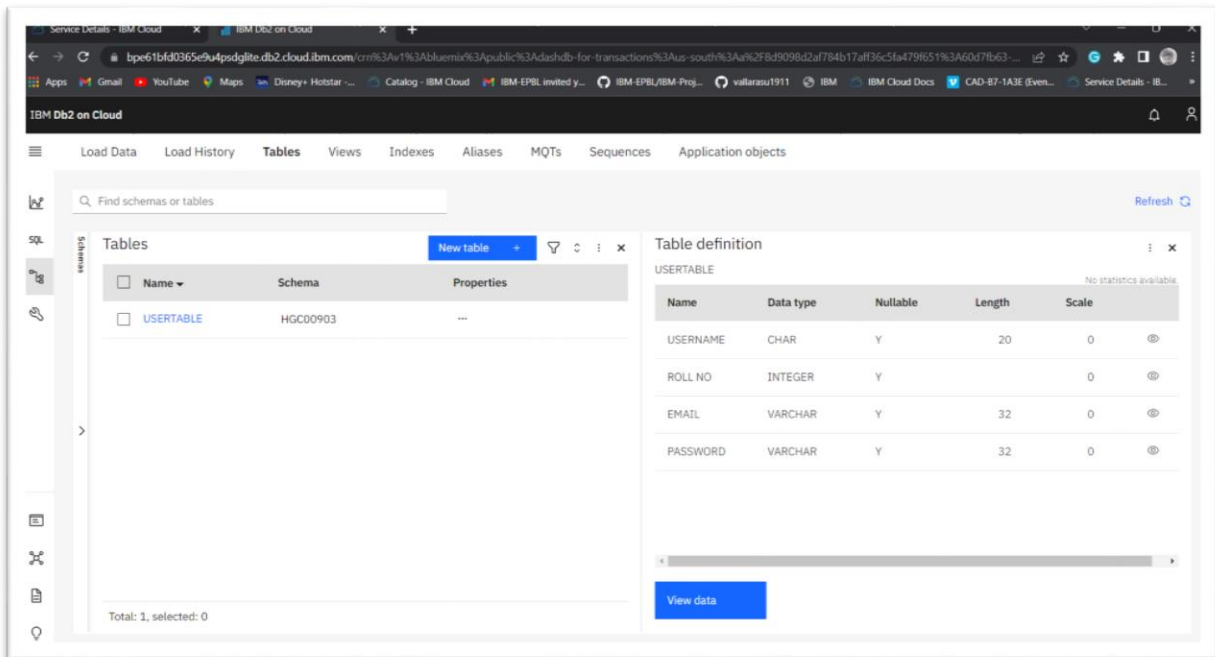
Assignment -2

IBM CLOUD DB2

Student Name	Vallarasu R
Student Roll Number	712219104028
Maximum Marks	2 Marks

Questions:

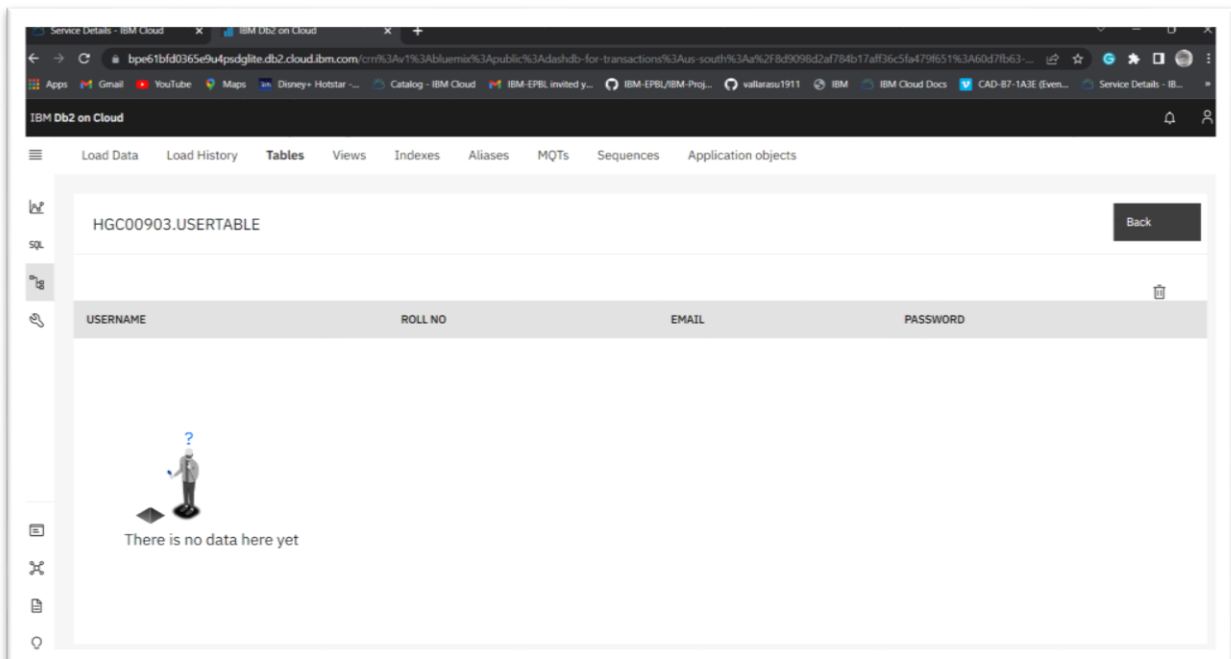
1. Create User table with user with email, username, roll number, password.



The screenshot shows the IBM Db2 on Cloud console interface. The 'Tables' tab is selected, and a new table named 'USERTABLE' is being defined in the 'HGC00903' schema. The table definition panel on the right 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 interface. The 'Tables' tab is selected, and the table 'HGC00903.USERTABLE' is displayed. The table is empty, and a message 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:

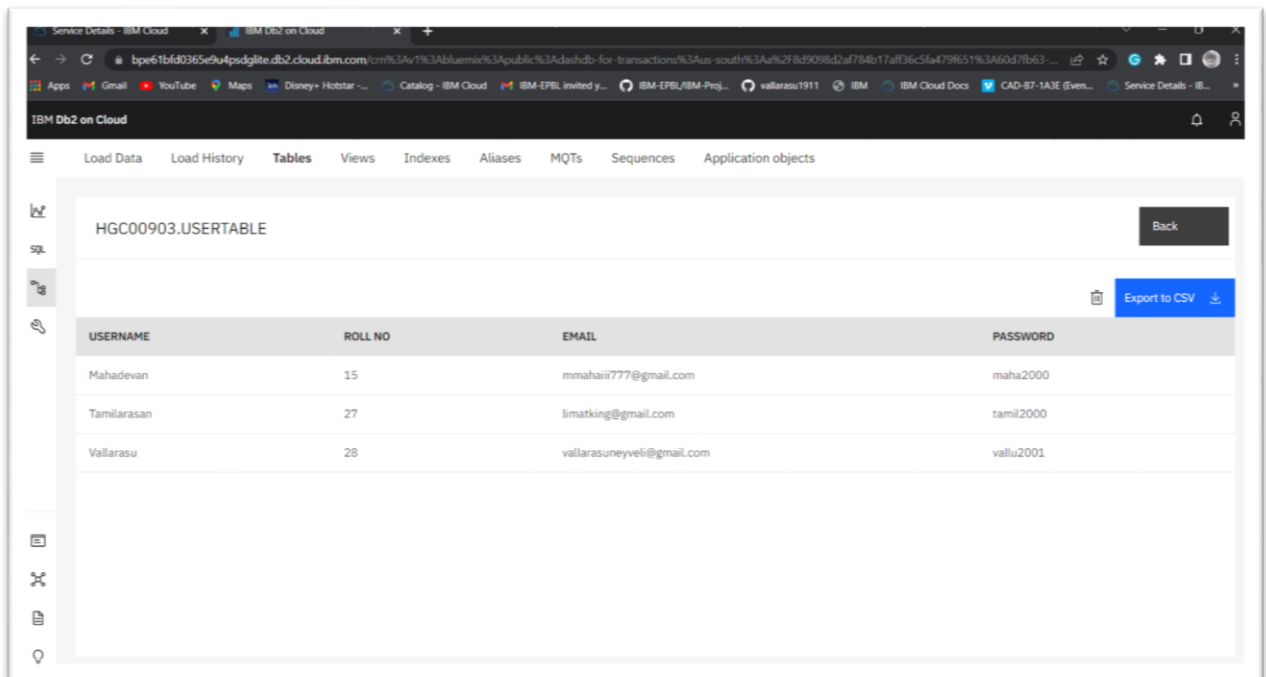
Script	Date	Status	Runtime
Untitled - 1	Oct 19, 2022 11:33:16 AM	✓ 1	0.000 s
UPDATE USERTABLE SET EMAIL='vallarasuneyveli@gmail.com' WHERE USERNAME='Vall...		✓	0.000 s

The screenshot shows the IBM Db2 on Cloud console displaying the contents of the 'HGC00903.USERTABLE' table. The table has four columns: USERNAME, ROLL NO, EMAIL, and PASSWORD. The data is as follows:

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

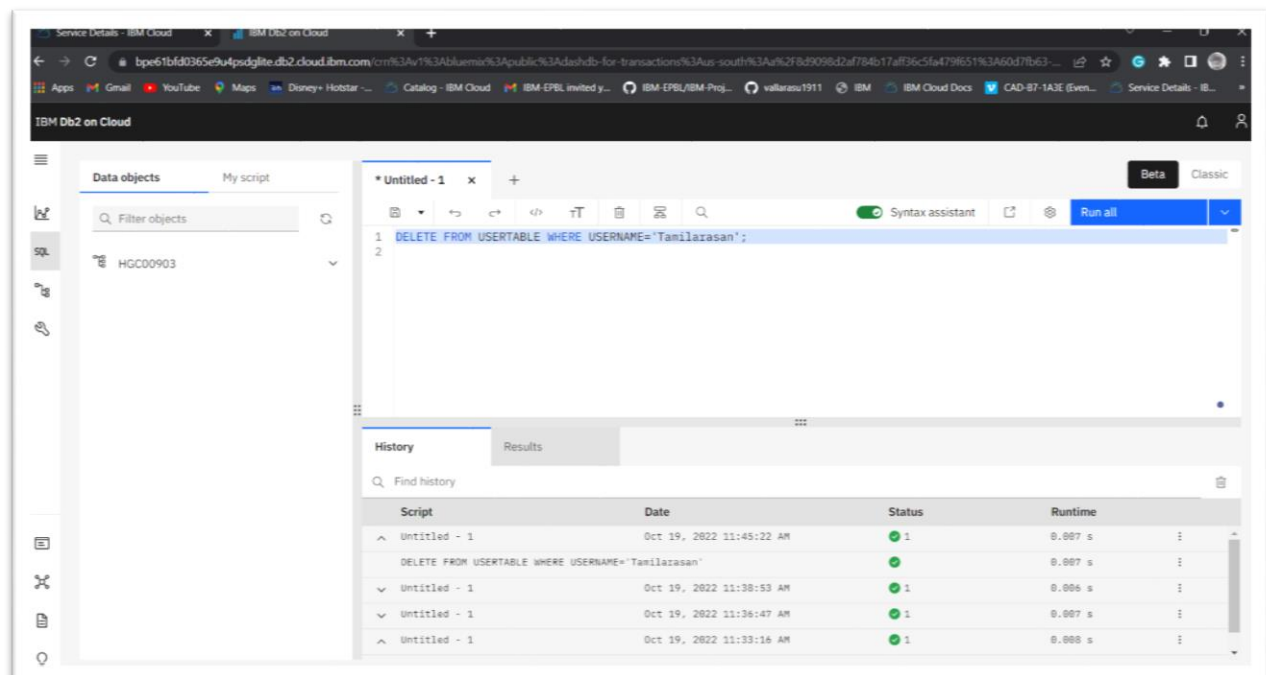
Buttons for 'Back' and 'Export to CSV' are visible in the top right corner of the table view.

DELETE TABLE:-



The screenshot shows the IBM Db2 on Cloud console 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 'HGC00903.UsERTABLE'. A 'Back' button is in the top right. Below the table name, there is an 'Export to CSV' button. The table structure is as follows:

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



The screenshot shows the IBM Db2 on Cloud console interface with the SQL editor open. The 'Data objects' tab is selected, showing a search bar and a list of objects including 'HGC00903'. The SQL editor has a tab titled 'Untitled - 1' and contains the following SQL statement:

```
1 DELETE FROM UsERTABLE WHERE USERNAME='Tamilarasan';
2
```

The 'Run all' button is visible in the top right of the editor. Below the editor, the 'History' tab is selected, showing a table of execution 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'^[a-zA-Z0-9]+@[a-zA-Z0-9]+\.[a-zA-Z0-9]+$', email):
            msg = 'Invalid email address !'
        elif not re.match(r'^[A-Za-z0-9]+$', 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-JcKb8q3iqJ61gNV9KGb8thSsNjpsL8n8PARn9HuZOnIxN0hoP+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: #2b2b43;
  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:

Service Details - IBM Cloud x IBM DB2 on Cloud x registration page x +

localhost:5000

Apps Gmail YouTube Maps Disney+ Hotstar Catalog - IBM Cloud IBM-EPBL invited y... IBM-EPBL/IBM-Proj... vallasu1911 IBM IBM Cloud Docs CAD-87-1A3E (Even... Service Details - IB...

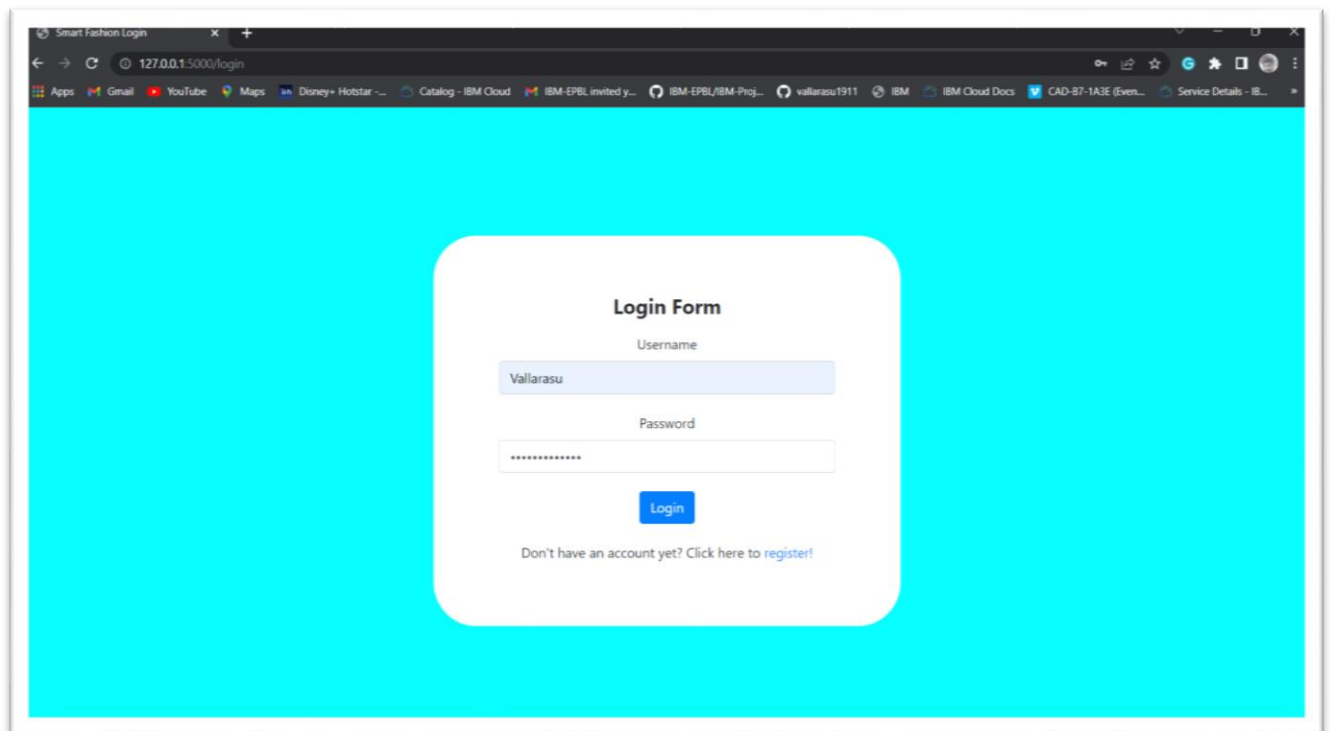
Register Form

You have successfully registered !

Register

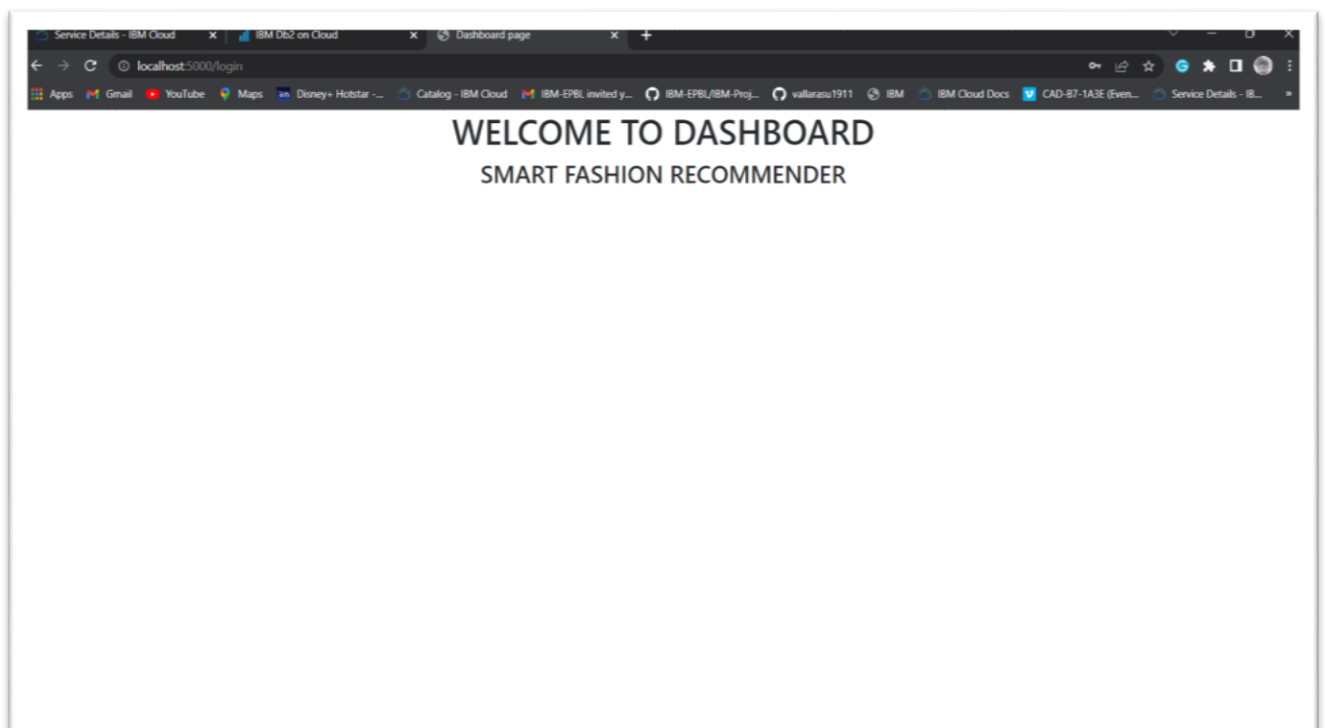
already have an account ? please login [login](#)

Login page:-



A screenshot of a web browser displaying the 'Smart Fashion Login' page. The browser's address bar shows '127.0.0.1:5000/login'. The page has a solid cyan background. In the center is a white rounded rectangle containing the 'Login Form'. The form has a title 'Login Form', a 'Username' label with an input field containing 'Vallarasu', a 'Password' label with an input field of masked characters, and a blue 'Login' button. Below the button is a link: 'Don't have an account yet? Click here to [register!](#)'.

Dashboard page:-



Database Table :-

The screenshot shows the IBM Db2 on Cloud console interface. The browser address bar displays the URL: `bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com/crm%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Aa%2F8d9098d2af784b17aff36c5fa479f651%3A60d7fb63-...`. The console header includes navigation tabs: Load Data, Load History, Tables, Views, Indexes, Aliases, MQTs, Sequences, and Application objects. The 'Tables' tab is selected, showing the table 'HGC00903.USERS'. A 'Back' button is in the top right. Below the table name, there is a trash icon and an 'Export to CSV' button. The table structure is as follows:

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