

Assignment -2 IBM CLOUD DB2

Assignment Date	29 September 2022
Student Name	Akash C
Student Roll Number	310619106006
Maximum Marks	2 Marks

1. Create User table with user with email, username and password.

The screenshot shows the IBM Db2 on Cloud console interface. The 'Tables' section on the left lists two tables: 'JOBS' and 'USERS', both under the 'YGG09863' schema. The 'Table definition' panel on the right shows the structure of the 'USERS' table, which has three columns: 'USERNAME' (VARCHAR, 32, nullable), 'EMAIL' (VARCHAR, 32, nullable), and 'PASSWORD' (VARCHAR, 32, nullable). The table is currently empty (0 rows).

Name	Data type	Nullable	Length	Scale
USERNAME	VARCHAR	Y	32	0
EMAIL	VARCHAR	Y	32	0
PASSWORD	VARCHAR	Y	32	0

2. Perform UPDATE,DELETE Queries with user table

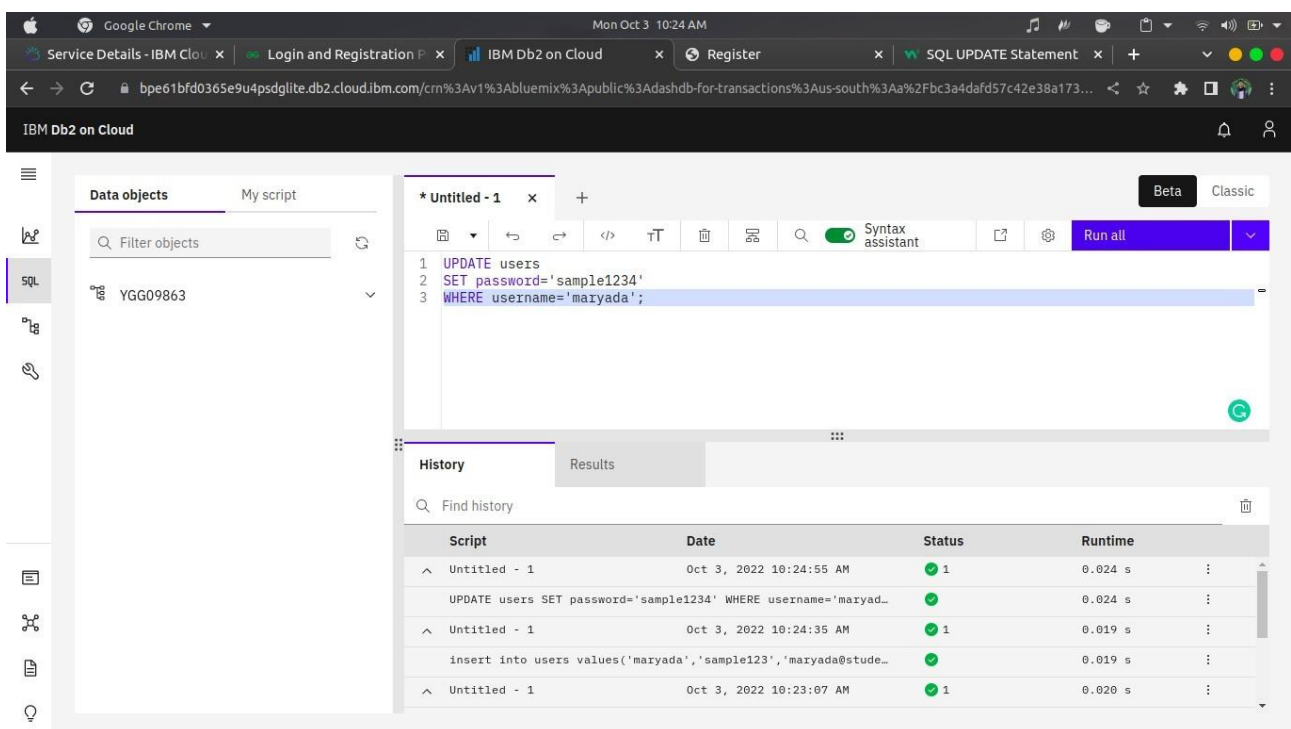
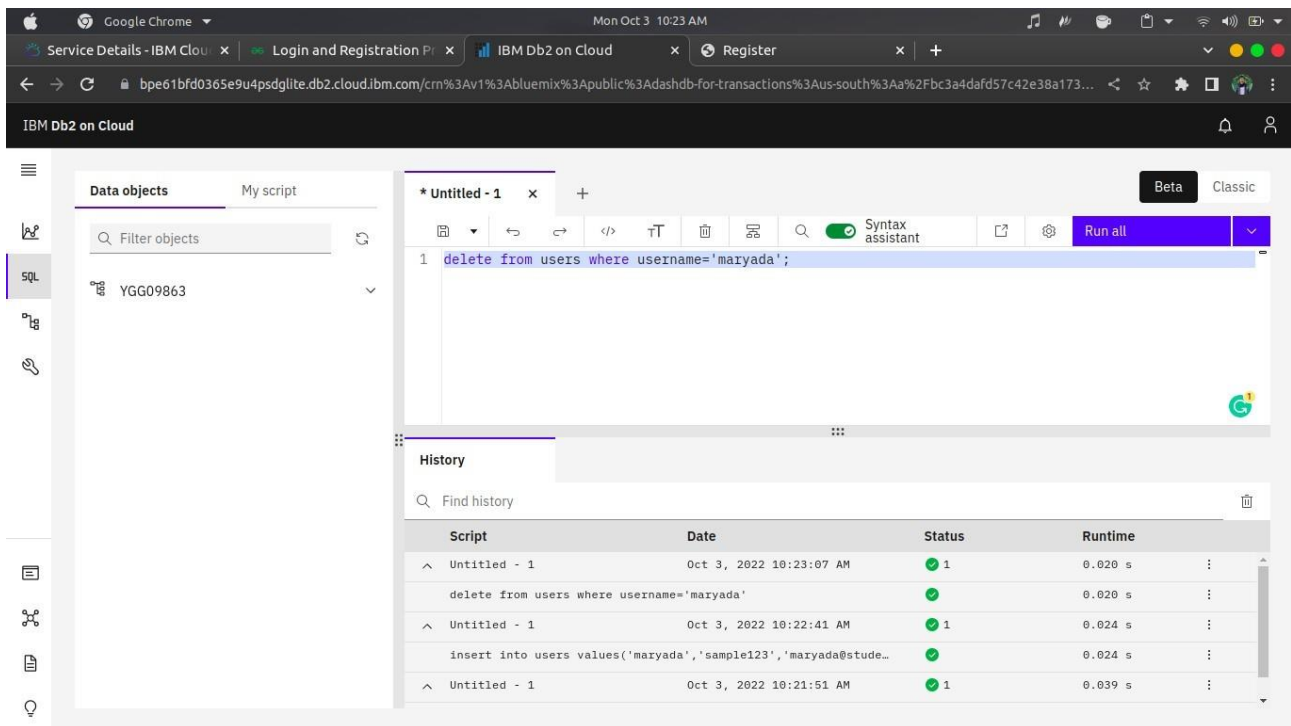
The screenshot shows the 'My script' tab in the IBM Db2 on Cloud console. The script editor contains two SQL queries: an INSERT statement to add a new user and a DELETE statement to remove a user by username. The 'History' panel at the bottom shows the execution results of these queries, indicating they were successful.

```

1 insert into users values('maryada','sample123','maryada@student.tce.edu');

delete from users where username='maryada'
  
```

Script	Date	Status	Runtime
Untitled - 1	Oct 3, 2022 10:22:41 AM	✓ 1	0.024 s
insert into users values('maryada','sample123','maryada@student...		✓	0.024 s
Untitled - 1	Oct 3, 2022 10:21:51 AM	✓ 1	0.039 s
delete from users where username='maryada'		✓	0.039 s



3. Connect python code to db2. (Done in question 4)

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

app.py:

```
#!/usr/bin/env python3
# -*- coding: utf-8 -*-
```

"""

Created on Sun Oct 2 12:32:54 2022

@author: maryada

"""

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

```
app=Flask(_name_)
app.secret_key='a'
conn=ibm_db.connect("DATABASE=bludb;HOSTNAME=9938aec0-8105-433e-8bf9-
0fbb7e483086.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32459;Security=SSL;SSL
ServerCertificate=DigiCertGlobalRootCA.crt;UID=ygg09863;PWD=dQXLECjtaCqXsJUt;", "", "")
```

```
@app.route('/')
@app.route('/login',methods=['GET','POST'])
def login():
    global userid;
    msg=" "
```

```
    if request.method == 'POST' and 'username' in request.form and 'password' in request.form:
```

```
        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!"
            return render_template("index.html", msg=msg)
        else :
            msg="Incorrect username and password"
```

```
    return render_template("login.html", msg=msg)
```

```
@app.route('/logout')
```

```
def logout():
    session.pop('loggedin', None)
    session.pop('id', None)
    session.pop('username', None)
    return redirect(url_for('login'))
```

```
@app.route("/register",methods=["GET","POST"])
```

```

def register():
    msg=""
    if request.method == 'POST' and 'username' in request.form and 'password' in request.form and
'email' in request.form :
        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 = 'Username must contain only characters and numbers !'
        elif not username or not password or not email:
            msg = 'Please fill out the form !'
        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 logged in!"

    elif request.method=="POST":
        msg="Please fill out the form"
    return render_template('register.html', msg=msg)

if __name__=="_main_":
    app.run(host='0.0.0.0')

```

templates folder:

index.html

<!-- Store this code in 'index.html' file inside the 'templates' folder-->

```

<html>
    <head>
        <meta charset="UTF-8">
        <title> Index </title>
        <link rel="stylesheet" href="{{ url_for('static', filename='style.css') }}">

    </head>
    <body></br></br></br></br></br>
        <div align="center">
            <div align="center" class="border">

```

```

        <div class="header">
            <h1 class="word">Index</h1>
        </div></br></br></br>
        <h1 class="bottom">
            Hi {{ session.username }}!!</br></br> Welcome to the index
page...

        </h1></br></br></br>
        <a href="{{ url_for('logout') }}" class="btn">Logout</a>
    </div>
</div>
</body>
</html>

```

login.html:

<!-- Store this code in 'login.html' file inside the 'templates' folder -->

```

<html>
    <head>
        <meta charset="UTF-8">
        <title> Login </title>
        <link rel="stylesheet" href="{{ url_for('static', filename='style.css') }}">
    </head>
    <body></br></br></br></br></br>
        <div align="center">
            <div align="center" class="border">
                <div class="header">
                    <h1 class="word">Login</h1>
                </div></br></br></br>
                <h2 class="word">
                    <form action="{{ url_for('login') }}" method="post">
                        <div class="msg">{{ msg }}</div>
                        <input id="username" name="username" type="text"
placeholder="Enter Your Username" class="textbox"/></br></br>
                        <input id="password" name="password" type="password"
placeholder="Enter Your Password" class="textbox"/></br></br></br>
                        <input type="submit" class="btn" value="Sign In"></br></br>
                    </form>
                </h2>
                <p class="bottom">Don't have an account? <a class="bottom"
href="{{ url_for('register') }}"> Sign Up here</a></p>
            </div>
        </div>
    </body>
</html>

```

register.html:

<!-- Store this code in 'register.html' file inside the 'templates' folder -->

```

<html>
    <head>
        <meta charset="UTF-8">

```

```

        <title> Register </title>
        <link rel="stylesheet" href="{{ url_for('static', filename='style.css') }}">
    </head>
    <body><br><br><br><br><br>
        <div align="center">
            <div align="center" class="border">
                <div class="header">
                    <h1 class="word">Register</h1>
                </div><br><br><br>
                <h2 class="word">
                    <form action="{{ url_for('register') }}" method="post">
                        <div class="msg">{{ msg }}</div>
                            <input id="username" name="username" type="text"
placeholder="Enter Your Username" class="textbox"/><br><br>
                            <input id="password" name="password" type="password"
placeholder="Enter Your Password" class="textbox"/><br><br>
                            <input id="email" name="email" type="text"
placeholder="Enter Your Email ID" class="textbox"/><br><br>
                            <input type="submit" class="btn" value="Sign Up"><br>
                        </form>
                    </h2>
                    <p class="bottom">Already have an account? <a class="bottom"
href="{{ url_for('login') }}"> Sign In here</a></p>
                </div>
            </div>
        </body>
    </html>

```

static folder:
style.css

/* Store this code in 'style.css' file inside the 'static' folder*/

```

.header{
    padding: 5px 120px;
    width: 150px;
    height: 70px;
    background-color: #236B8E;
}

.border{
    padding: 80px 50px;
    width: 400px;
    height: 450px;
    border: 1px solid #236B8E;
    border-radius: 0px;
    background-color: #9AC0CD;
}

.btn {
    padding: 10px 40px;
    background-color: #236B8E;
}

```

```
        color: #FFFFFFF;
        font-style: oblique;
        font-weight: bold;
        border-radius: 10px;
    }

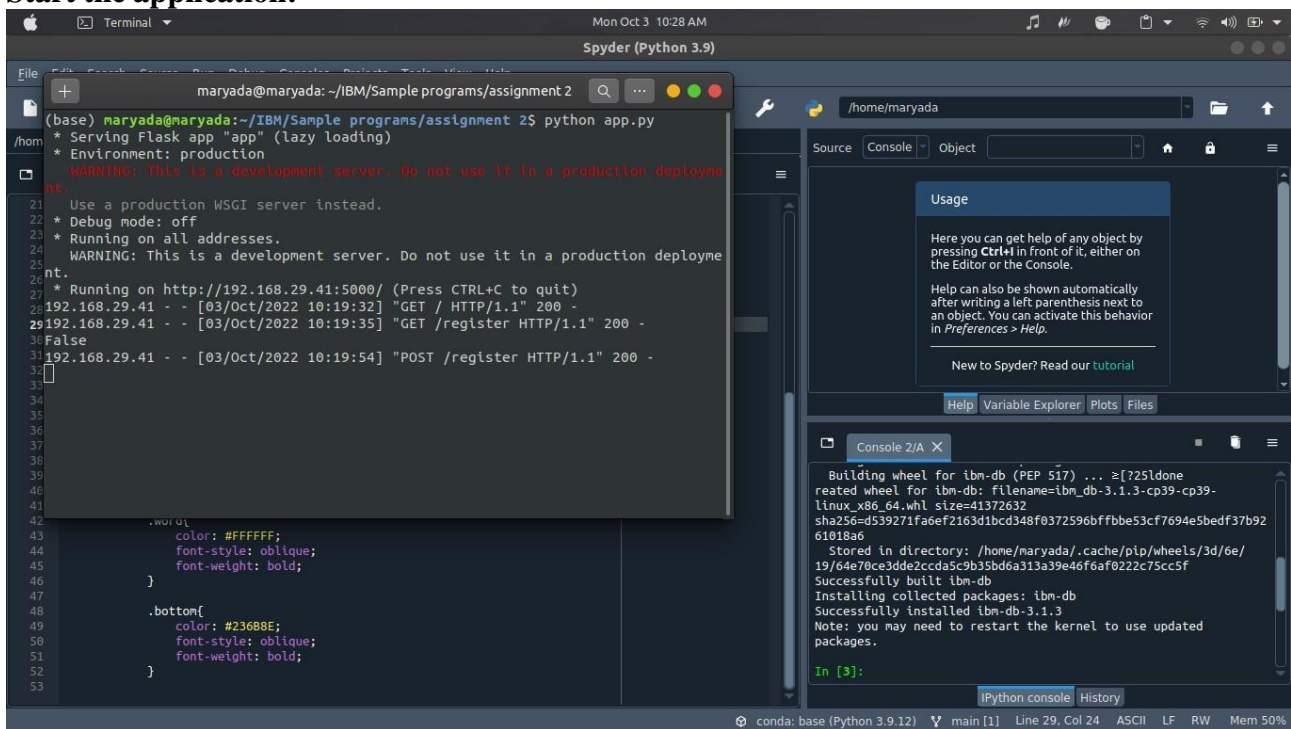
    .textbox{
        padding: 10px 40px;
        background-color: #236B8E;
        text-color: #FFFFFFF;
        border-radius: 10px;
    }

    ::placeholder {
        color: #FFFFFFF;
        opacity: 1;
        font-style: oblique;
        font-weight: bold;
    }

    .word{
        color: #FFFFFFF;
        font-style: oblique;
        font-weight: bold;
    }

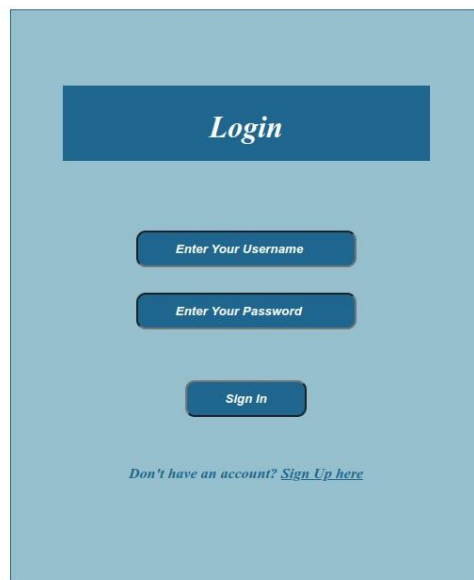
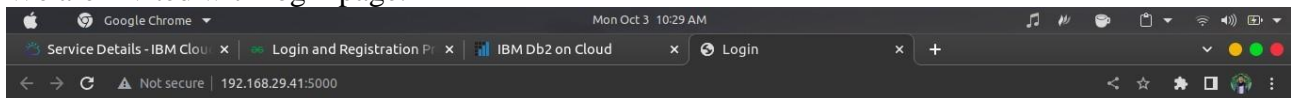
    .bottom{
        color: #236B8E;
        font-style: oblique;
        font-weight: bold;
    }
```

Output: Start the application:



```
(base) maryada@maryada: ~/IBM/Sample programs/assignment 2$ python app.py
* Serving Flask app "app" (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
* Running on all addresses.
WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://192.168.29.41:5000/ (Press CTRL+C to quit)
192.168.29.41 - - [03/Oct/2022 10:19:32] "GET / HTTP/1.1" 200 -
192.168.29.41 - - [03/Oct/2022 10:19:35] "GET /register HTTP/1.1" 200 -
False
192.168.29.41 - - [03/Oct/2022 10:19:54] "POST /register HTTP/1.1" 200 -
```

We are invited with login page.



Login

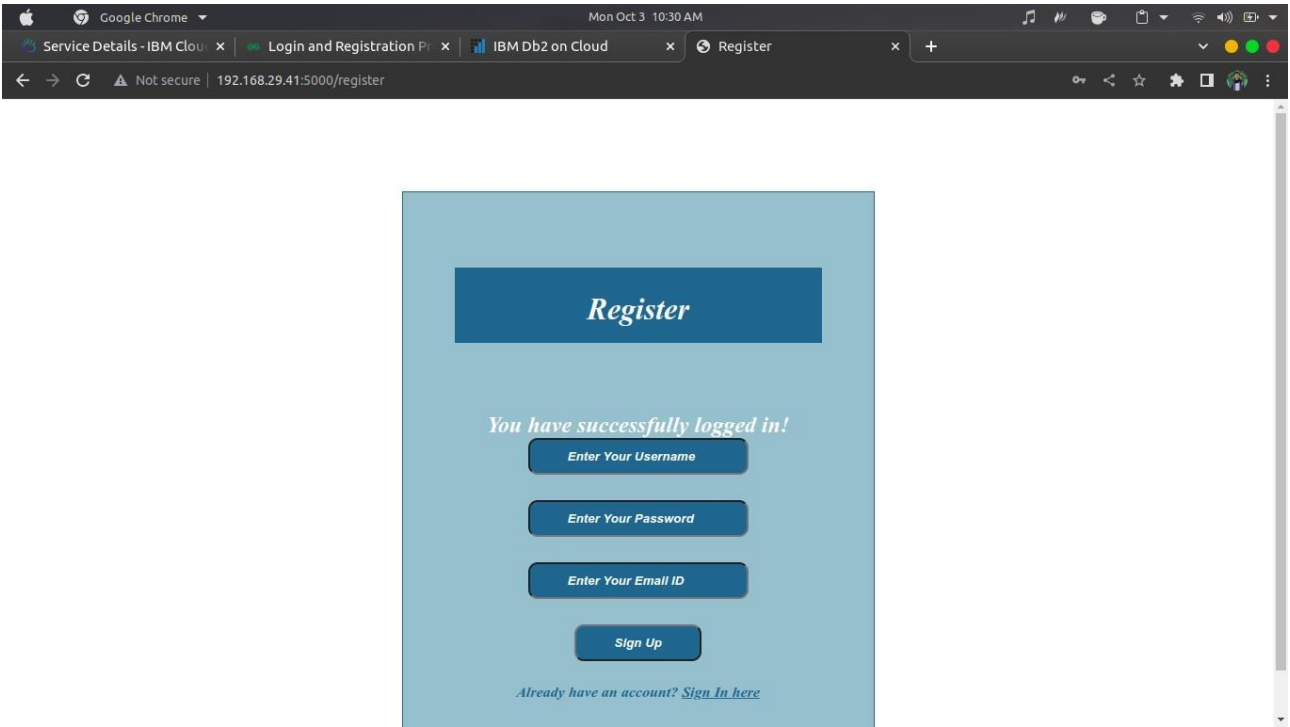
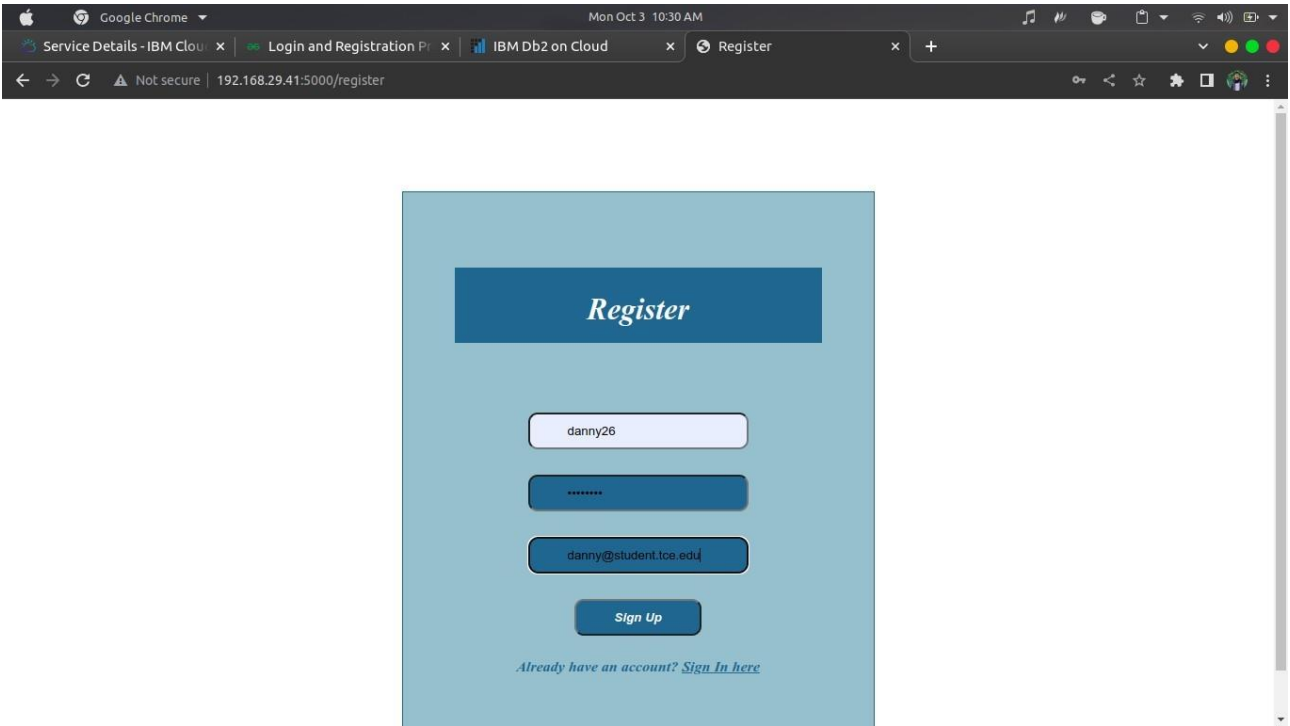
Enter Your Username

Enter Your Password

Sign In

Don't have an account? [Sign Up here](#)

Registration:



Google Chrome | Mon Oct 3 10:31 AM

Service Details - IBM Cloud | Login and Registration Pr | IBM Db2 on Cloud | Register

bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com/crn%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Aa%2Fbc3a4dafd57c42e38a173...

IBM Db2 on Cloud

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

YGG09863.USERS

Back

Export to CSV

USERNAME	EMAIL	PASSWORD
danny26	danny@student.tce.edu	sample23
maryada	sample123	sample1234

Login and Logout:

Google Chrome | Mon Oct 3 10:32 AM

Service Details - IBM Cloud | Login and Registration Pr | IBM Db2 on Cloud | Login

Not secure | 192.168.29.41:5000/login

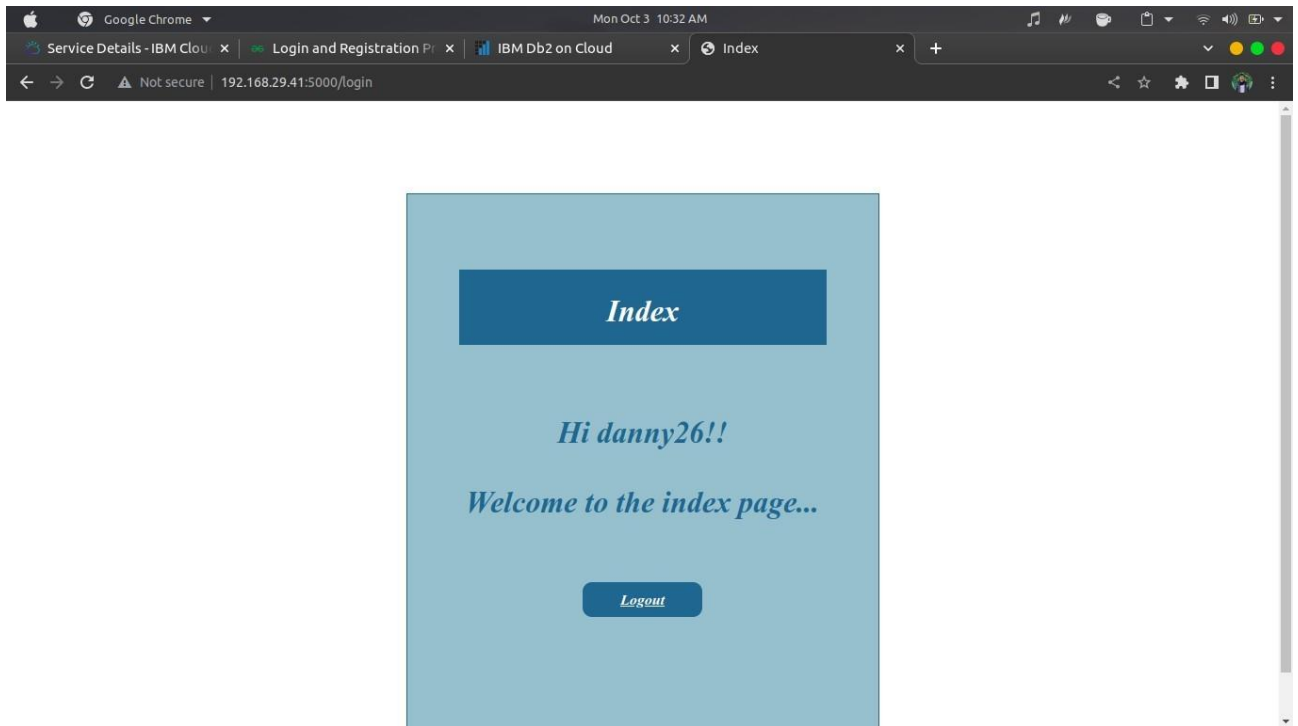
Login

danny26

password

Sign In

Don't have an account? [Sign Up here](#)



Logout:

