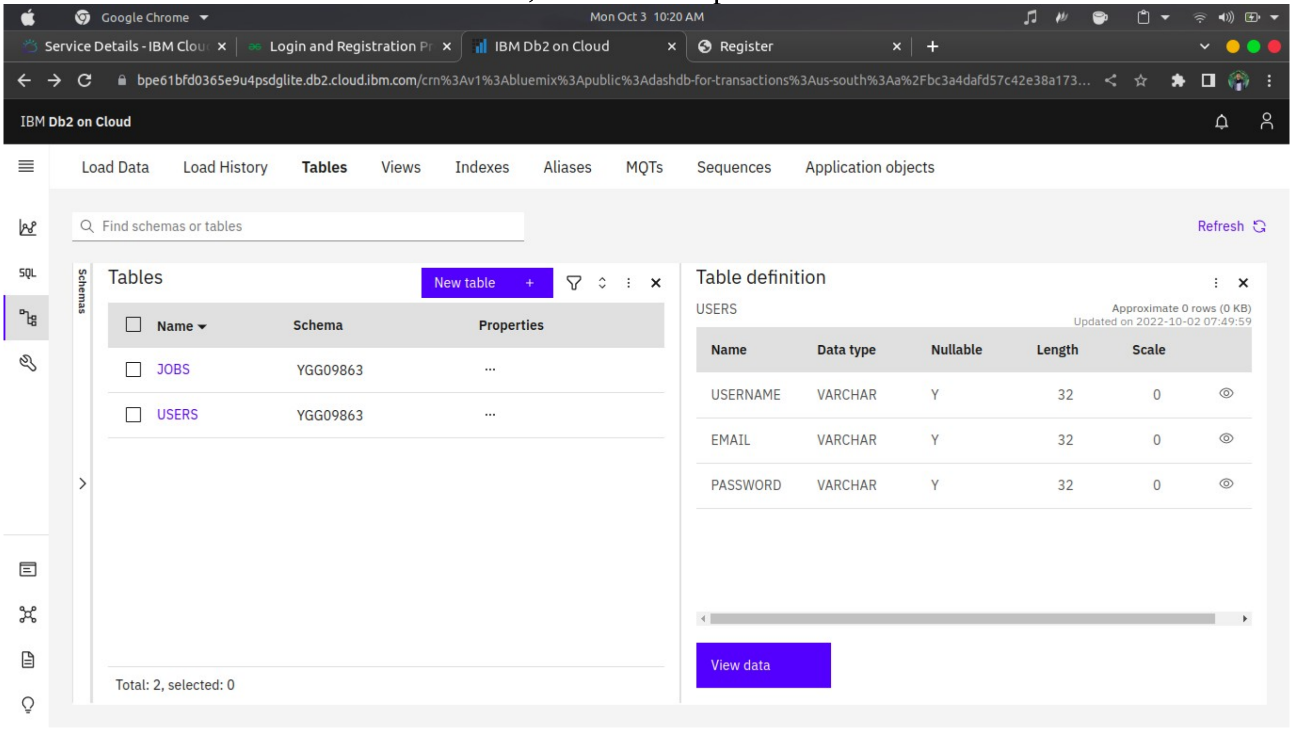
Assignment 2:
917719C008
917719C054
917719C062
917719C089

1. Create User table with user with email,usernameand password.


IBM Db2 on Cloud

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

Tables

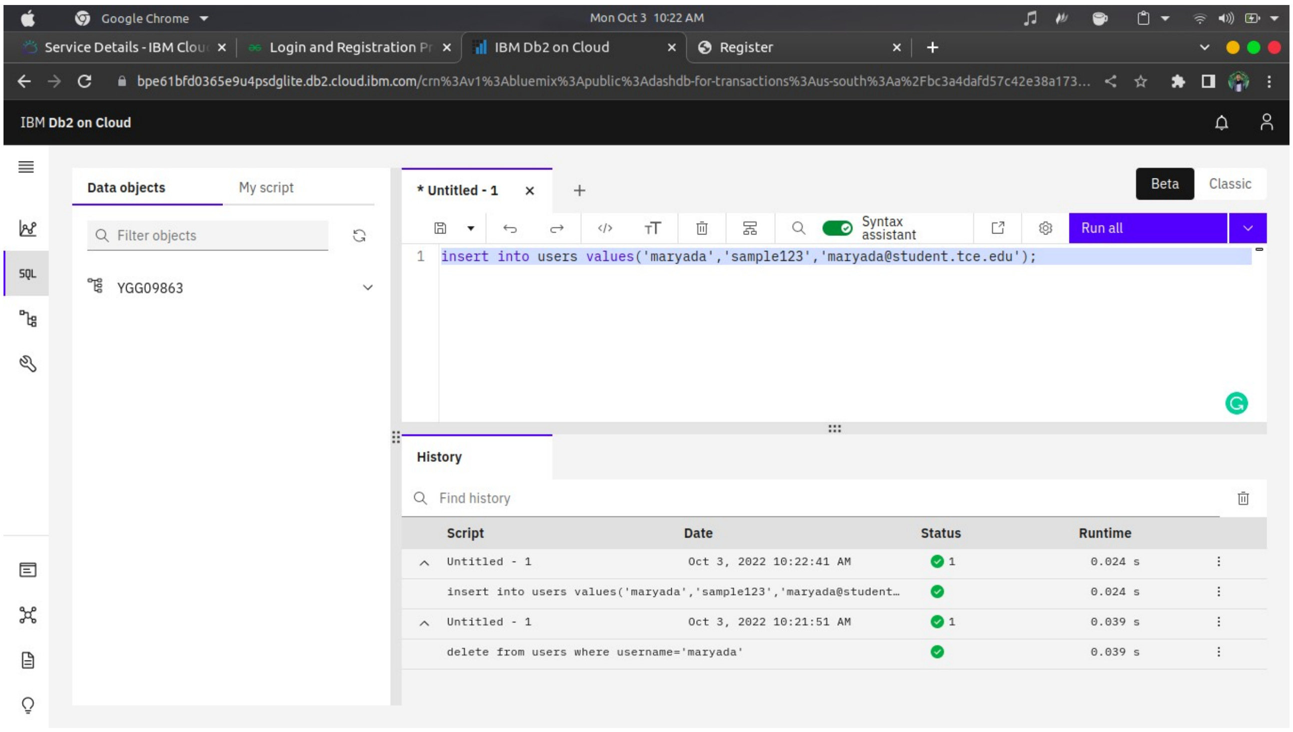
Name	Schema	Properties
JOBS	YGG09863	···
USERS	YGG09863	···

Total: 2, selected: 0

Table definition
USERS
Approximate 0 rows (0 KB)
Updated on 2022-10-02 07:49:59

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

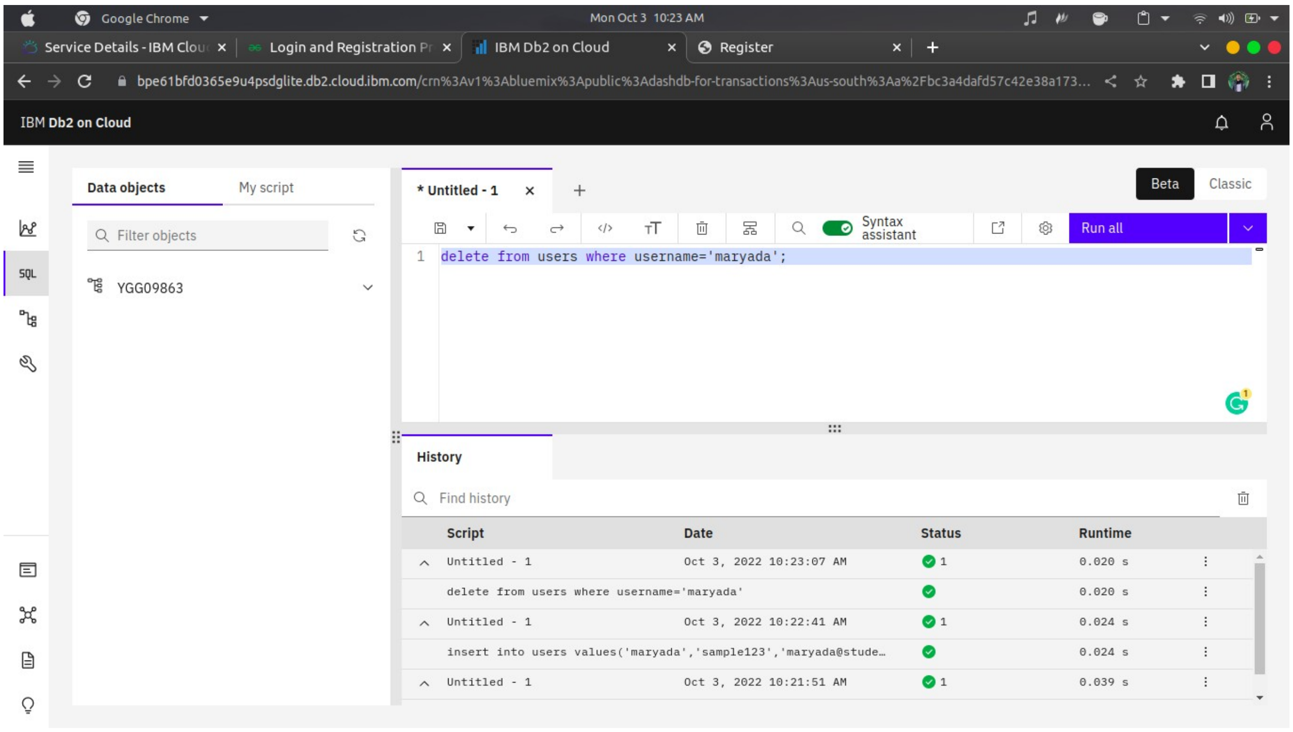

IBM Db2 on Cloud

* Untitled - 1

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

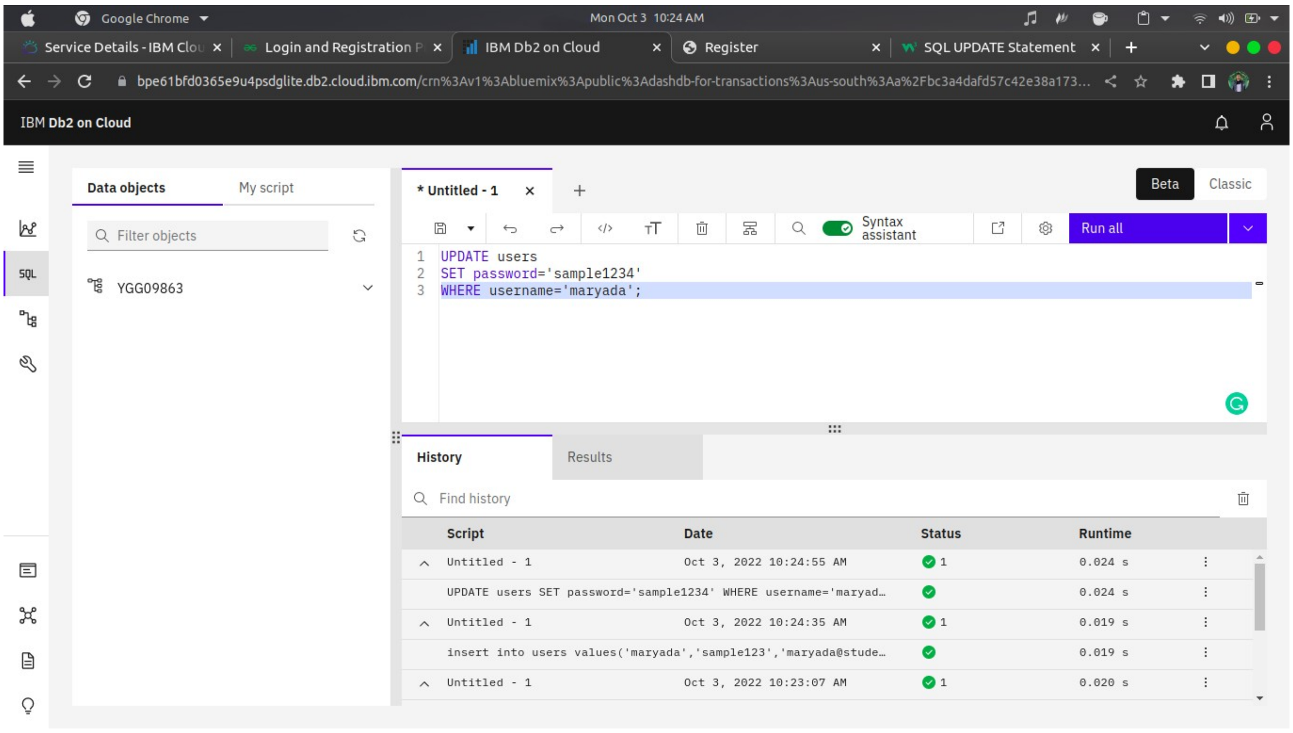
History

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



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

Script	Date	Status	Runtime
Untitled - 1	Oct 3, 2022 10:23:07 AM	✓ 1	0.020 s
delete from users where username='maryada'		✓	0.020 s
Untitled - 1	Oct 3, 2022 10:22:41 AM	✓ 1	0.024 s
insert into users values('maryada','sample123','maryada@stude…		✓	0.024 s
Untitled - 1	Oct 3, 2022 10:21:51 AM	✓ 1	0.039 s



```
UPDATE users
SET password='sample1234'
WHERE username='maryada';
```

Script	Date	Status	Runtime
Untitled - 1	Oct 3, 2022 10:24:55 AM	✓ 1	0.024 s
UPDATE users SET password='sample1234' WHERE username='maryad…		✓	0.024 s
Untitled - 1	Oct 3, 2022 10:24:35 AM	✓ 1	0.019 s
insert into users values('maryada','sample123','maryada@stude…		✓	0.019 s
Untitled - 1	Oct 3, 2022 10:23:07 AM	✓ 1	0.020 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(prep_stmt,1,username)
            ibm_db.bind_param(prep_stmt,2,email)
            ibm_db.bind_param(prep_stmt,3,password)
            ibm_db.execute(prep_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:

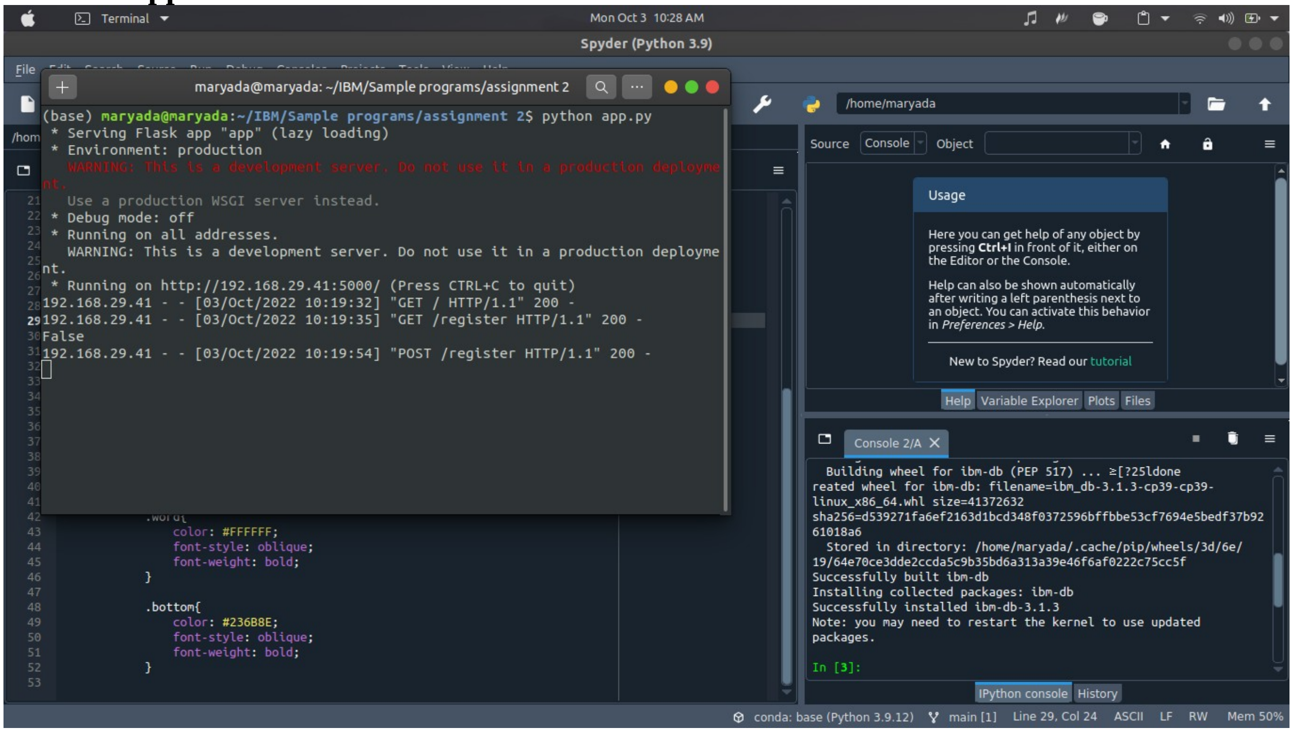
```
<!-- Store this code in 'register.html' file inside the 'templates' folder -->

<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: #FFFFFF;
	font-style: oblique;
	font-weight: bold;
	border-radius: 10px;
}

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

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

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

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

Output:
Start the application:



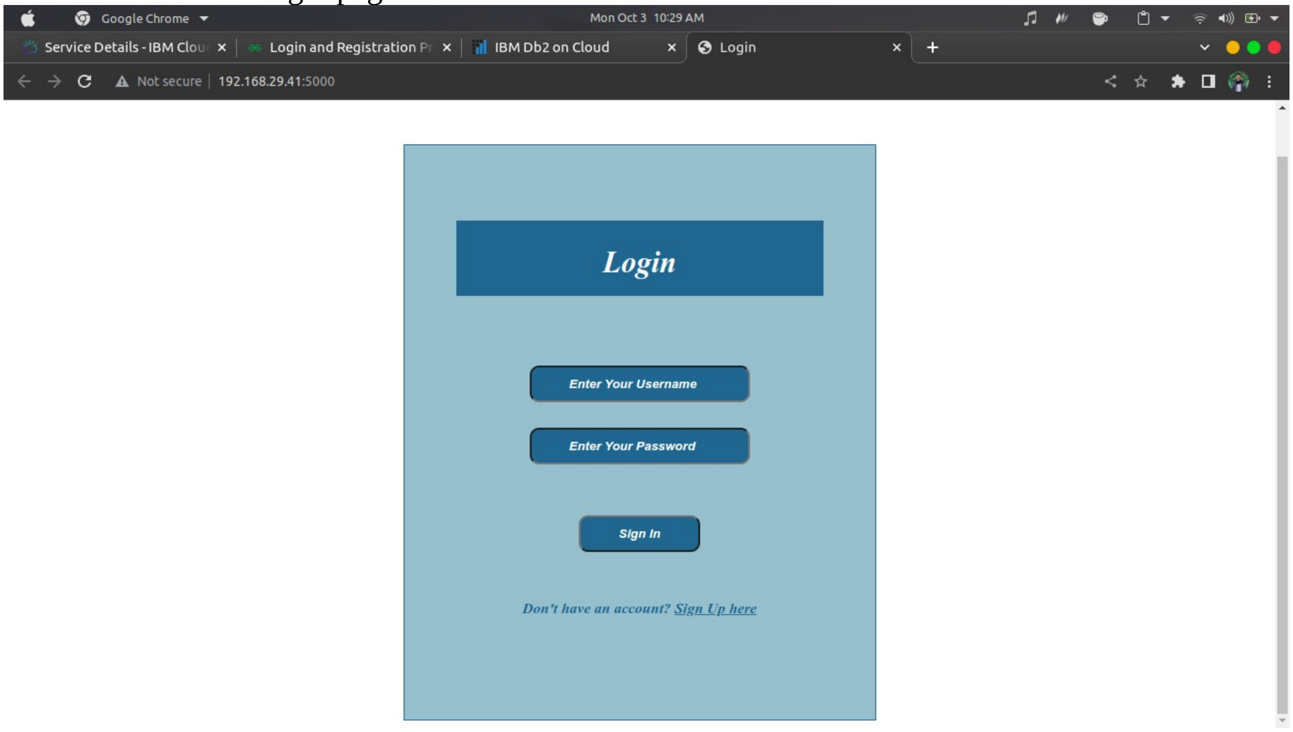
```
(base) maryada@maryada:~/IBM/Sample programs/assignment 2$ python app.py
 * Serving Flask app "app" (lazy loading)
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deployme
nt.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on all addresses.
   WARNING: This is a development server. Do not use it in a production deployme
nt.
 * 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 -
```

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

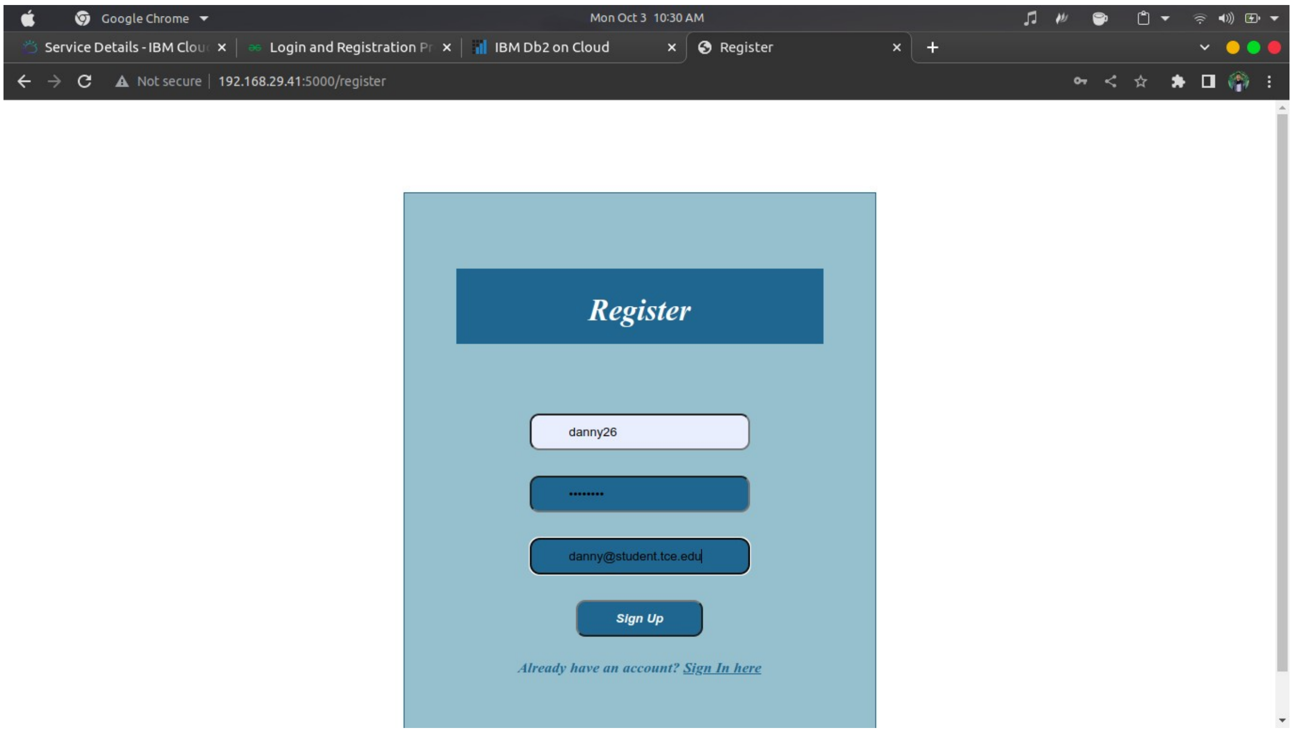
```
  Building wheel for ibm-db (PEP 517) ... ≥[?25ldone
reated wheel for ibm-db: filename=ibm_db-3.1.3-cp39-cp39-
linux_x86_64.whl size=41372632
sha256=d539271fa6ef2163d1bcd348f0372596bffbbe53cf7694e5bedf37b92
61018a6
  Stored in directory: /home/maryada/.cache/pip/wheels/3d/6e/
19/64e70ce3dde2ccda5c9b35bd6a313a39e46f6af0222c75cc5f
Successfully built ibm-db
Installing collected packages: ibm-db
Successfully installed ibm-db-3.1.3
Note: you may need to restart the kernel to use updated
packages.

In [3]:
```

Terminal
Mon Oct 3 10:28 AM
Spyder (Python 3.9)
maryada@maryada: ~/IBM/Sample programs/assignment 2
/home/maryada
Source
Console
Object
Usage
Here you can get help of any object by pressing Ctrl+I in front of it, either on the Editor or the Console.
Help can also be shown automatically after writing a left parenthesis next to an object. You can activate this behavior in Preferences > Help.
New to Spyder? Read our tutorial
Help
Variable Explorer
Plots
Files
Console 2/A
IPython console
History
conda: base (Python 3.9.12)
main [1]
Line 29, Col 24
ASCII
LF
RW
Mem 50%

We are invited with login page.



Registration:


Google Chrome
Mon Oct 3 10:30 AM
Service Details - IBM Clou
Login and Registration Pr
IBM Db2 on Cloud
Register
Not secure | 192.168.29.41:5000/register

Register

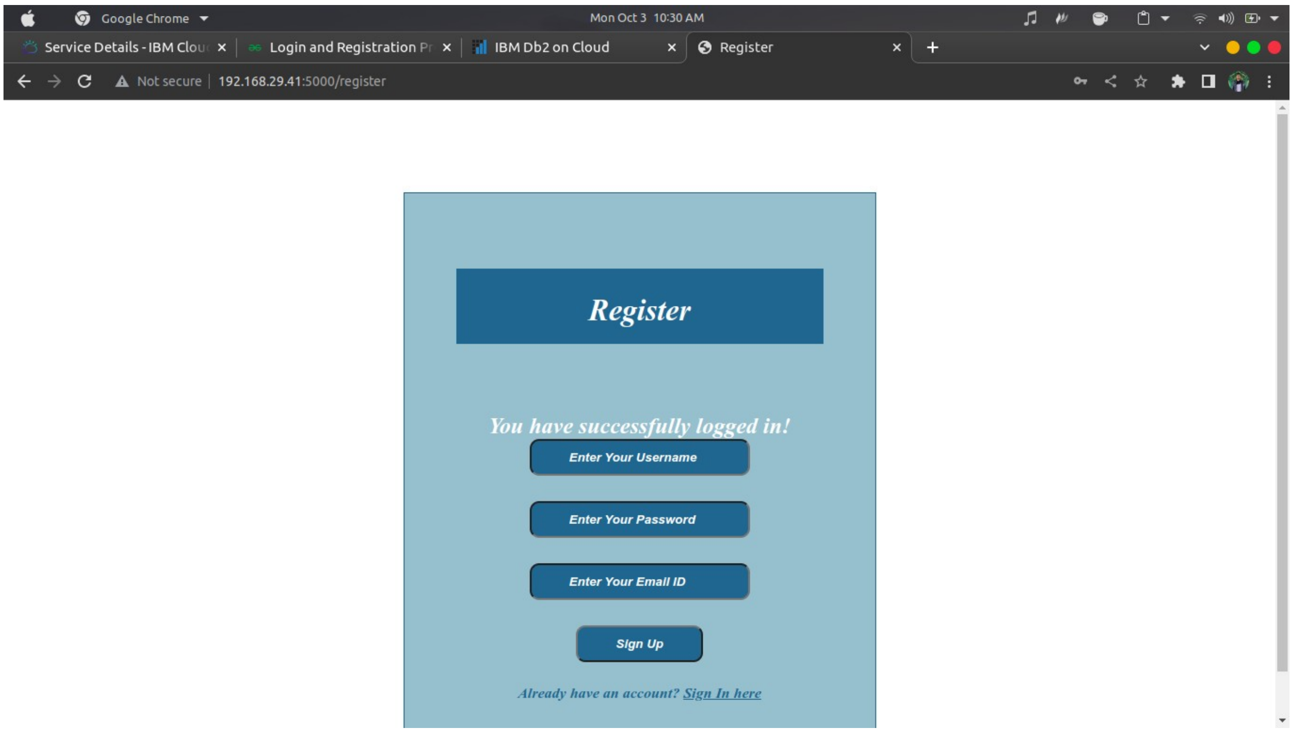
danny26

••••••••

danny@student.tce.edu

Sign Up

Already have an account? Sign In here


Google Chrome
Mon Oct 3 10:30 AM
Service Details - IBM Clou
Login and Registration Pr
IBM Db2 on Cloud
Register
Not secure | 192.168.29.41:5000/register

Register

You have successfully logged in!

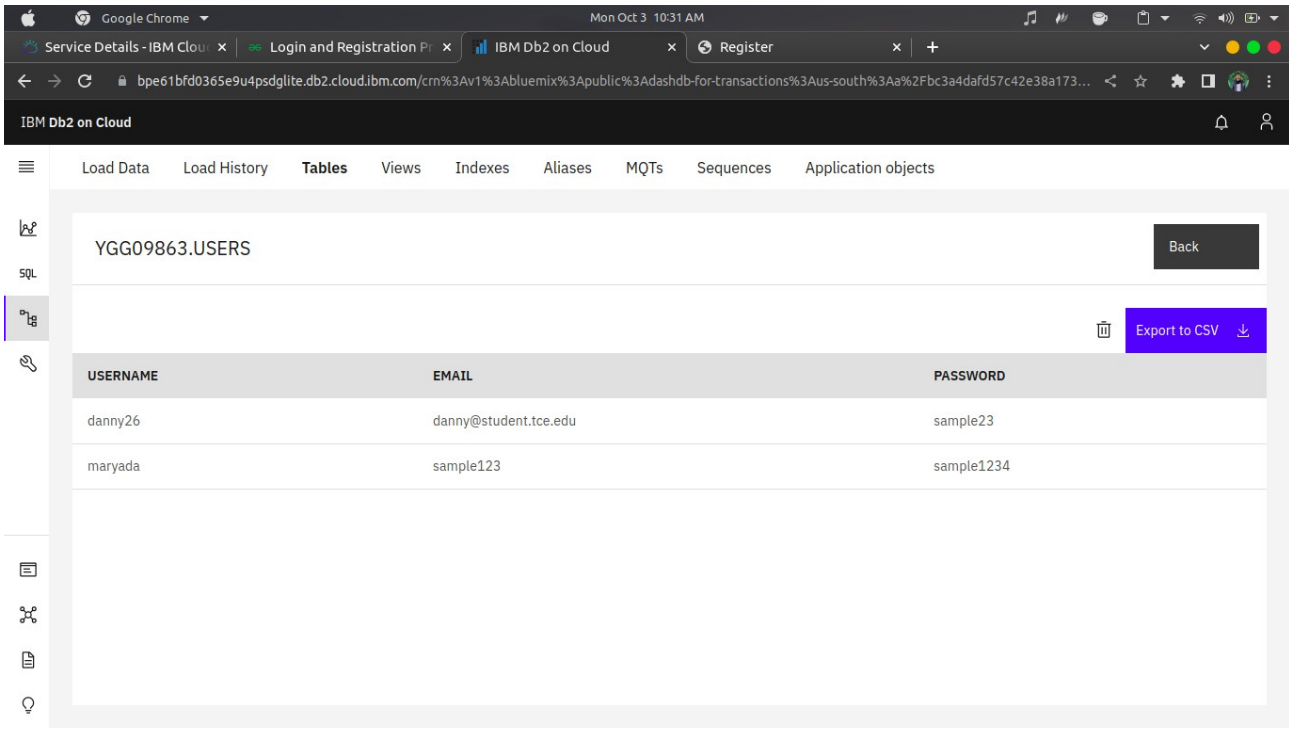
Enter Your Username

Enter Your Password

Enter Your Email ID

Sign Up

Already have an account? Sign In here

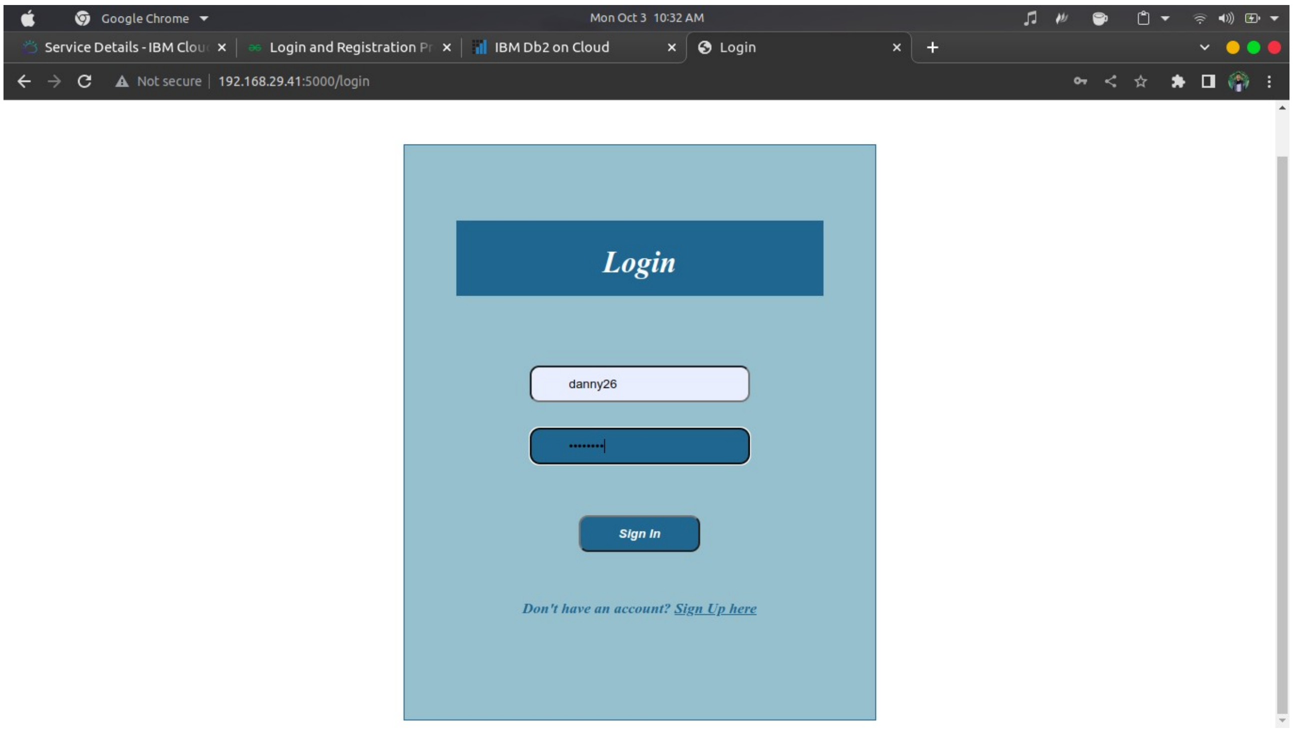

IBM Db2 on Cloud

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

YGG09863.USERS

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

Login and Logout:

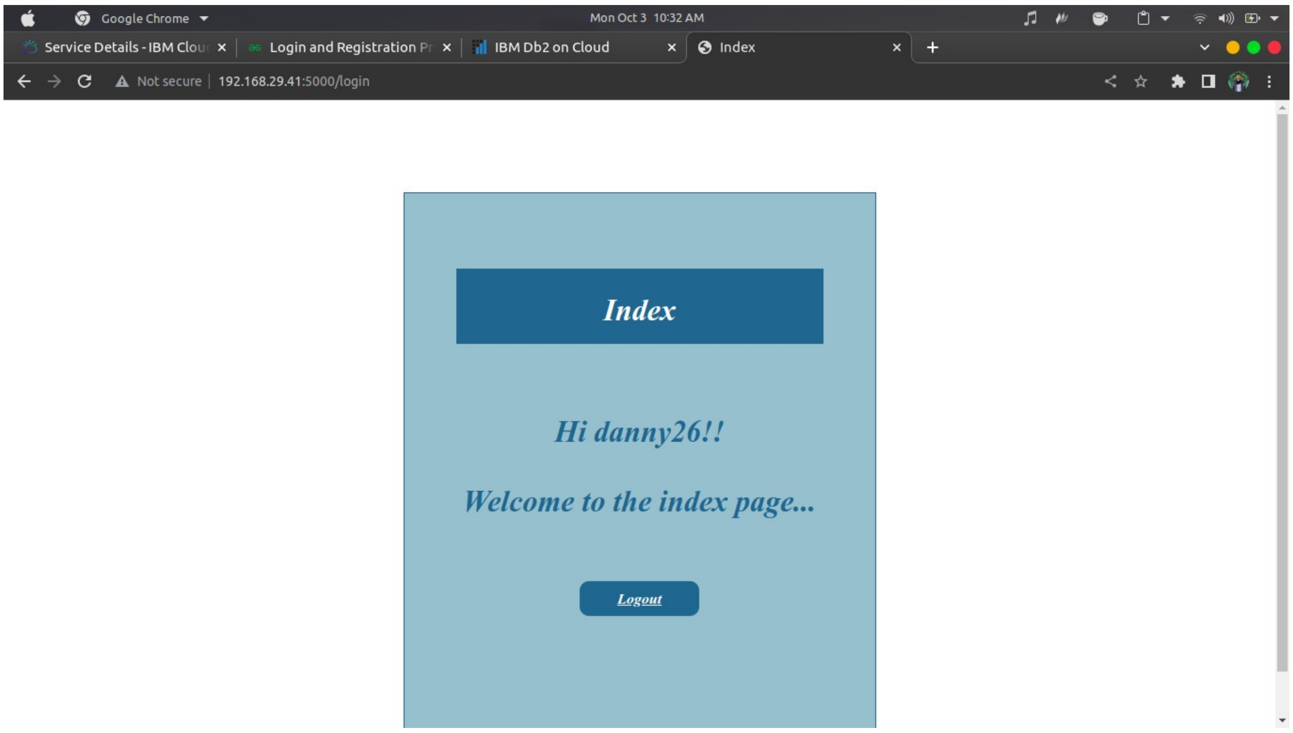

192.168.29.41:5000/login

Login

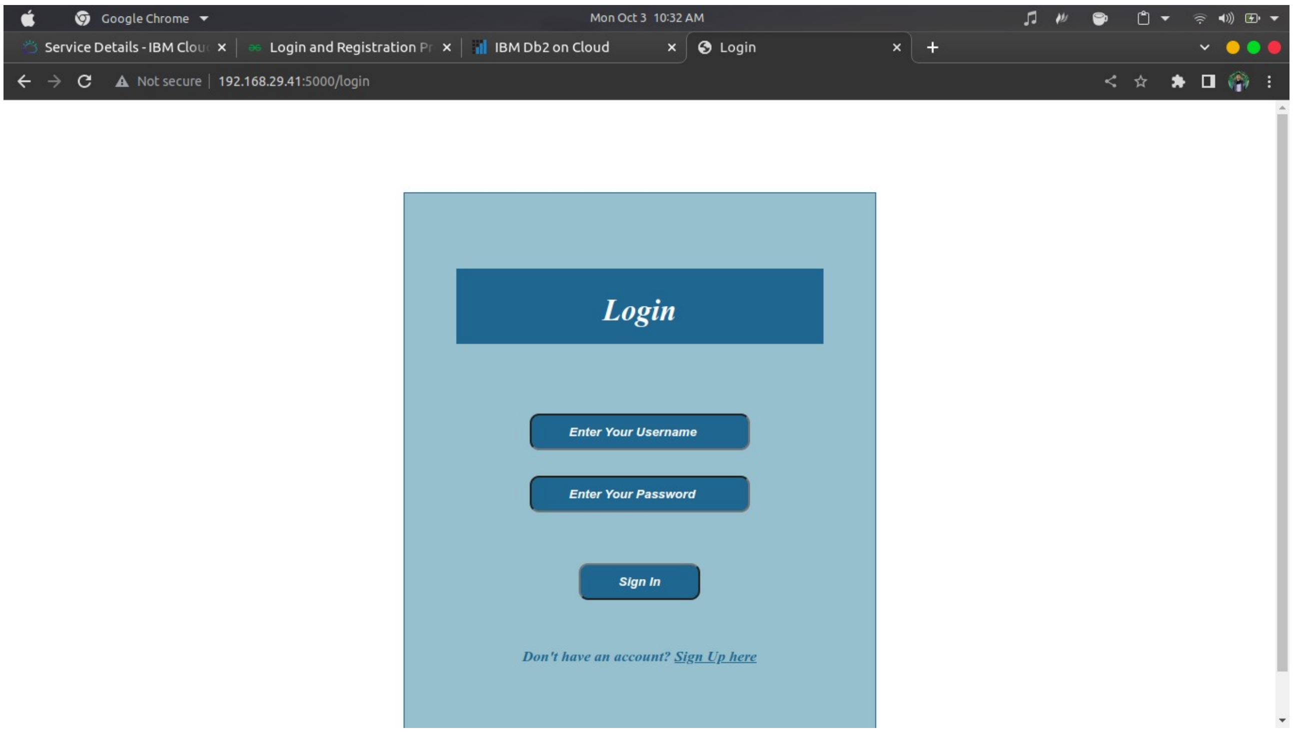
danny26

Sign In

Don't have an account? Sign Up here


Google Chrome
Mon Oct 3 10:32 AM
Service Details - IBM Clou
Login and Registration Pr
IBM Db2 on Cloud
Index
Not secure
192.168.29.41:5000/login
Index
Hi danny26!!
Welcome to the index page...
Logout

Logout:


Google Chrome
Mon Oct 3 10:32 AM
Service Details - IBM Clou
Login and Registration Pr
IBM Db2 on Cloud
Login
Not secure
192.168.29.41:5000/login
Login
Enter Your Username
Enter Your Password
Sign In
Don't have an account? Sign Up here