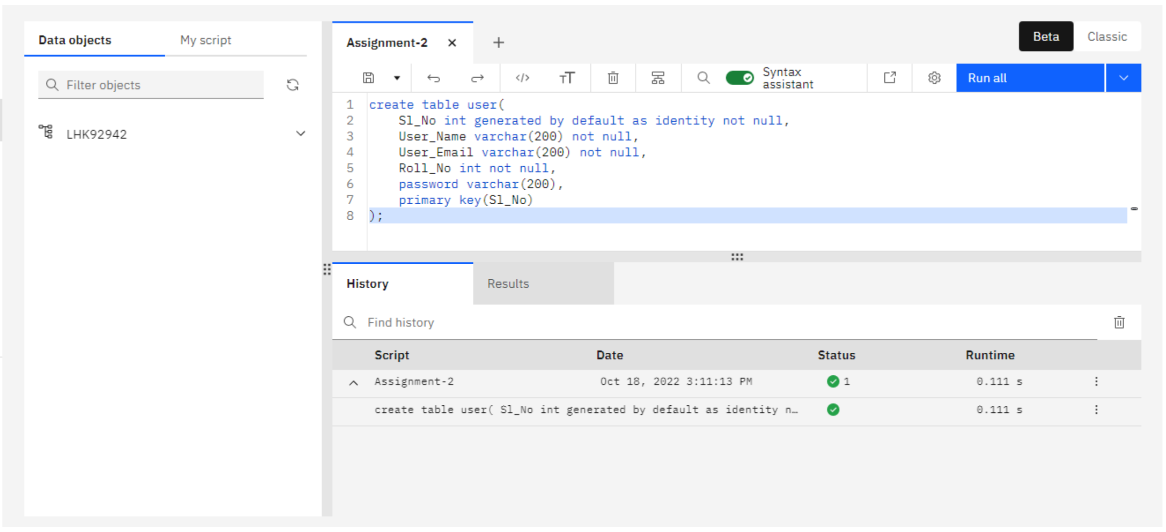
Assignment -2
DB and Flask

Assignment Date	12 October 2022
Student Name	Mr P Sathiyananth
Student Roll Number	621319104051
Maximum Marks	2 Marks

Question-1:

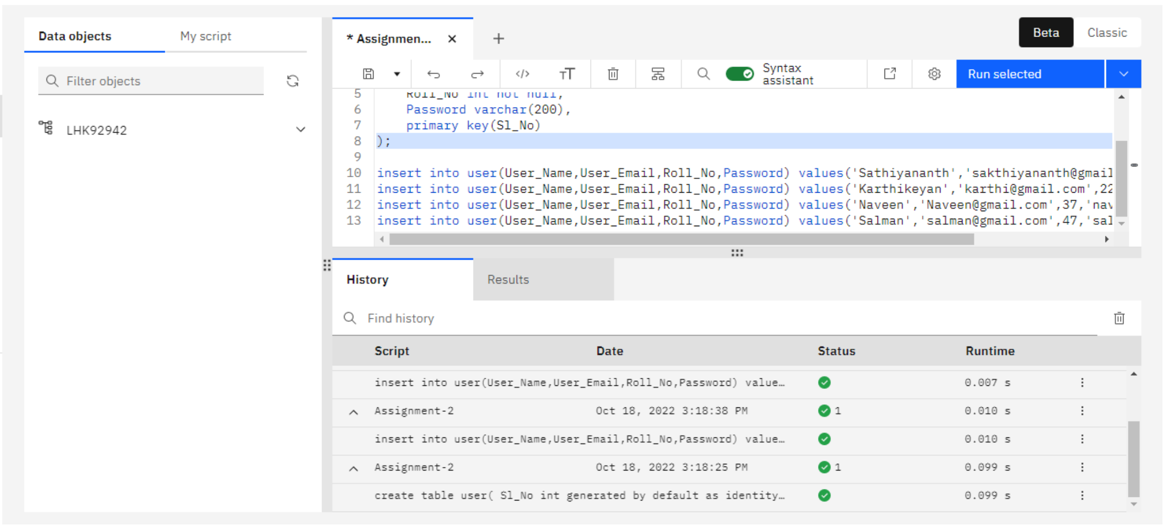
Create user table with email, username, roll number, password



```
create table user(
    Sl_No int generated by default as identity not null,
    User_Name varchar(200) not null,
    User_Email varchar(200) not null,
    Roll_No int not null,
    password varchar(200),
    primary key(Sl_No)
);
```

Script	Date	Status	Runtime
Assignment-2	Oct 18, 2022 3:11:13 PM	✓ 1	0.111 s
create table user(Sl_No int generated by default as identity n…		✓	0.111 s

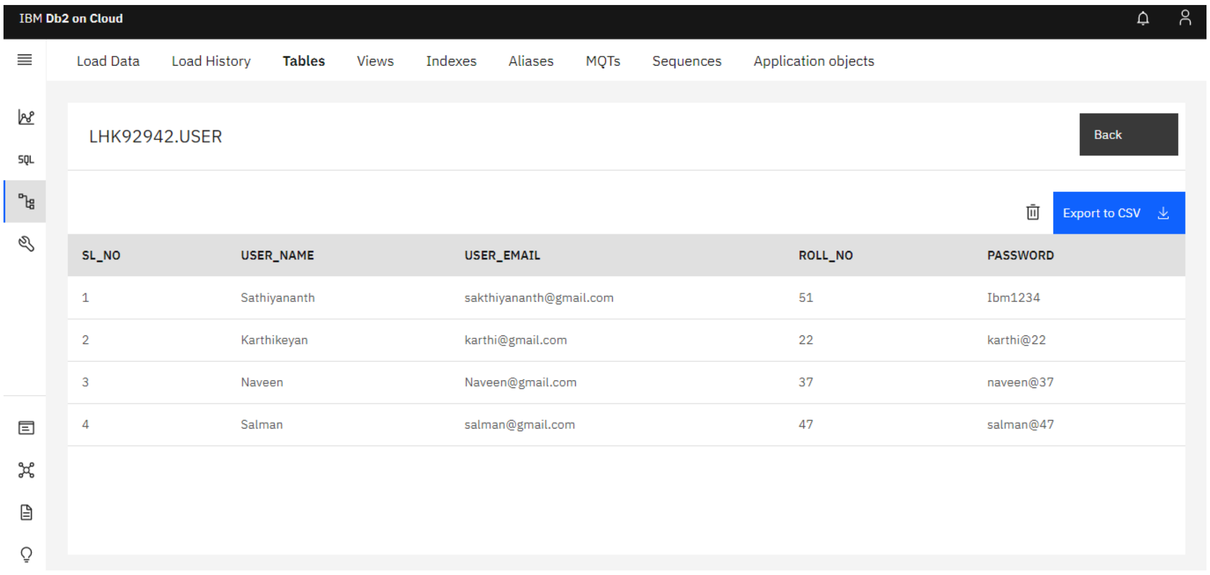
Insert Values:



```
    Roll_No int not null,
    Password varchar(200),
    primary key(Sl_No)
);

insert into user(User_Name,User_Email,Roll_No,Password) values('Sathiyananth','sakthiyananth@gmail
insert into user(User_Name,User_Email,Roll_No,Password) values('Karthikeyan','karthi@gmail.com',22
insert into user(User_Name,User_Email,Roll_No,Password) values('Naveen','Naveen@gmail.com',37,'nav
insert into user(User_Name,User_Email,Roll_No,Password) values('Salman','salman@gmail.com',47,'sal
```

Script	Date	Status	Runtime
insert into user(User_Name,User_Email,Roll_No,Password) value…		✓	0.007 s
Assignment-2	Oct 18, 2022 3:18:38 PM	✓ 1	0.010 s
insert into user(User_Name,User_Email,Roll_No,Password) value…		✓	0.010 s
Assignment-2	Oct 18, 2022 3:18:25 PM	✓ 1	0.099 s
create table user(Sl_No int generated by default as identity…		✓	0.099 s

User table:



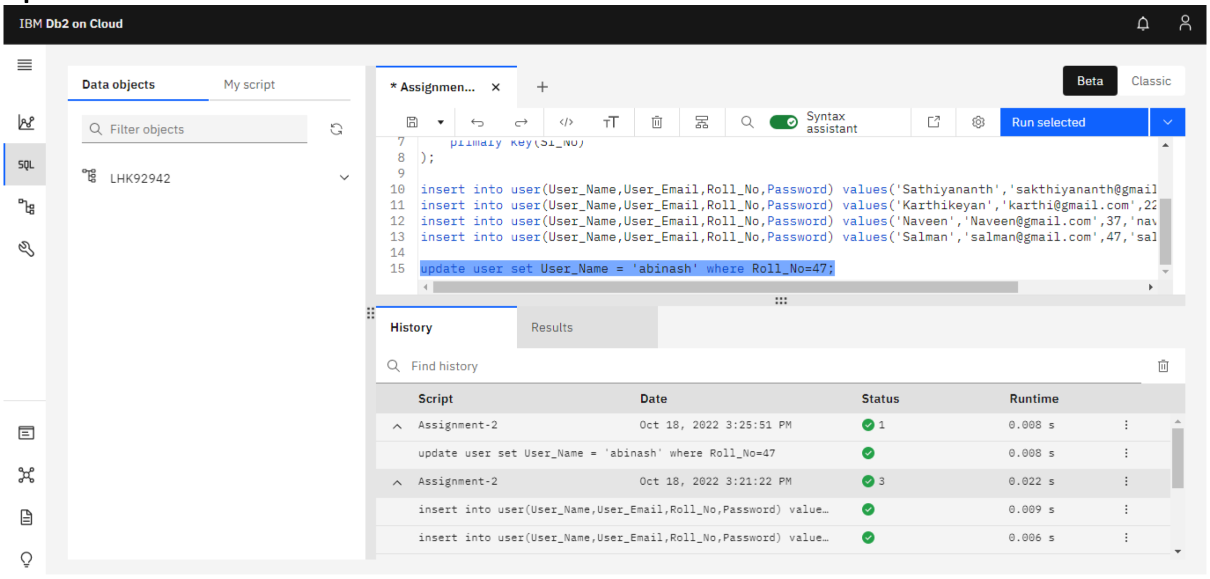
LHK92942.USER

SL_NO	USER_NAME	USER_EMAIL	ROLL_NO	PASSWORD
1	Sathiyananth	sakthiyananth@gmail.com	51	Ibm1234
2	Karthikeyan	karthi@gmail.com	22	karthi@22
3	Naveen	Naveen@gmail.com	37	naveen@37
4	Salman	salman@gmail.com	47	salman@47

Question-2:

Perform update & delete queries with the table.

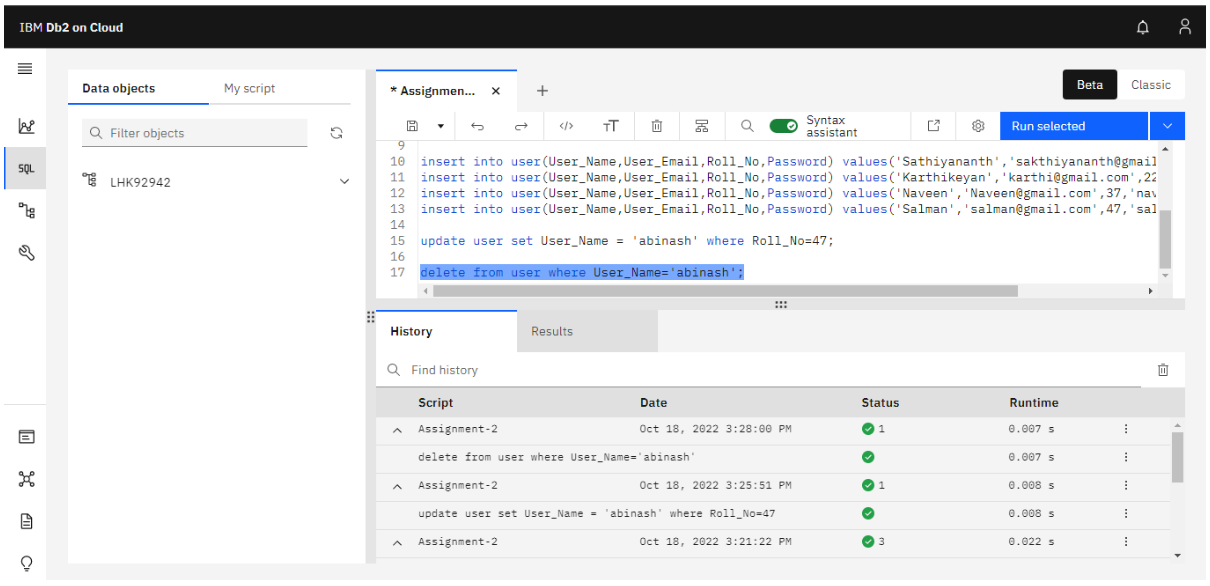
Update values:



```
    primary key(Sl_No)
);

insert into user(User_Name,User_Email,Roll_No,Password) values('Sathiyananth','sakthiyananth@gmail
insert into user(User_Name,User_Email,Roll_No,Password) values('Karthikeyan','karthi@gmail.com',22
insert into user(User_Name,User_Email,Roll_No,Password) values('Naveen','Naveen@gmail.com',37,'nav
insert into user(User_Name,User_Email,Roll_No,Password) values('Salman','salman@gmail.com',47,'sal

update user set User_Name = 'abinash' where Roll_No=47;
```

Script	Date	Status	Runtime
Assignment-2	Oct 18, 2022 3:25:51 PM	✓ 1	0.008 s
update user set User_Name = 'abinash' where Roll_No=47		✓	0.008 s
Assignment-2	Oct 18, 2022 3:21:22 PM	✓ 3	0.022 s
insert into user(User_Name,User_Email,Roll_No,Password) value…		✓	0.009 s
insert into user(User_Name,User_Email,Roll_No,Password) value…		✓	0.006 s

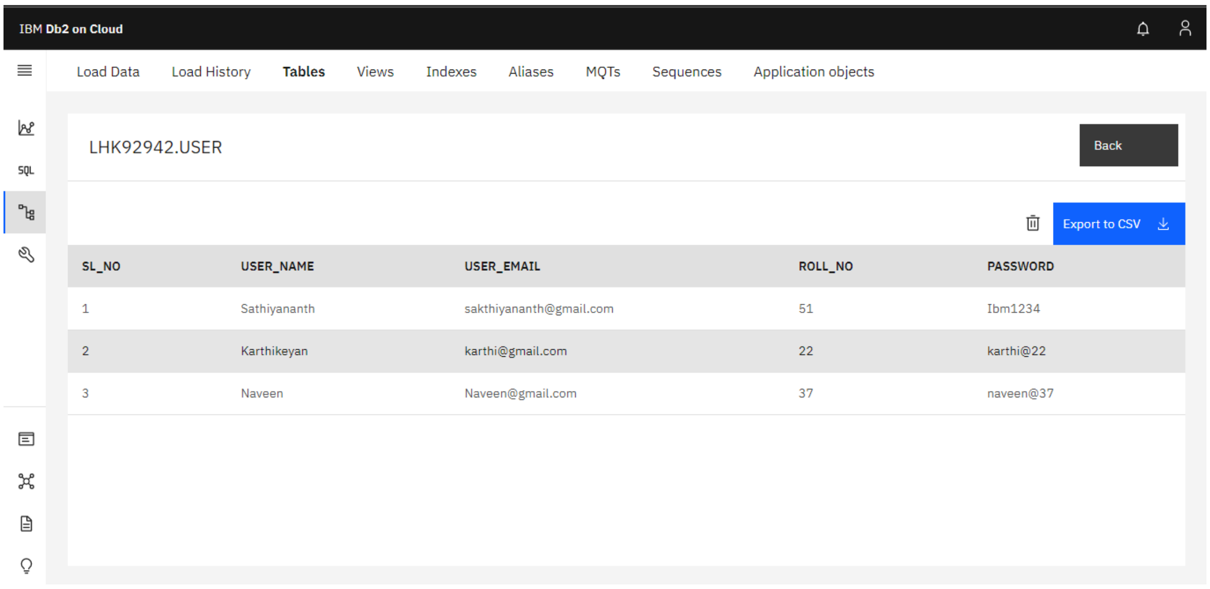
Delete values:



```
insert into user(User_Name,User_Email,Roll_No,Password) values('Sathiyananth','sakthiyananth@gmail
insert into user(User_Name,User_Email,Roll_No,Password) values('Karthikeyan','karthi@gmail.com',22
insert into user(User_Name,User_Email,Roll_No,Password) values('Naveen','Naveen@gmail.com',37,'nav
insert into user(User_Name,User_Email,Roll_No,Password) values('Salman','salman@gmail.com',47,'sal

update user set User_Name = 'abinash' where Roll_No=47;

delete from user where User_Name='abinash';
```

History | Results

Script	Date	Status	Runtime
Assignment-2	Oct 18, 2022 3:28:00 PM	✓ 1	0.007 s
delete from user where User_Name='abinash'		✓	0.007 s
Assignment-2	Oct 18, 2022 3:25:51 PM	✓ 1	0.008 s
update user set User_Name = 'abinash' where Roll_No=47		✓	0.008 s
Assignment-2	Oct 18, 2022 3:21:22 PM	✓ 3	0.022 s



LHK92942.USER

SL_NO	USER_NAME	USER_EMAIL	ROLL_NO	PASSWORD
1	Sathiyananth	sakthiyananth@gmail.com	51	Ibm1234
2	Karthikeyan	karthi@gmail.com	22	karthi@22
3	Naveen	Naveen@gmail.com	37	naveen@37

Question-3:

Connect python code to db2.

import ibm_db

import bcrypt

conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=fbd88901-ebdb-4a4f-a32e-9822b9fb237b.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32731;SECURITY=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;PROTOCOL=TCPIP;UID=lhk92942;PWD=Cht7cZes9VeaXQ5N","","")

Question-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.

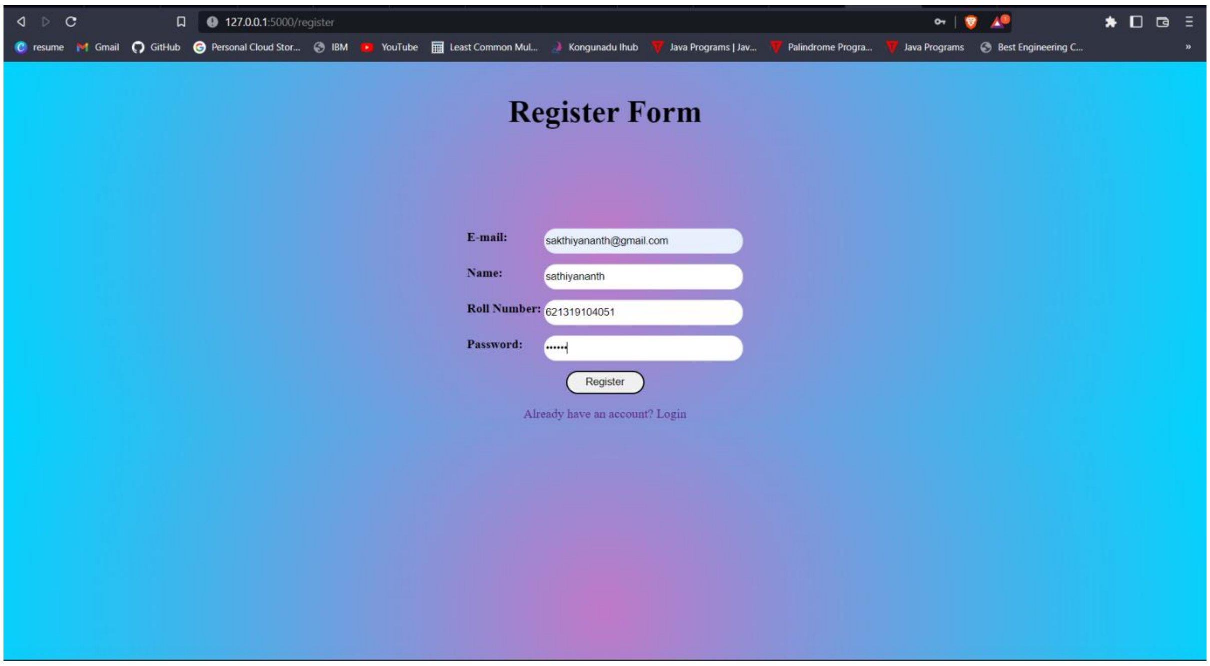
Solution:

app.py

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

import ibm_db

import bcrypt

conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=fbd88901-ebdb-4a4f-a32e-9822b9fb237b.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32731;SECURITY=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;PROTOCOL=TCPIP;UID=lhk92942;PWD=Cht7cZes9VeaXQ5N",'','')

# url_for('static', filename='style.css')

app = Flask(__name__)

app.secret_key = b'_5#y2L"F4Q8z\n\xec]/'

@app.route("/",methods=['GET'])

def home():

    if 'email' not in session:

        return redirect(url_for('login'))

    return render_template('home.html',name='Home')

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

def register():
if request.method == 'POST':

    email = request.form['email']

    username = request.form['username']

    rollNo = request.form['rollNo']

    password = request.form['password'

    if not email or not username or not rollNo or not password:

        return render_template('register.html',error='Please fill all fields')

    hash=bcrypt.hashpw(password.encode('utf-8'),bcrypt.gensalt())

    query = "SELECT * FROM user_details WHERE email=? OR rollNo=?"

    stmt = ibm_db.prepare(conn, query)

    ibm_db.bind_param(stmt,1,email)

    ibm_db.bind_param(stmt,2,rollNo)

    ibm_db.execute(stmt)

    isUser = ibm_db.fetch_assoc(stmt)

    if not isUser:

        insert_sql = "INSERT INTO user_details(EMAIL, USERNAME, ROLLNO, 
PASSWORD) VALUES (?,?,?,?)"

        prep_stmt = ibm_db.prepare(conn, insert_sql)

        ibm_db.bind_param(prep_stmt, 1, email)

        ibm_db.bind_param(prep_stmt, 2, username)

        ibm_db.bind_param(prep_stmt, 3, rollNo)

        ibm_db.bind_param(prep_stmt, 4, hash)
        ibm_db.execute(prep_stmt)

        return render_template('register.html',success="You can login")

    else:

        return render_template('register.html',error='Invalid Credentials')

return render_template('register.html',name='Home')

@app.route("/login",methods=['GET','POST'])

def login():

    if request.method == 'POST':

        email = request.form['email']

        password = request.form['password']

        if not email or not password:

            return render_template('login.html',error='Please fill all fields')

        query = "SELECT * FROM user_details WHERE email=?"

        stmt = ibm_db.prepare(conn, query)

        ibm_db.bind_param(stmt,1,email)

        ibm_db.execute(stmt)

        isUser = ibm_db.fetch_assoc(stmt)

        print(isUser,password)

        if not isUser:

            return render_template('login.html',error='Invalid Credentials')
        isPasswordMatch = bcrypt.checkpw(password.encode('utf-
8'),isUser['PASSWORD'].encode('utf-8'))

        if not isPasswordMatch:

            return render_template('login.html',error='Invalid Credentials')

        session['email'] = isUser['EMAIL']

        return redirect(url_for('home'))

    return render_template('login.html',name='Home')

@app.route('/logout')

def logout():

    session.pop('email', None)

    return redirect(url_for('login'))

if __name__ == "__main__":

    app.run(debug=True)
```

Output:

Registration Page:



Register Form

E-mail: sakthiyananth@gmail.com

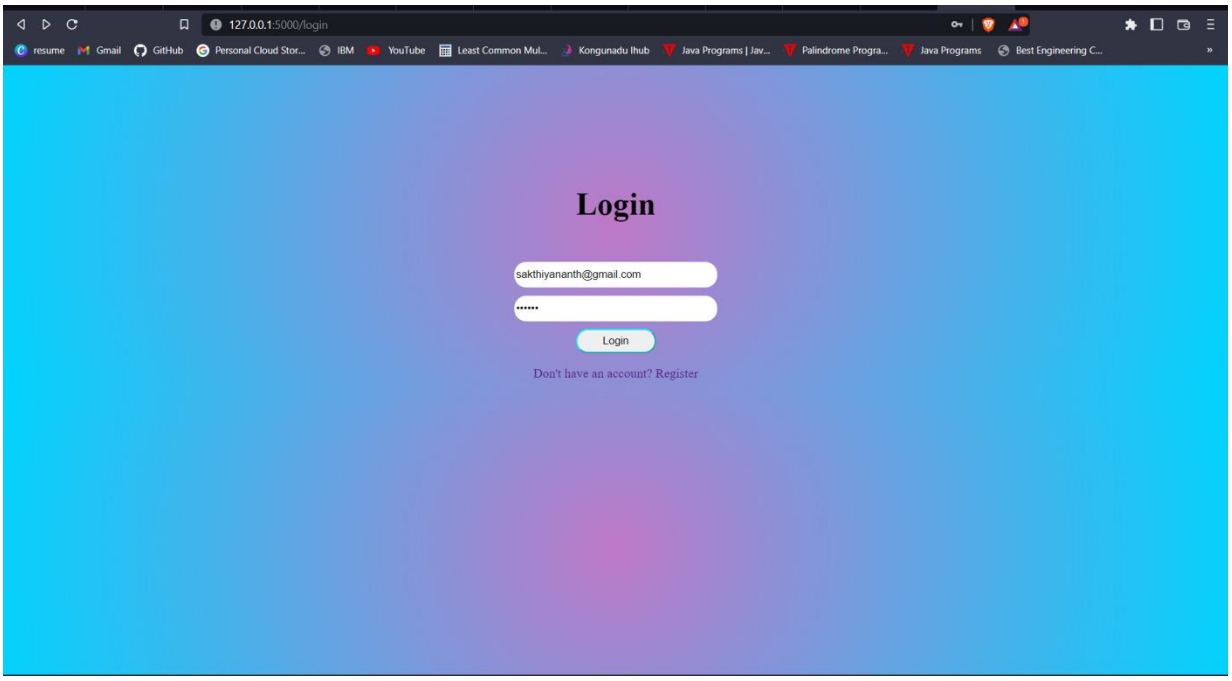
Name: sathiyananth

Roll Number: 621319104051

Password: ••••••

Already have an account? Login

Login Page:



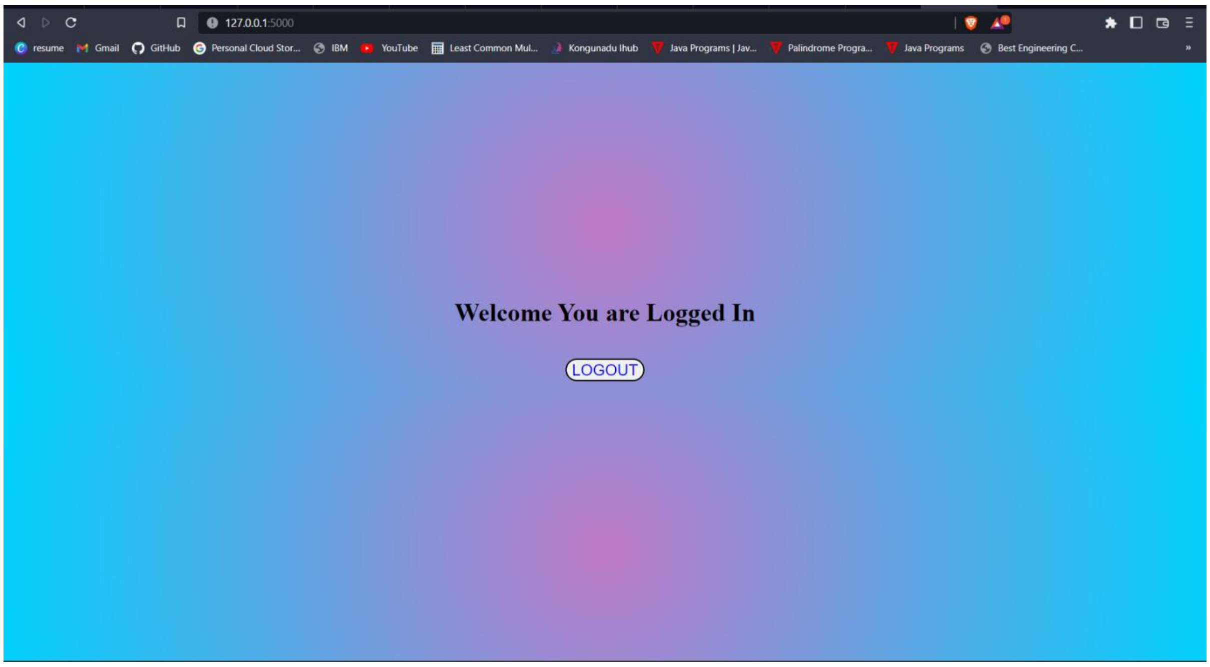
Login

sakthiyananth@gmail.com

••••••

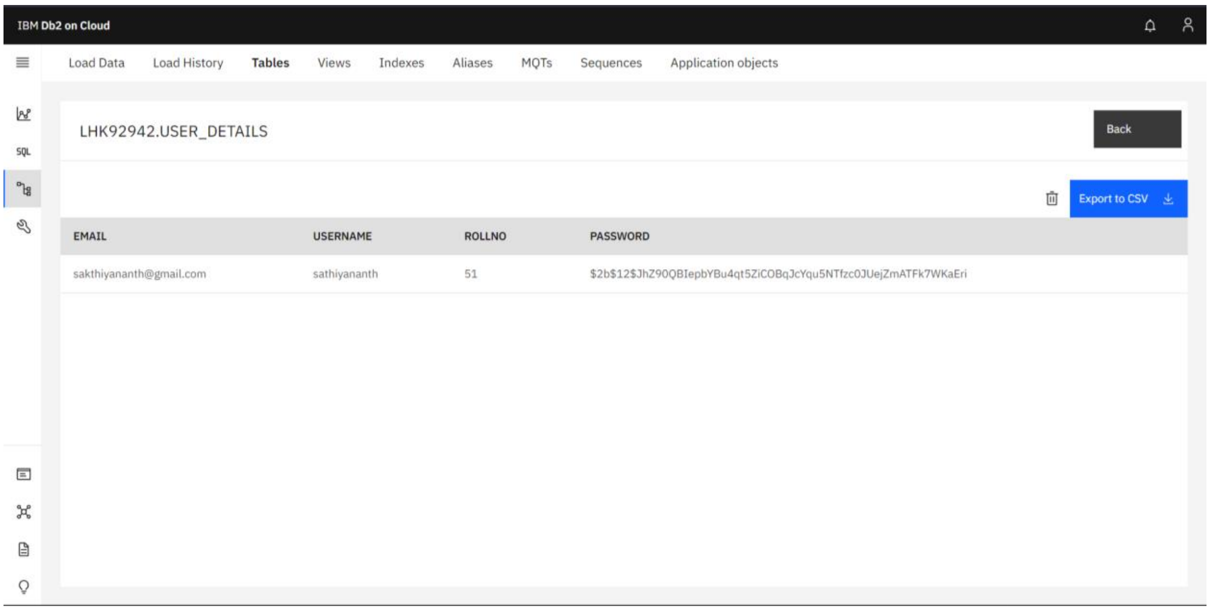
Don't have an account? Register

Home Page:



Welcome You are Logged In

Database:



LHK92942.USER_DETAILS

EMAIL	USERNAME	ROLLNO	PASSWORD
sakthiyananth@gmail.com	sathiyananth	51	$2b$12$JhZ90QBIepbYBu4qt5ZiCOBqJcYqu5NTfzc0JUejZmATFk7WKaEri