Assignment -2

User Table Creation

Assignment Date	12 October 2022
Student Name	Anand Michael M
Student Roll Number	962319104017
Maximum Marks	2 Marks

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

2. Perform UPDATE, DELETE Queries with user table

3. Connect python code to 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

Solution:

Table Creation:

Base.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>{% block title %}{% endblock %}</title>

  <style>
    @import
url('https://fonts.googleapis.com/css2?family=Michroma&display=swap');
    </style>
  <link rel="stylesheet" href="{{ url_for('static', filename='css/style.css')
}}"/>
</head>
<body>
  <!-- Nav Bar -->
  <nav>
    <div>
      <h3>User Registration Assignment</h3>
    </div>
  </nav>

  {% with messages = get_flashed_messages(with_categories=true) %}
    {% if messages %}
```

```
        {% for category, message in messages %}
          {% if category == "error" %}
            <div class="flash-div">
              <h4>{{ message }}</h4>
            </div>
          {% else %}
            <div class="flash-div success">
              <h4>{{ message }}</h4>
            </div>
          {% endif %}
        {% endfor %}
      {% endif %}
    {% endwith %}

    <div class="main-div">
      {% block main %}
      {% endblock %}
    </div>
</body>
</html>
```

Dashboard.html:

```
{% extends 'base.html' %}

{% block title %}
    Dashboard
{% endblock %}

{% block main %}
    <div class="form-main-div">
      <div class="table-div">
        <h2>Your Details</h2>
        <table>
          <th colspan="2">
            Welcome
          </th>
          <tr>
            <td>Email</td>
            <td>{{ account['EMAIL'] }}</td>
          </tr>
          <tr>
            <td>UserName</td>
            <td>{{ account['USERNAME'] }}</td>
          </tr>
          <tr>
            <td>Register Number</td>
```

```
            <td>{{ account['NUMBER'] }}</td>
          </tr>
          <tr>
            <td>Password</td>
            <td>{{ account['PASSWORD'] }}</td>
          </tr>
        </table>
      </div>
    </div>
{% endblock %}
```

Login.html:

```
{% extends 'base.html' %}

{% block title %}
    Login
{% endblock %}

{% block main %}
    <div class="form-main-div">
      <div class="form-div">
        <h3>Login</h3>
        <form method="POST">
          <label>Email</label> <br>
          <input class="inputs" type="text" placeholder="Enter your
email" name="email"/>

          <label>Password</label> <br>
          <input class="inputs" type="password" placeholder="Enter your
password" name="password"/>

          <button class="submit">Login</button>

          <div>
            <a href="/register">Don't have an account? Create one</a>
          </div>
        </form>
      </div>
    </div>
{% endblock %}
```

Register.html:

```
{% extends 'base.html' %}
```

```
{% block title %}
   Sign up
{% endblock %}

{% block main %}
   <div class="form-main-div">
      <div class="form-div">
         <h3>Enter all the details</h3>
         <form method="POST">
            <label>Email</label> <br>
            <input class="inputs" type="text" placeholder="Enter your email"
name="email"/>

            <label>Username</label> <br>
            <input class="inputs" type="text" placeholder="Enter your
username" name="username"/>

            <label>Register Number</label> <br>
            <input class="inputs" type="number" placeholder="Enter your
email" name="number"/>

            <label>Password</label> <br>
            <input class="inputs" type="password" placeholder="Enter your
password" name="password"/>

            <input class="submit" type="submit"/>

            <div>
               <a href="/">Already have an account? Login</a>
            </div>
         </form>
      </div>
   </div>
{% endblock %}
```

__init__.py:

```
from flask import Flask


def create_app():
   app = Flask(__name__)
```

```
    app.config['SECRET_KEY'] = "PHqtYfAN2v"

    # registering the blue print witg the app
    from .views import blue_print
    app.register_blueprint(blue_print, url_prefix="/")

    return app
```

Views.py:

```
from flask import Blueprint, redirect, render_template, request, flash
import ibm_db
import re # regular expression

blue_print = Blueprint("blue_print", "__name__")
conn = ibm_db.connect('DATABASE=bludb;HOSTNAME=54a2f15b-5c0f-46df-8954-7e38e612c2bd.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32733;SECURITY=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=tyb34892;PWD=Qq5GdhZKREQl1Vrc', '', '')

@blue_print.route('/', methods = ['GET', 'POST'])
def home():
    if request.method == 'POST':
        # getting the data entered by the user
        email = request.form.get('email')
        password = request.form.get('password')

        # validating the inputs
        if len(email) < 10:
            flash("Email must be atleast 10 characters long", category="error")

        elif len(password) < 6:
            flash("Password must be atleast 6 characters long", category="error")
```

```
    else:
        # checking whether the user with the email exists in the database
        sql_check_query = "SELECT * FROM user WHERE email = ?"
        stmt = ibm_db.prepare(conn, sql_check_query)
        ibm_db.bind_param(stmt, 1, email)
        ibm_db.execute(stmt)

        account = ibm_db.fetch_assoc(stmt)
        print(account)

        if account:

            # email id exists
            # checking if the password is correct
            if not account['PASSWORD'] == password:
                flash('Invalid password', category='error')

            else:
                # user entered the correct password
                # redirecting the user to the dashboard
                return render_template('dashboard.html', account=account)

        else:
            # email id does not exist in the database
            flash('Email invalid... Try Again', category='error')

    return render_template('login.html')

return render_template('login.html')
```

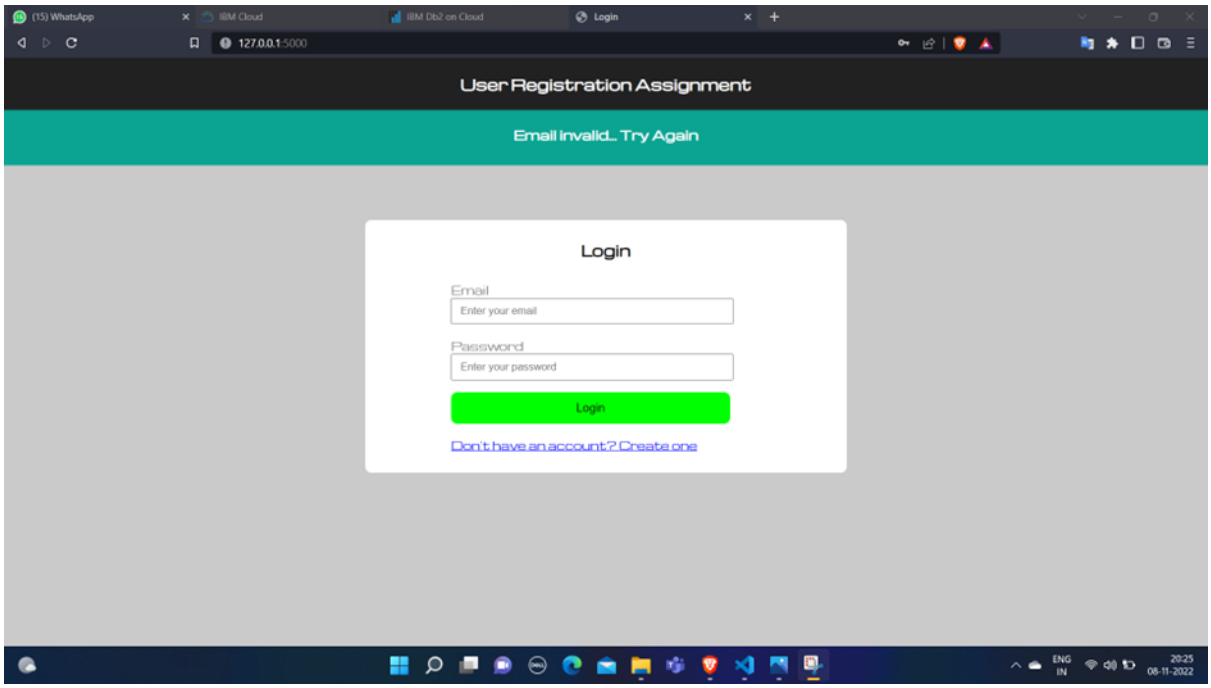
```
@blue_print.route('/register', methods = ['GET', 'POST'])
def register():
    if request.method == 'POST':
        # getting the data entered by the user
        username = request.form.get('username')
        email = request.form.get('email')
        number = request.form.get('number')
        password = request.form.get('password')

        # validating the data entered by the user
        if(len(number) < 12):
            flash("Reg. No must be 12 numbers long", category="error")

        elif not re.match(r'^[a-zA-Z]*$', username):
            flash("Use only alphabets in username", category="error")

        elif len(username) < 6:
            flash("Username must be atleast 6 characters long", category="error")

        elif len(password) < 6:
            flash("Password must be atleast 6 characters long", category="error")

        elif len(email) < 10:
            flash("Email must be atleast 10 characters long", category="error")

        else:
            # checking whether the user table contains an entry with the email already
            sql_check_query = "SELECT * FROM user WHERE email = ?"
            stmt = ibm_db.prepare(conn, sql_check_query)
            ibm_db.bind_param(stmt, 1, email)
            ibm_db.execute(stmt)
```

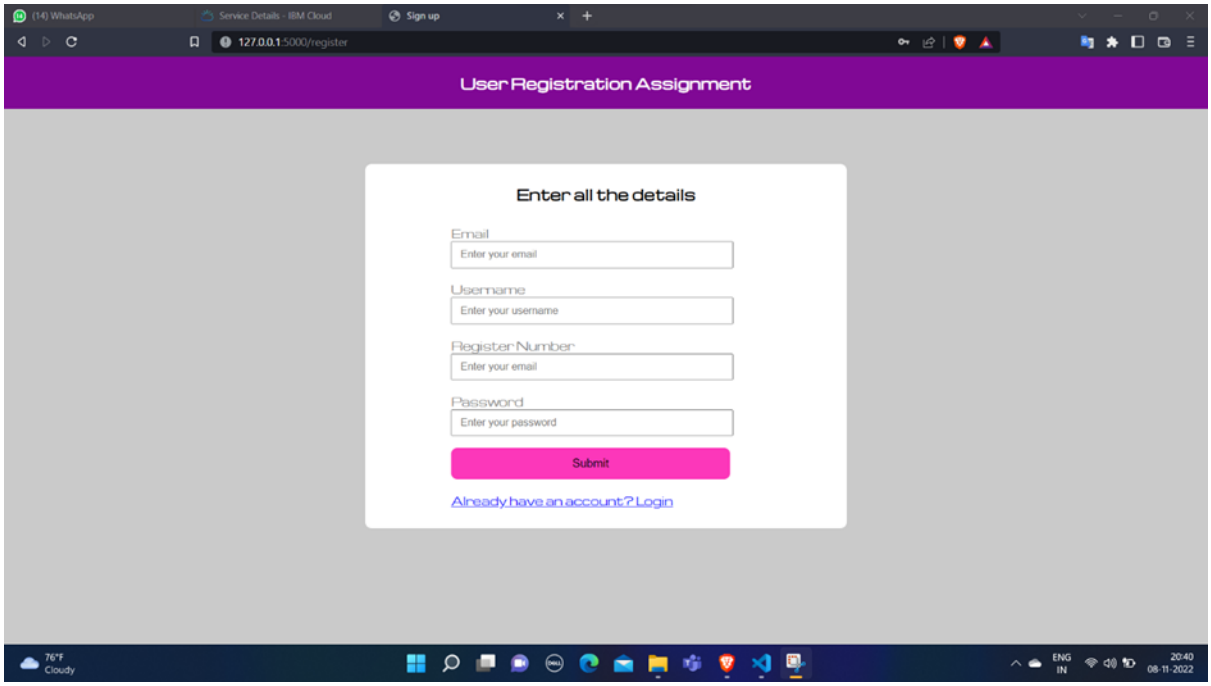
```
            account = ibm_db.fetch_assoc(stmt)

            # email id does not exist in the database
            if not account:
                # inserting the data into the database
                sql_insert_query = "INSERT INTO user (username, email, password, number) VALUES (?, ?,
?, ?)"
                stmt = ibm_db.prepare(conn, sql_insert_query)
                ibm_db.bind_param(stmt, 1, username)
                ibm_db.bind_param(stmt, 2, email)
                ibm_db.bind_param(stmt, 3, password)
                ibm_db.bind_param(stmt, 4, str(number))
                ibm_db.execute(stmt)

                # user data has been inserted into the database
                # showing login page to the user
                flash('User created successfully! Please Login', category='success')
                return redirect('/')

            else:
                flash('Email id already exists! Try another one', category='error')

        return render_template('register.html')

    return render_template('register.html')

@blue_print.route('/dashboard')
def dashboard():
    return render_template('dashboard.html')
```

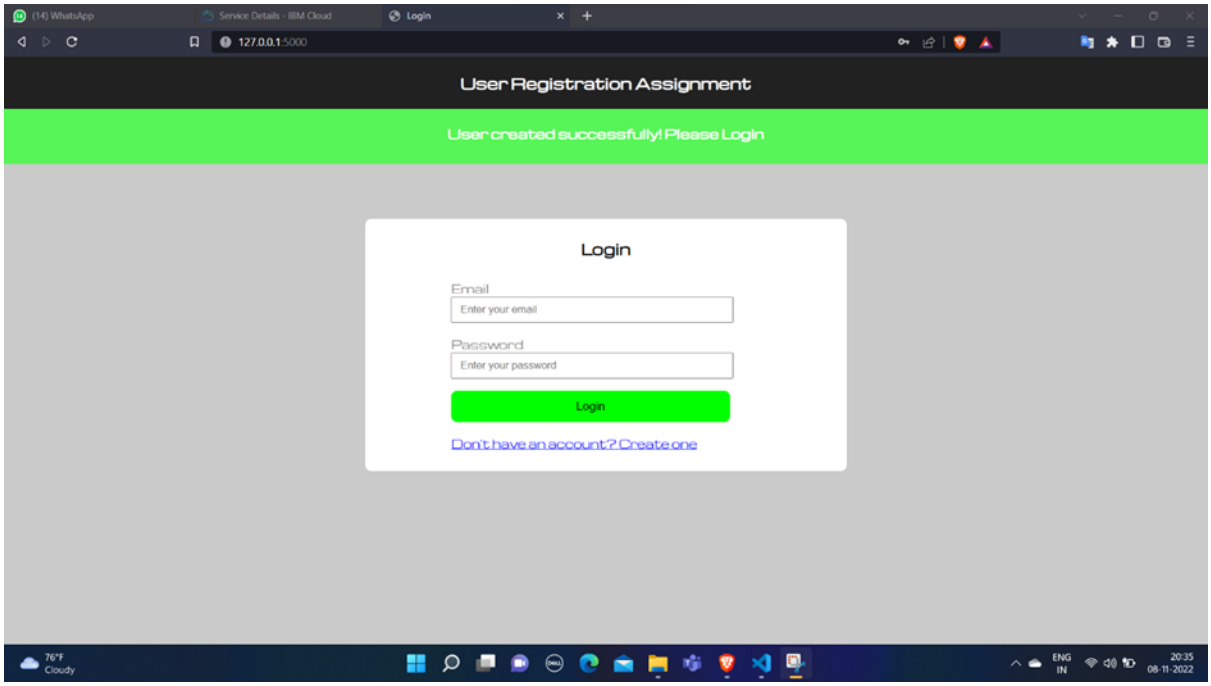
App.py:

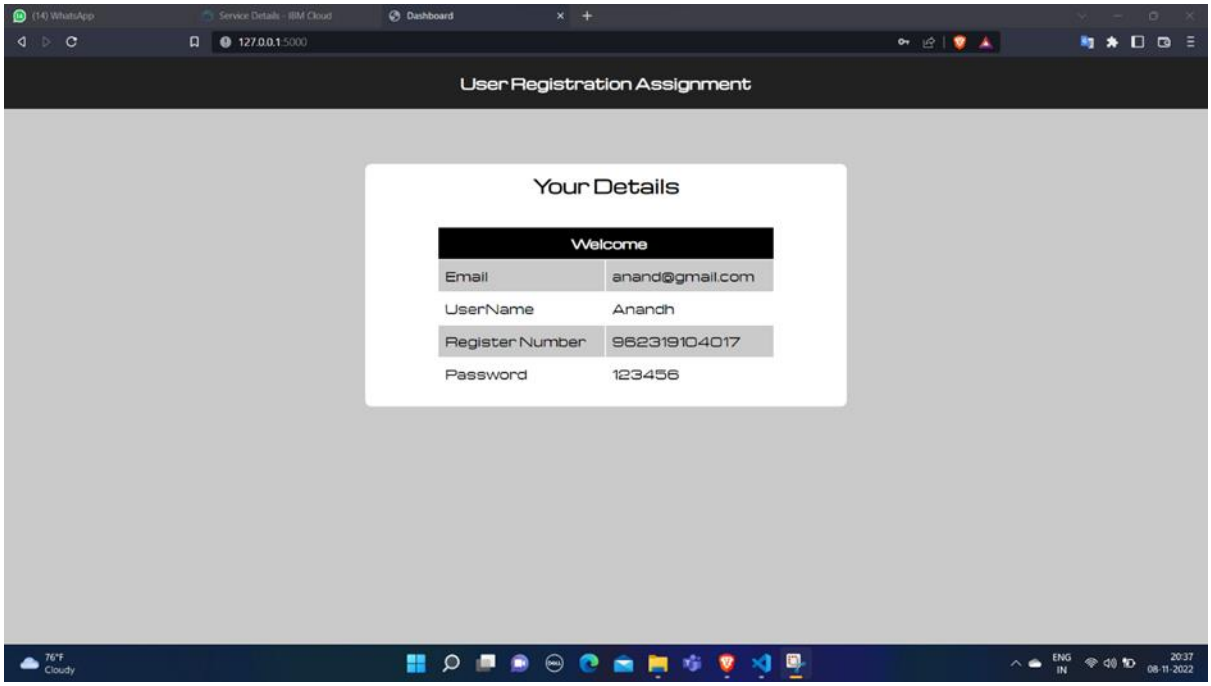
```
from registration import create_app


app = create_app()


if __name__ == "__main__":
    app.run(debug=True)
```

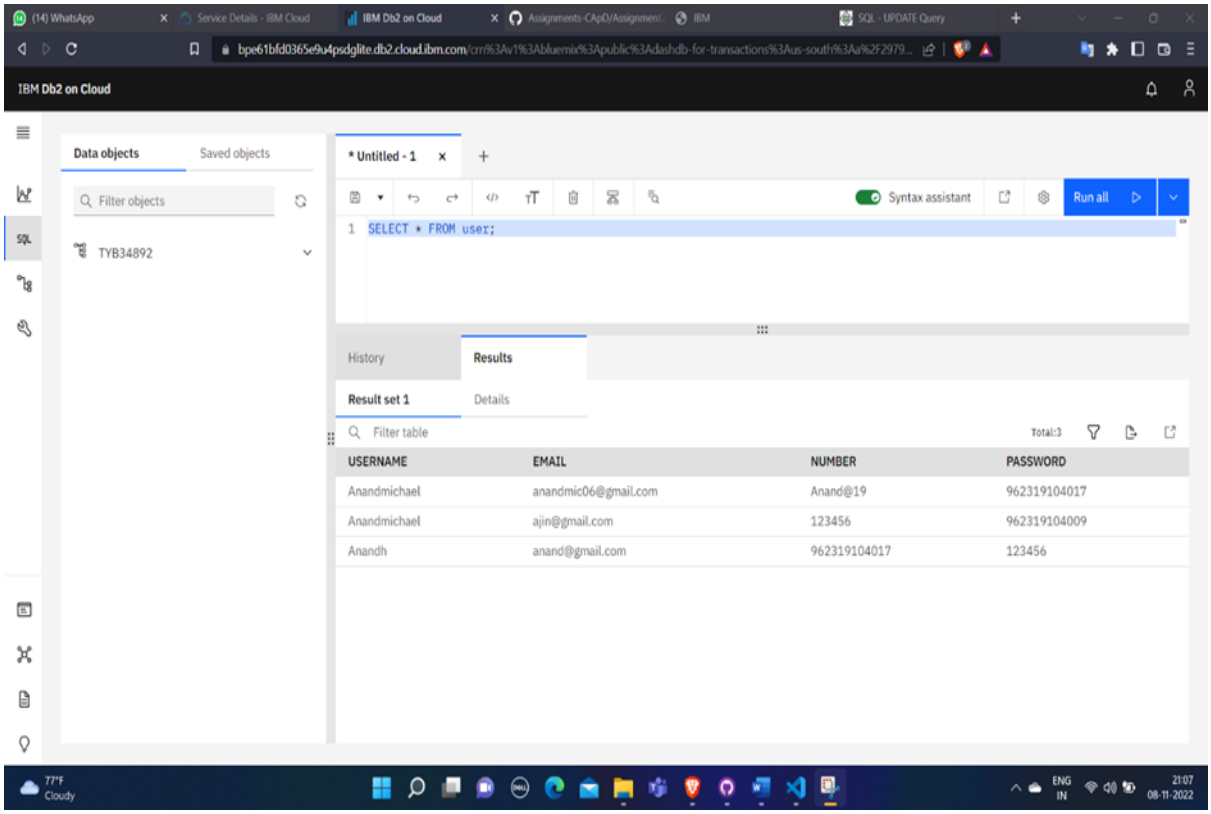
Output:

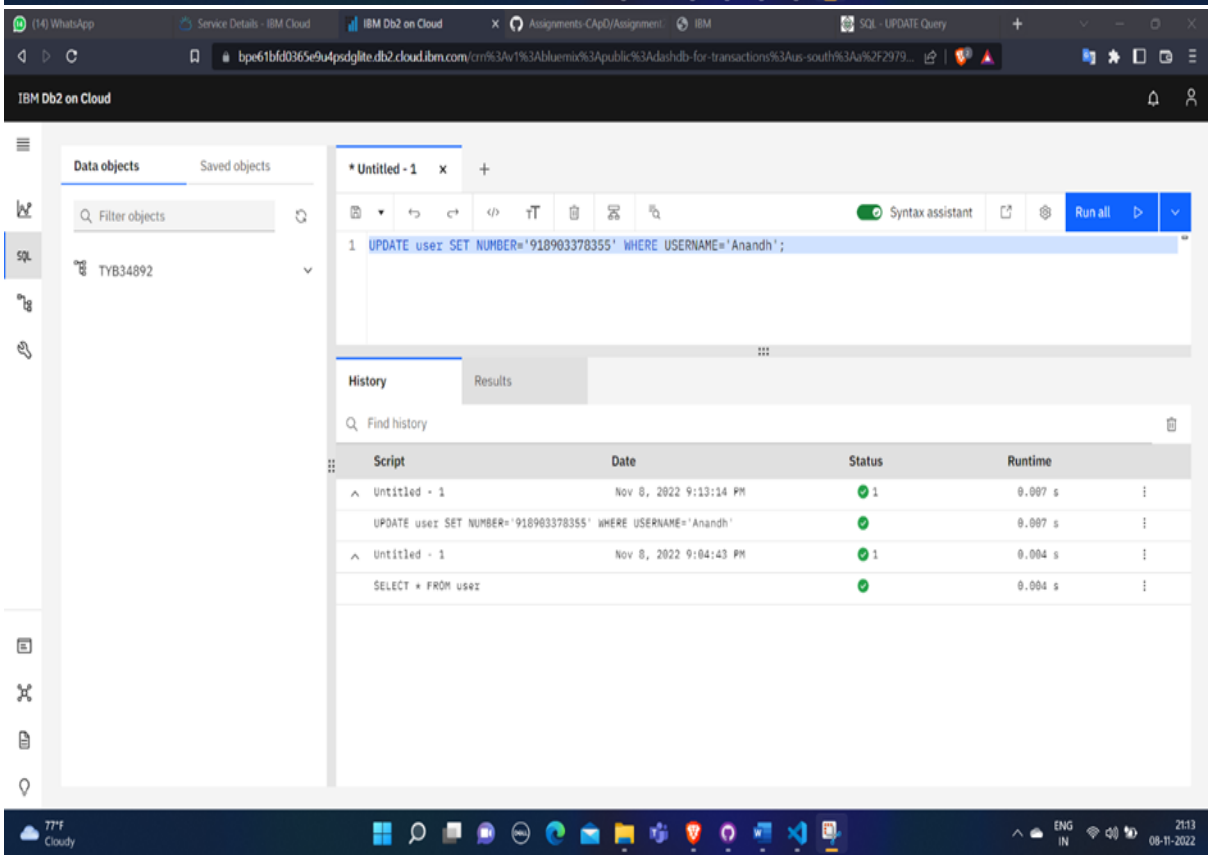


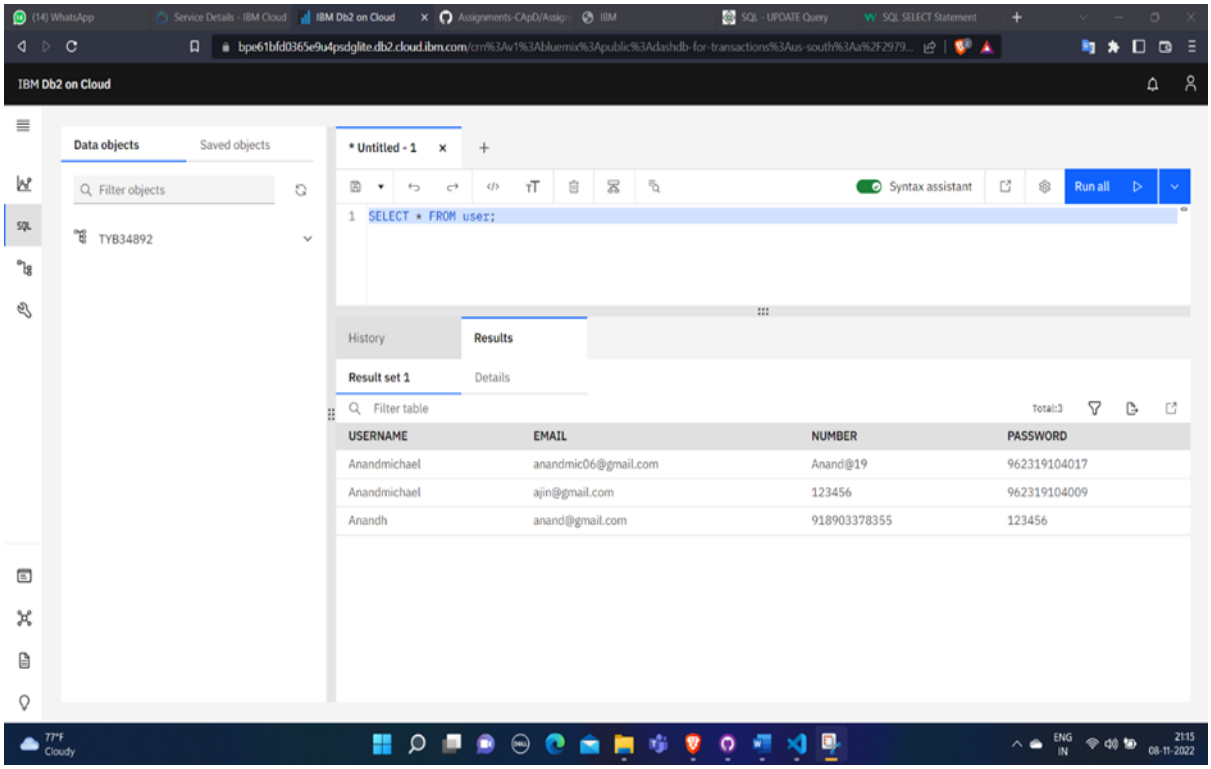

(14) WhatsApp
Service Details - IBM Cloud
Sign up
127.0.0.1:5000/register
User Registration Assignment
Enter all the details
Email
Enter your email
Username
Enter your username
Register Number
Enter your email
Password
Enter your password
Submit
Already have an account? Login
76°F
Cloudy
ENG
IN
20:40
08-11-2022

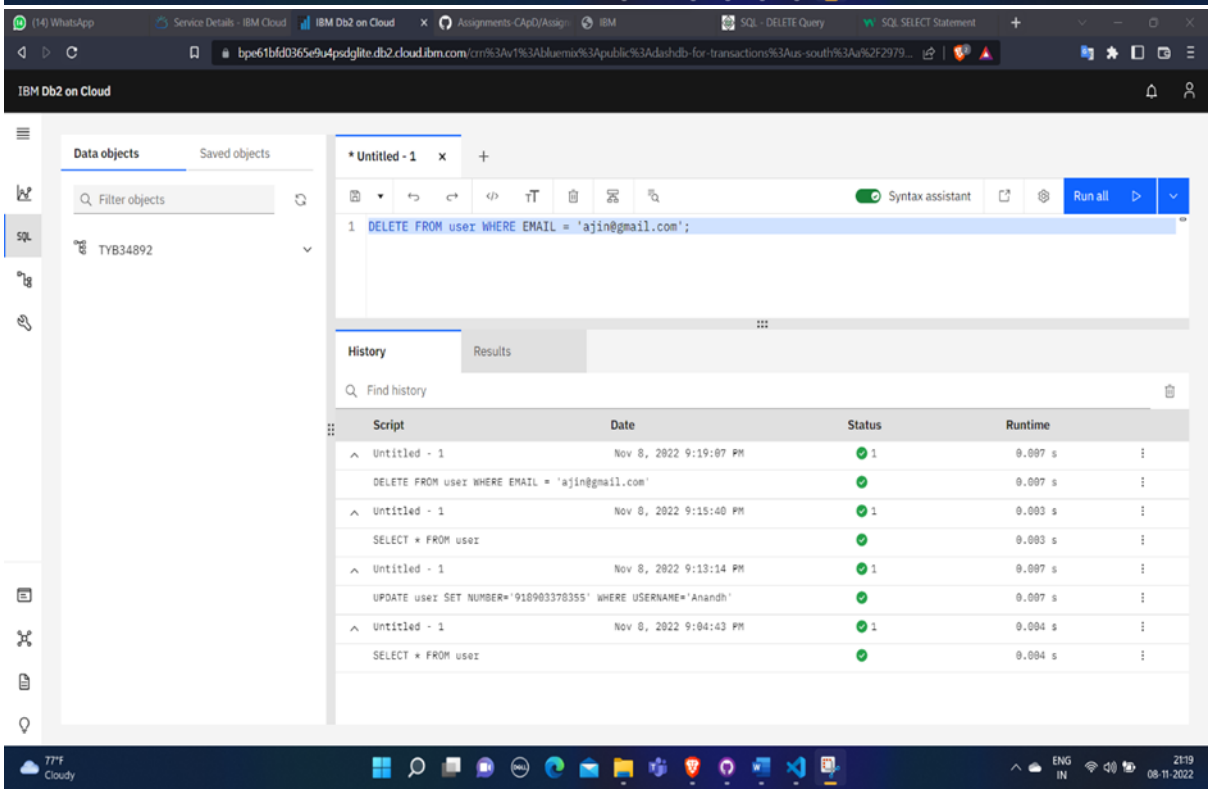

User Registration Assignment
User created successfully! Please Login
Login
Email
Enter your email
Password
Enter your password
Login
Don't have an account? Create one

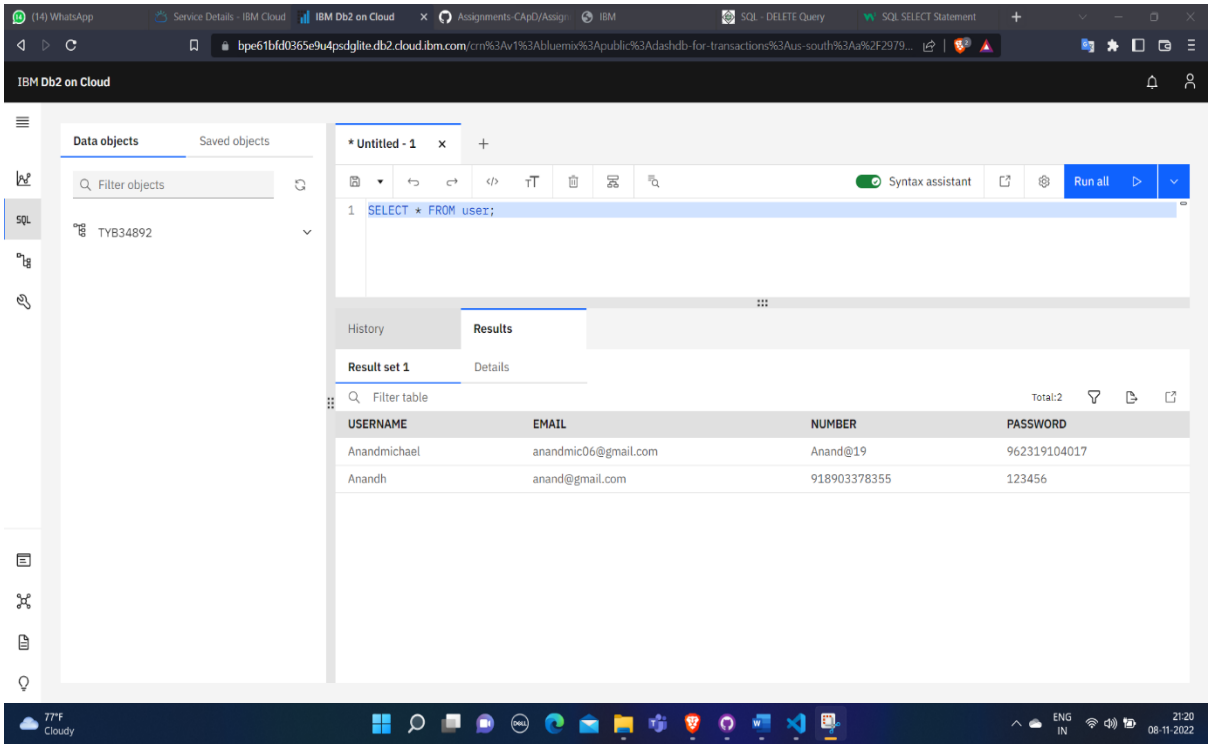

User Registration Assignment
Your Details
Welcome
Email
anand@gmail.com
UserName
Anandh
Register Number
962319104017
Password
123456


IBM Db2 on Cloud
Data objects
Saved objects
Filter objects
TYB34892
* Untitled - 1
Syntax assistant
Run all
1 SELECT * FROM user;
History
Results
Result set 1
Details
Filter table
Total:3
USERNAME EMAIL NUMBER PASSWORD
Anandmichael anandmic06@gmail.com Anand@19 962319104017
Anandmichael ajin@gmail.com 123456 962319104009
Anandh anand@gmail.com 962319104017 123456


IBM Db2 on Cloud
Data objects
Saved objects
Filter objects
TYB34892
* Untitled - 1
Syntax assistant
Run all
1 UPDATE user SET NUMBER='918903378355' WHERE USERNAME='Anandh';
History
Results
Find history
Script Date Status Runtime
Untitled - 1 Nov 8, 2022 9:13:14 PM 1 0.007 s
UPDATE user SET NUMBER='918903378355' WHERE USERNAME='Anandh' 0.007 s
Untitled - 1 Nov 8, 2022 9:04:43 PM 1 0.004 s
SELECT * FROM user 0.004 s


IBM Db2 on Cloud
Data objects
Saved objects
Filter objects
TYB34892
* Untitled - 1
Syntax assistant
Run all
1 SELECT * FROM user;
History
Results
Result set 1
Details
Filter table
Total:3
USERNAME EMAIL NUMBER PASSWORD
Anandmichael anandmic06@gmail.com Anand@19 962319104017
Anandmichael ajin@gmail.com 123456 962319104009
Anandh anand@gmail.com 918903378355 123456


IBM Db2 on Cloud
Data objects
Saved objects
Filter objects
TYB34892
* Untitled - 1
Syntax assistant
Run all
1 DELETE FROM user WHERE EMAIL = 'ajin@gmail.com';
History
Results
Find history
Script Date Status Runtime
Untitled - 1 Nov 8, 2022 9:19:07 PM 1 0.007 s
DELETE FROM user WHERE EMAIL = 'ajin@gmail.com' 0.007 s
Untitled - 1 Nov 8, 2022 9:15:40 PM 1 0.003 s
SELECT * FROM user 0.003 s
Untitled - 1 Nov 8, 2022 9:13:14 PM 1 0.007 s
UPDATE user SET NUMBER='918903378355' WHERE USERNAME='Anandh' 0.007 s
Untitled - 1 Nov 8, 2022 9:04:43 PM 1 0.004 s
SELECT * FROM user 0.004 s


IBM Db2 on Cloud
Data objects
Saved objects
Filter objects
TYB34892
* Untitled - 1
Syntax assistant
Run all
1 SELECT * FROM user;
History
Results
Result set 1
Details
Filter table
Total:2
USERNAME EMAIL NUMBER PASSWORD
Anandmichael anandmic06@gmail.com Anand@19 962319104017
Anandh anand@gmail.com 918903378355 123456