

Assignment -2

IBM CLOUD DB2

| | |
|---------------------|-------------------|
| Assignment Date | 29 September 2022 |
| Student Name | NIVETHA N |
| Student Roll Number | 613019205034 |
| Maximum Marks | 2 Marks |

Questions:

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

The screenshot displays the IBM Db2 on Cloud web interface. The top navigation bar includes tabs for 'Service Details - IBM Cloud', 'IBM Db2 on Cloud', and 'New Tab'. The main header shows the URL and a search bar. Below the header, a navigation menu lists various database objects: 'Load Data', 'Load History', 'Tables', 'Views', 'Indexes', 'Aliases', 'MQTs', 'Sequences', and 'Application objects'. The 'Tables' section is active, showing a list of tables. A table named 'STUDENT' is selected, and its definition is displayed on the right. The table definition shows the following columns: 'USERNAME' (CHAR, 5, nullable), 'ROLL NUMBER' (INTEGER, nullable), 'EMAIL ID' (VARCHAR, 32, nullable), and 'PASSWORD' (VARCHAR, 32, nullable). A 'View data' button is visible at the bottom of the table definition panel. The left sidebar contains icons for 'SQL', 'Schemas', and other database management tools. The bottom status bar shows the temperature (31°C) and the time (11:50 AM, 10/20/2022).

| Name | Data type | Nullable | Length | Scale |
|-------------|-----------|----------|--------|-------|
| USERNAME | CHAR | Y | 5 | 0 |
| ROLL NUMBER | INTEGER | Y | | 0 |
| EMAIL ID | VARCHAR | Y | 32 | 0 |
| PASSWORD | VARCHAR | Y | 32 | 0 |

- Perform UPDATE,DELETE Queries with user table

UPDATE TABLE:-

The screenshot shows the IBM Db2 on Cloud console interface. On the left, the 'Data objects' panel displays a database named 'BTH40838'. The main area is titled '*Untitled - 1' and contains a SQL script:

```
1 INSERT INTO STUDENT values ('nivi','51','nivi51@gmail.com','nivi@');
2
```

Below the script editor, the 'History' tab is active, showing a table of execution history:

| Script | Date | Status | Runtime |
|---|--------------------------|--------|---------|
| Untitled - 1 | Oct 20, 2022 12:00:00 AM | ✓ 1 | 0.013 s |
| INSERT INTO STUDENT values ('nivi','51','nivi51@gmail.com'... | | ✓ | 0.013 s |

The right sidebar shows system information: 31°C, 12:01 PM, and 10/20/2022.

The screenshot shows the IBM Db2 on Cloud console interface, specifically the 'Tables' tab. The table 'BTH40838.STUDENT' is selected. The table structure is displayed as follows:

| USERNAME | ROLL NUMBER | EMAIL ID | PASSWORD |
|----------|-------------|------------------|----------|
| nivi | 51 | nivi51@gmail.com | nivi@ |

The right sidebar shows system information: 31°C, 12:04 PM, and 10/20/2022.

for

DELETE TABLE:-

The screenshot shows the IBM Db2 on Cloud console. On the left, the 'Data objects' tab is selected, showing a table named 'BTH40838'. The main area displays a SQL script in a text editor with the following code:

```
1 INSERT INTO STUDENT values ('nivi','51','nivi51@gmail.com','nivi@');
2 INSERT INTO STUDENT values ('arun','52','arun22@gmail.com','arun@');
3 DELETE FROM STUDENT WHERE USERNAME = 'nivi';
4
```

Below the script, the 'History' tab is selected, showing a table of execution history:

| Script | Date | Status | Runtime |
|---|--------------------------|--------|---------|
| Untitled - 1 | Oct 20, 2022 12:10:45 AM | 3 | 0.032 s |
| INSERT INTO STUDENT values ('nivi','51','nivi51@gmail.co... | | | 0.014 s |
| INSERT INTO STUDENT values ('arun','52','arun22@gmail.co... | | | 0.010 s |
| DELETE FROM STUDENT WHERE USERNAME = 'nivi' | | | 0.008 s |
| Untitled - 1 | Oct 20, 2022 12:00:00 AM | 1 | 0.013 s |

The screenshot shows the IBM Db2 on Cloud console with the 'Tables' tab selected. The table 'BTH40838.STUDENT' is displayed. The table structure is as follows:

| USERNAME | ROLL NUMBER | EMAIL ID | PASSWORD |
|----------|-------------|------------------|----------|
| arun | 52 | arun22@gmail.com | arun@ |

The 'Export to CSV' button is visible in the top right corner of the table view.

3. CONNECT PYTHON CODE TO DB2.

NOTE:- Question 4 contains Question 3 answer

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=Db2New;HOSTNAME=19af6446-6171-4641-8aba-
9dcff8e1b6ff.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=30699;USERNAM
E=kbg92696;PASSWORD=3IlWyGYU3bMIvwnX;SECURITY=SSL;SSLSERVERCERTIFICATE=DigiCer
tGlobalRootCA.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'^[@]+\@[^@]+\.[^@]+', 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>Plasma donor application register</title>

  <!-- 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/fontawesome/4.7.0/css/font-
awesome.css">
  <!-- css stylesheet -->
  <link rel="stylesheet" href="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>
  <!-- bootstrap navbar -->
  <!-- navbar ends -->
  <!-- Login form -->
  <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>Plasma Donor Application Login</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/favicon32x32.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/fontawesome/4.7.0/css/font-
awesome.css">
    <!-- css stylesheet -->
    <link rel="stylesheet" href="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="/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>

```

Style.css

```

* {
    margin: 0;
padding: 0;

    align-items: center;    justify-content:
center;    animation: anime 10s ease-in-out
infinite;
}
@keyframes anime{
    0%{        background-position:
0 50%;
    }    50%{        background-
position: 100% 50%;    }    100%{
background-position: 0 50%;

```



```

    } } form {display:
flex;      flex-direction:
column;    align-items:
center;    justify-content:
center;    background-
color: white; width:
40%;      height: 450px;
border-radius: 50px;
margin: 100px; gap:
25px;

} 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;
} body
{
    color: #444444;      background: linear-gradient(-45deg, #EE7752, #E73C7E,
#23A6D5, #23D5AB);      background-size: 400% 400%;      position: relative;
display: flex;      flex-direction: column;

```

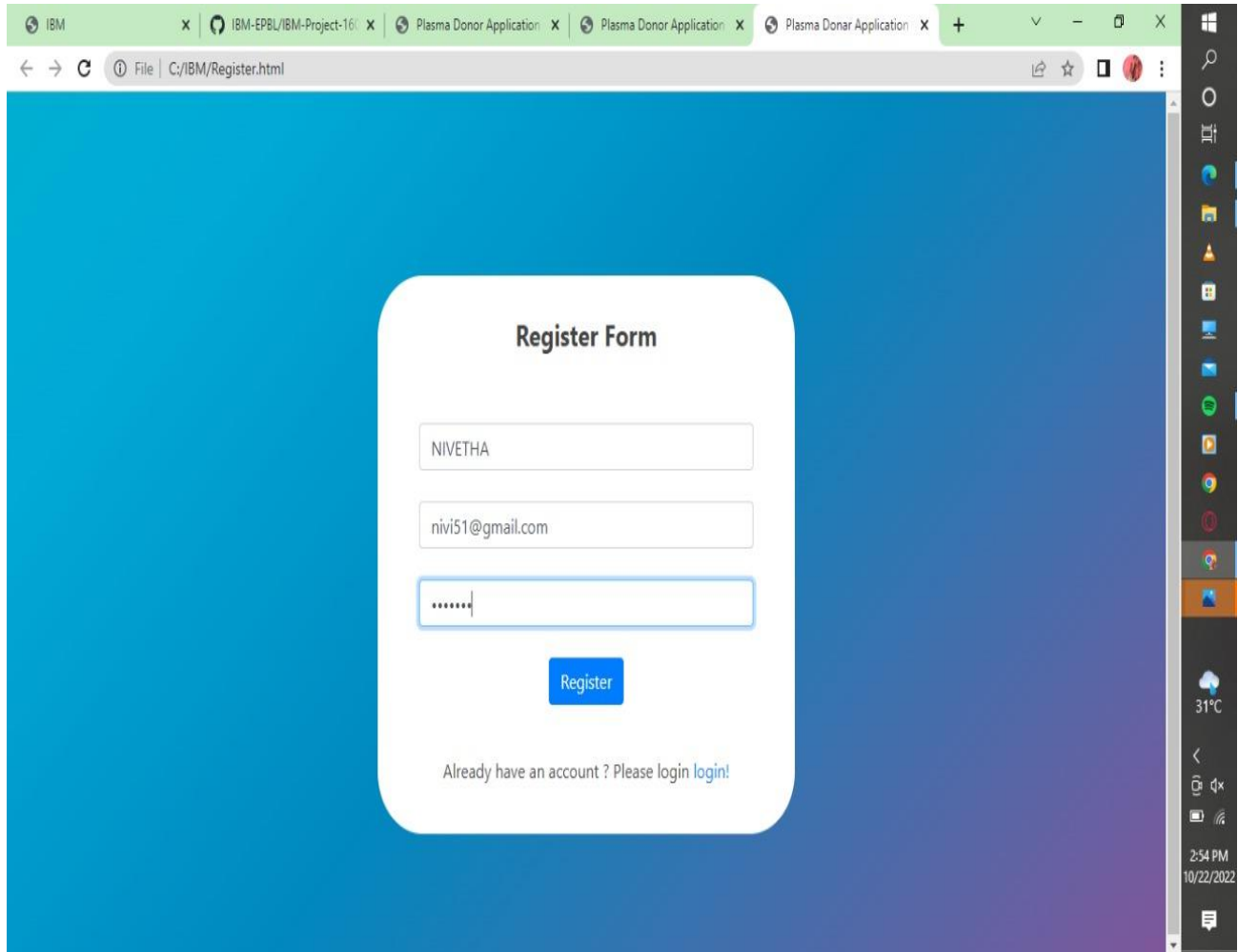
```
padding-bottom: 10px;
```

```
}
```

```
.form-text-h2 {      font-size: x-large;      padding-top: 10px;
```

```
}
```

OUTPUT:- REGISTRATION PAGE:-



The screenshot displays a web browser window with multiple tabs. The active tab is titled 'IBM-EPBL/IBM-Project-16'. The address bar shows the file path 'C:/IBM/Register.html'. The main content area features a registration form with a blue gradient background. The form is titled 'Register Form' and contains three input fields: a text field with 'NIVETHA', an email field with 'nivi51@gmail.com', and a password field with masked characters '.....'. A blue 'Register' button is positioned below the input fields. At the bottom of the form, there is a link that says 'Already have an account ? Please login [login!](#)'. The Windows taskbar is visible on the right side of the screen, showing various application icons, the system clock, and the date '10/22/2022'.

Register Form

NIVETHA

nivi51@gmail.com

.....

Register

Already have an account ? Please login [login!](#)

LOGIN PAGE:-

Service Details - IBM Cloud x IBM Db2 on Cloud x New Tab x Plasma Donor Application Login x

File | C:/IBM/Login.html

Login Form

Username

Nivetha

Password

Login

Don't have an account yet? Click here to [register!](#)

WELCOME PAGE:-

