

## ASSIGNMENT- 2

### IBM CLOUD DB2

Date	29 September 2022
Student Name	KRITHIKA R S
Student Roll Number	613019104042
Maximum Marks	2 Marks

Questions:

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

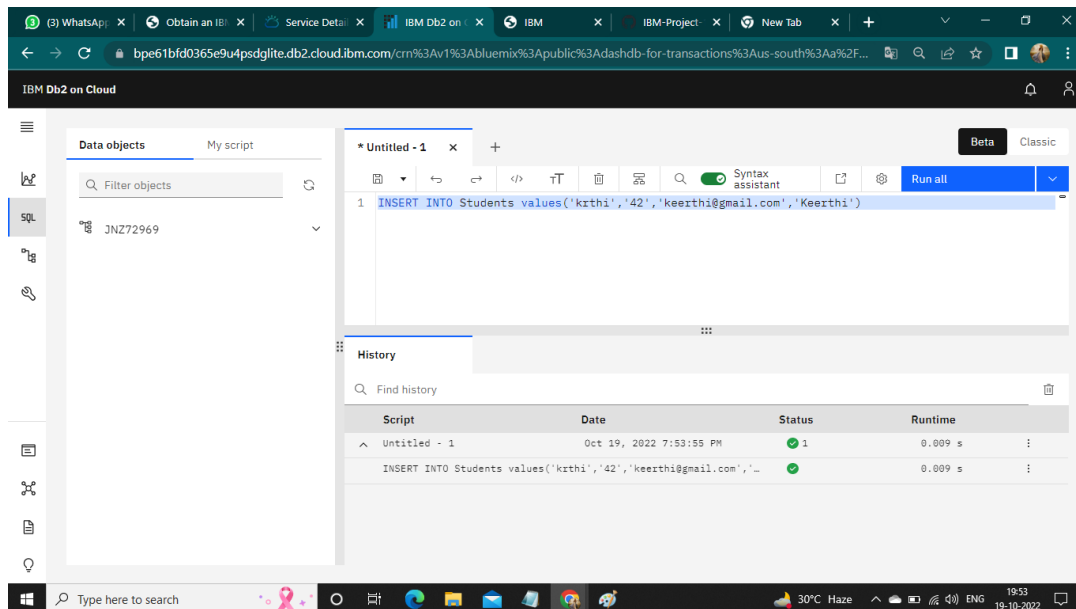
The screenshot displays the IBM Db2 on Cloud web interface. The top navigation bar includes tabs for 'Load Data', 'Load History', 'Tables', 'Views', 'Indexes', 'Aliases', 'MQTs', 'Sequences', and 'Application objects'. The 'Tables' tab is active, showing a list of tables. A table named 'STUDENTS' is selected, and its definition is displayed on the right. The table definition shows the following columns:

Name	Data type	Nullable	Length	Scale
USERNAME	CHAR	Y	5	0
ROLLNO	INTEGER	Y		0
EMAILID	VARCHAR	Y	32	0
PASSWORD	VARCHAR	Y	32	0

The interface also shows a search bar for schemas or tables, a 'New table' button, and a 'View data' button. The bottom status bar indicates the time as 19:51 on 19-10-2022.

## 2) Perform UPDATE, DELETE queries with user table.

### UPDATE TABLE:

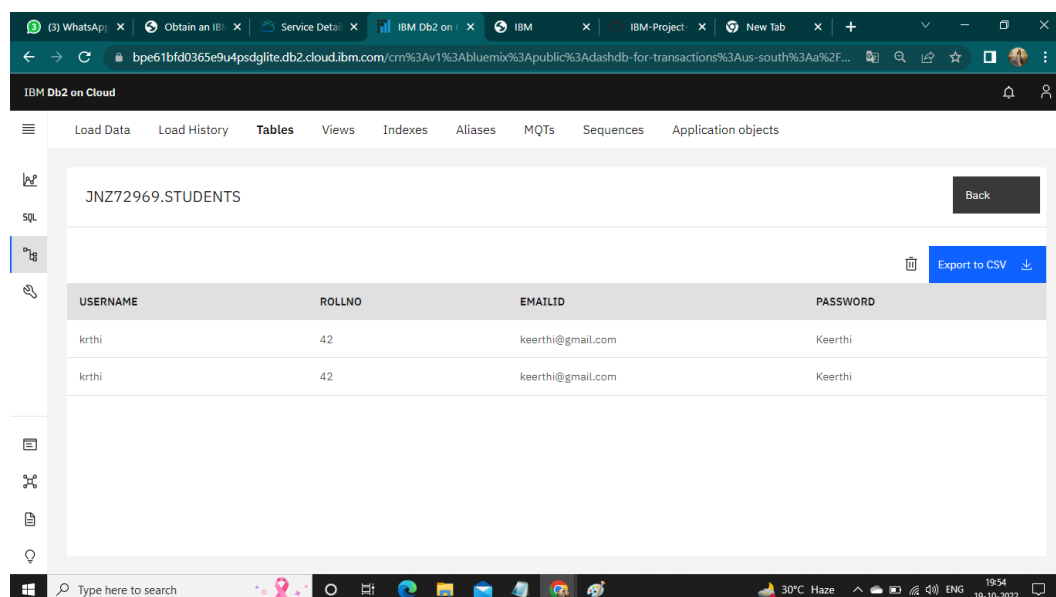


The screenshot shows the IBM Db2 on Cloud console. On the left, the 'Data objects' tab is active, showing a table named 'JNZ72969'. The main area displays an SQL script in a text editor with the following content:

```
1 INSERT INTO Students values('krthi','42','keerthi@gmail.com','Keerthi')
```

Below the script, the 'History' tab shows the execution results:

Script	Date	Status	Runtime
Untitled - 1	Oct 19, 2022 7:53:55 PM	✓ 1	0.009 s
INSERT INTO Students values('krthi','42','keerthi@gmail.com','...)		✓	0.009 s



The screenshot shows the IBM Db2 on Cloud console with the 'Tables' tab selected. The table 'JNZ72969.STUDENTS' is displayed. The table structure and data are as follows:

USERNAME	ROLLNO	EMAILID	PASSWORD
krthi	42	keerthi@gmail.com	Keerthi
krthi	42	keerthi@gmail.com	Keerthi

## DELETE TABLE:

The screenshot shows the IBM Db2 on Cloud SQL editor interface. The left sidebar displays the 'Data objects' tab with a search filter 'JNZ72969'. The main editor area shows a script titled 'Untitled - 1' with the following SQL statements:

```
1 INSERT INTO Students values('krthi','42','keerthi@gmail.com','Keerthi');
2 INSERT INTO Students values('ramya','24','ramya@gmail.com','Ramya');
3 DELETE FROM Students WHERE USERNAME='krthi';
```

The 'History' tab at the bottom shows the execution history of the script:

Script	Date	Status	Runtime
Untitled - 1	Oct 19, 2022 8:10:26 PM	✓ 3	0.021 s
INSERT INTO Students values('krthi','42','keerthi@gmail.com','...'		✓	0.006 s
INSERT INTO Students values('ramya','24','ramya@gmail.com','Ra...		✓	0.006 s
DELETE FROM Students WHERE USERNAME='krthi'		✓	0.009 s

The screenshot shows the IBM Db2 on Cloud 'Tables' view for the 'JNZ72969.STUDENTS' table. The table structure is as follows:

USERNAME	ROLLNO	EMAILID	PASSWORD
ramya	24	ramya@gmail.com	Ramya
ramya	24	ramya@gmail.com	Ramya
ramya	24	ramya@gmail.com	Ramya

### 3) CONNECT PYTHON CODE TO DB2.

**NOTE:** Question 4 contains Question 3 answer

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=kgb92696;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>Nutrition Assistant 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/font-
awesome/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>Nutrition Assistant 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/favicon-
32x32.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/font-
awesome/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;
}
body {
    color: #444444;
    background: linear-gradient(-45deg, #EE7752, #E73C7E, #23A6D5, #23D5AB);
    background-size: 400% 400%;
    position: relative;
    display: flex;
    flex-direction: column;

```



```
    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%;
}
```

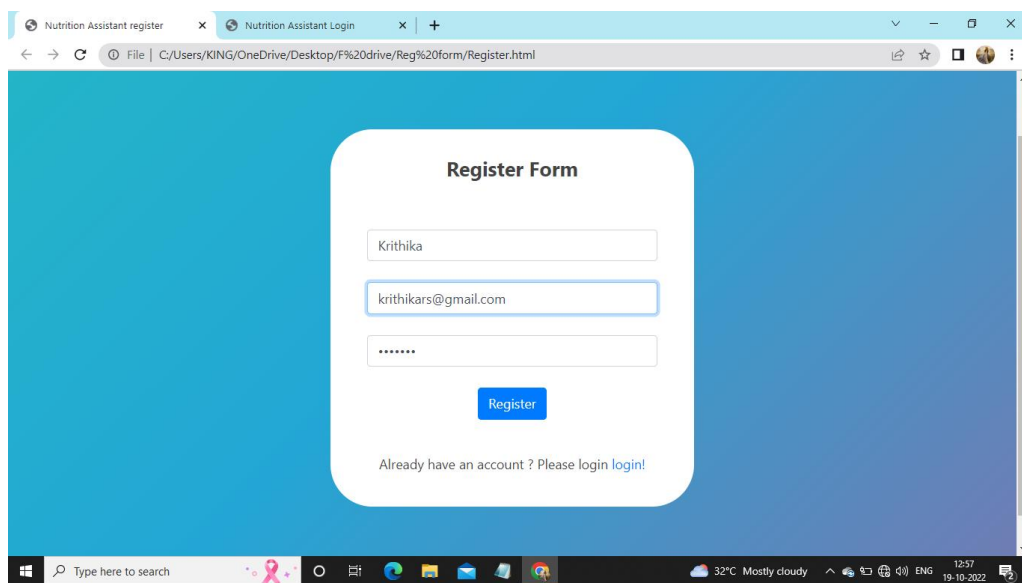
```
.form-text-vk {
```

```
padding-bottom: 10px;
}

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

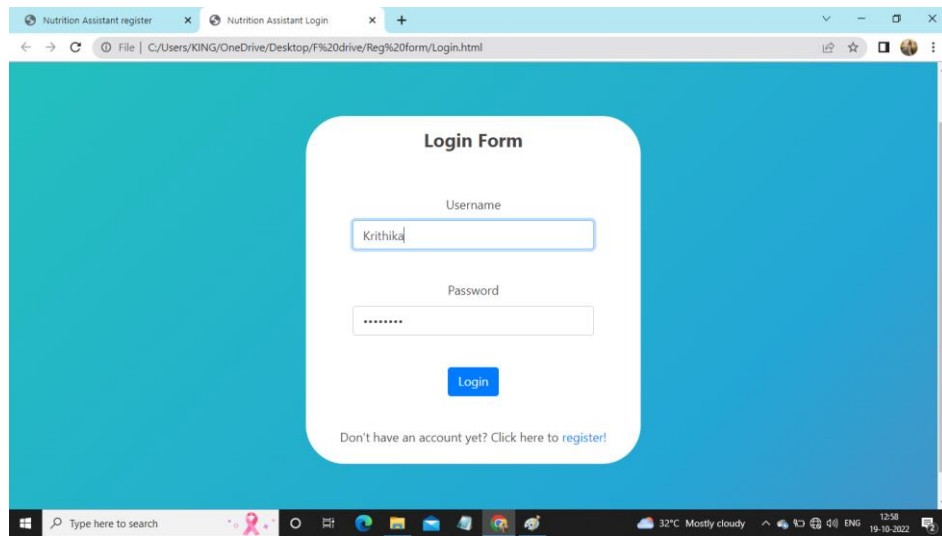
**OUTPUT:**

**REGISTRATION PAGE:**



The screenshot shows a web browser window with two tabs: 'Nutrition Assistant register' and 'Nutrition Assistant Login'. The active tab is 'Nutrition Assistant register', displaying a registration form. The form is titled 'Register Form' and is set against a blue gradient background. It contains three input fields: a text field with 'Krithika', an email field with 'krithikars@gmail.com', and a password field with masked characters '\*\*\*\*\*'. Below the fields is a blue 'Register' button. At the bottom of the form, there is a link: 'Already have an account ? Please login [login!](#)'. The browser's address bar shows the file path 'C:/Users/KING/OneDrive/Desktop/F%20drive/Reg%20form/Register.html'. The Windows taskbar at the bottom indicates the system time as 12:57 on 19-10-2022, with a temperature of 32°C and 'Mostly cloudy' weather.

## LOGIN PAGE:



The screenshot shows a web browser window with two tabs: 'Nutrition Assistant register' and 'Nutrition Assistant Login'. The active tab is 'Nutrition Assistant Login', displaying a login form. The browser's address bar shows the file path: 'C:/Users/KING/OneDrive/Desktop/F%20drive/Reg%20form/Login.html'. The login form is centered on a blue gradient background and contains the following elements:

- Username:** A text input field containing the text 'Krithika'.
- Password:** A password input field with masked characters '\*\*\*\*\*'.
- Login:** A blue button labeled 'Login'.
- Registration Link:** A link at the bottom that reads 'Don't have an account yet? Click here to [register!](#)'.

The Windows taskbar at the bottom shows the search bar, task icons, system tray with weather (32°C Mostly cloudy), and date/time (12:58 19-10-2022).

## WELCOME PAGE:

