

Assignment - 3

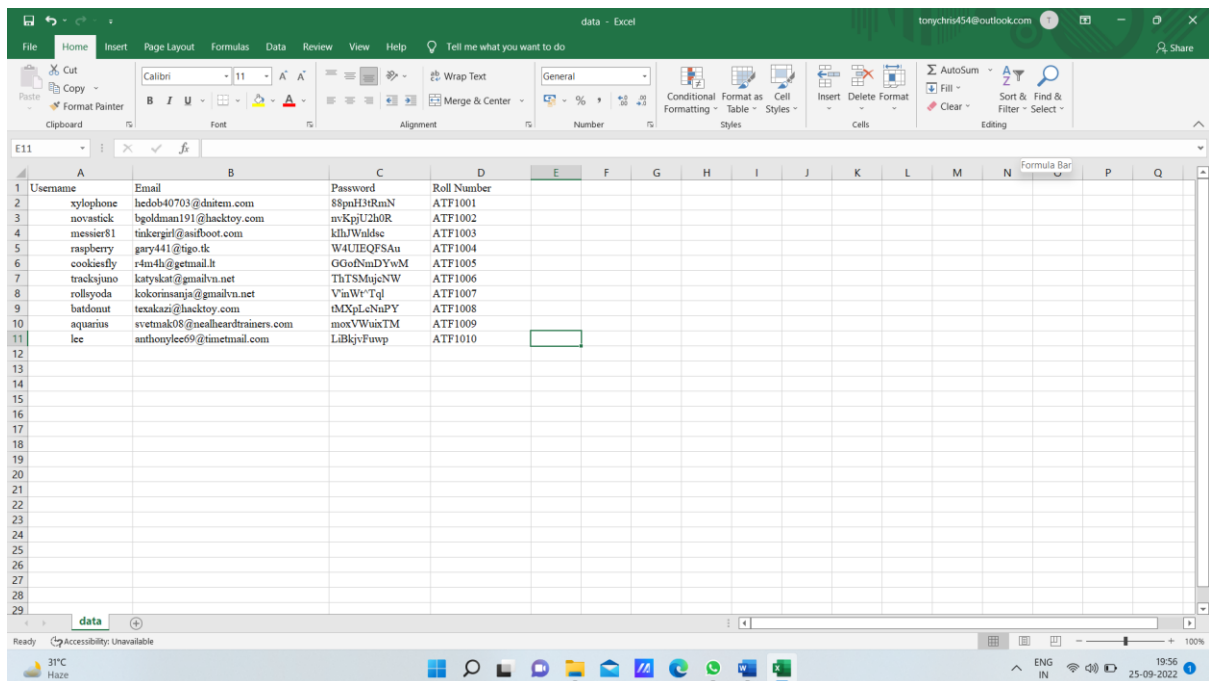
Assignment Date	29 September 2022
Student Name	Saravana Kumar R
Student Roll No	812419104057
Maximum Marks	2 Marks

Question-1:

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

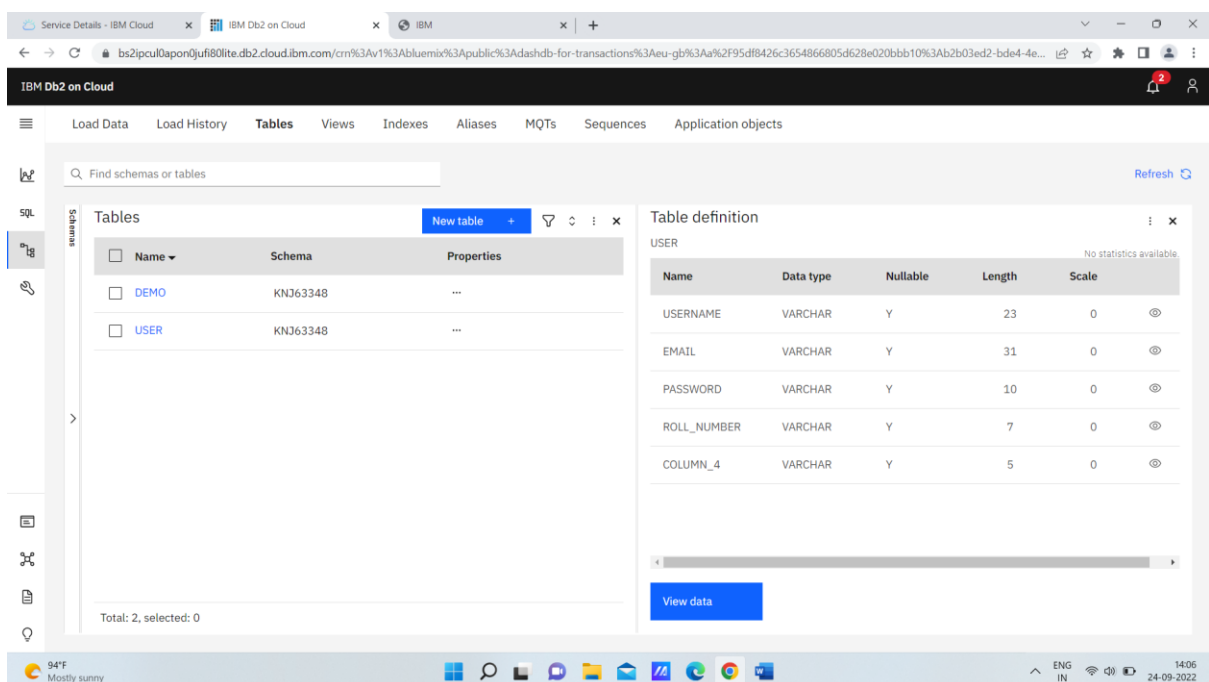
Solution:

Excel comma file



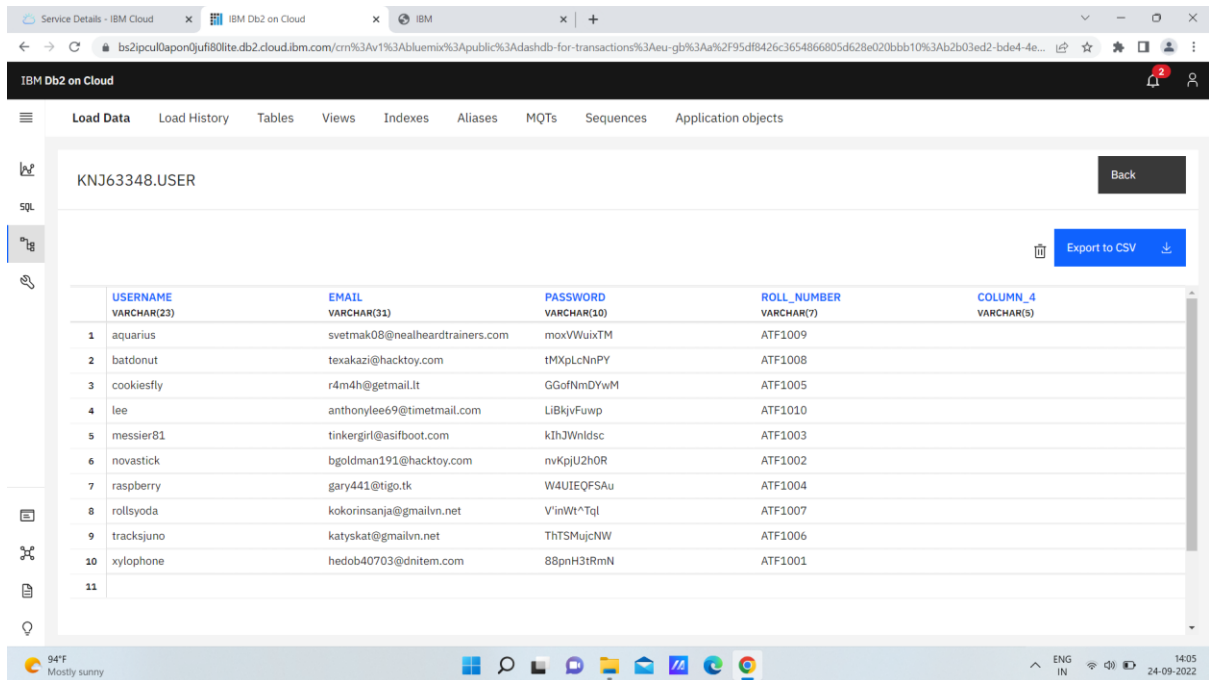
Username	Email	Password	Roll Number
xylophone	hedob40703@dnitem.com	\$8puH3RmN	ATF1001
novastick	bgoldman191@hacktoy.com	nvKpjUzh0R	ATF1002
messier81	tinkergirl@asilboot.com	kihJWaldsc	ATF1003
raspberry	gary441@tigo.dk	W4UIEQFSaU	ATF1004
cookiecatty	r4m4h@getmail.it	GGofNmDYwM	ATF1005
traskyjuno	katykat@gmail.vn.net	ThTSMajcNW	ATF1006
rollyoda	kokorinseju@gmail.vn.net	VnWvTql	ATF1007
batdonut	texakazi@hacktoy.com	tMXpLcNuPY	ATF1008
aquarius	svetmak08@neelheardrainers.com	moxVWuixTM	ATF1009
lee	anthonylee69@tinetmail.com	LiBkjvFuwP	ATF1010

User table in Db2



Name	Data type	Nullable	Length	Scale
USERNAME	VARCHAR	Y	23	0
EMAIL	VARCHAR	Y	31	0
PASSWORD	VARCHAR	Y	10	0
ROLL_NUMBER	VARCHAR	Y	7	0
COLUMN_4	VARCHAR	Y	5	0

Data in User table



The screenshot shows the IBM Db2 on Cloud console interface. The 'Load Data' tab is selected, and the 'User' table is displayed. The table has 11 rows of data. The columns are USERNAME, EMAIL, PASSWORD, ROLL_NUMBER, and COLUMN_4. The data is as follows:

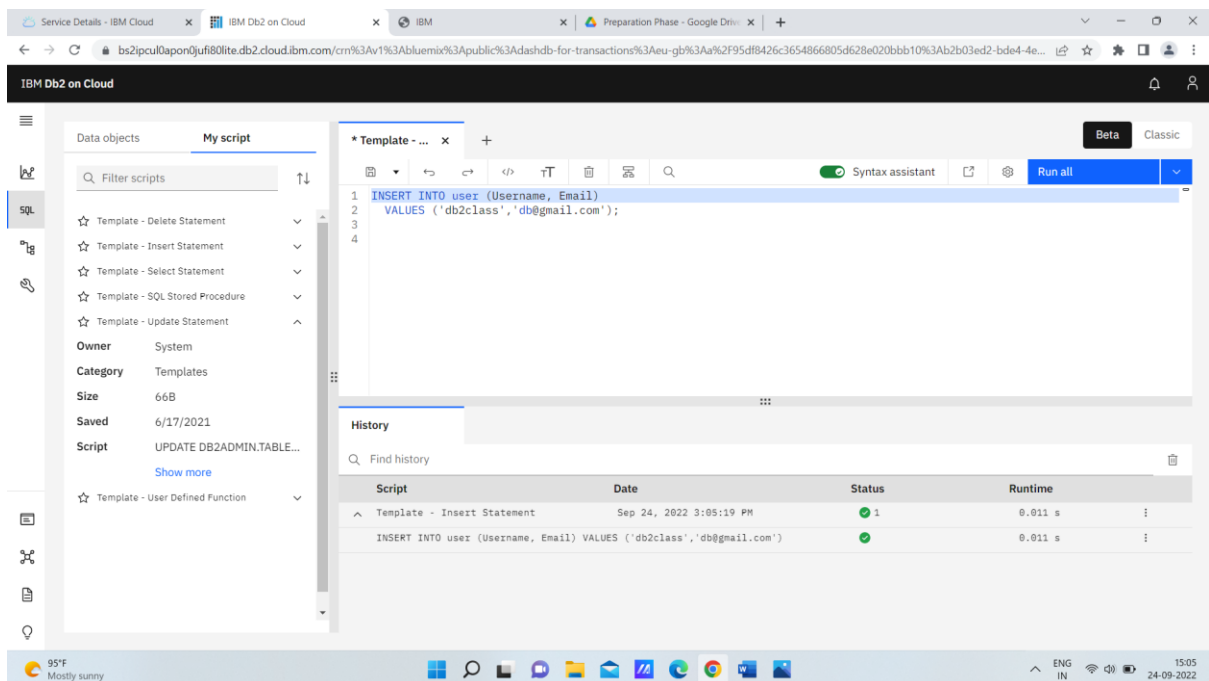
	USERNAME VARCHAR(23)	EMAIL VARCHAR(31)	PASSWORD VARCHAR(10)	ROLL_NUMBER VARCHAR(7)	COLUMN_4 VARCHAR(5)
1	aquarius	svetmak08@nealheardtrainers.com	moxVWuixTM	ATF1009	
2	batdonut	texakazi@hacktoy.com	tMXpLcNnPY	ATF1008	
3	cookiesfly	r4m4h@getmail.lt	GGofNmDYwM	ATF1005	
4	lee	anthonylee69@timetmail.com	LIBkivFuwp	ATF1010	
5	messier81	tinkergirl@asifboot.com	kIHJWnldsc	ATF1003	
6	novastick	bgoldman191@hacktoy.com	nvKpjU2hOR	ATF1002	
7	raspberry	gary441@tigo.tk	W4UIEQFSAu	ATF1004	
8	rollsodya	kokorinsanja@gmailvn.net	V'inWt^TqI	ATF1007	
9	tracksjuno	katyskat@gmailvn.net	ThTSMujcNW	ATF1006	
10	xylophone	hedob40703@dnitem.com	88pnH3trMn	ATF1001	
11					

Question-2:

Perform INSERT, SELECT, DELETE Queries in user table

Solution:

Insert Query



The screenshot shows the IBM Db2 on Cloud console interface. The 'My script' tab is selected, and the 'Insert Query' is displayed. The query is as follows:

```
1 INSERT INTO user (Username, Email)
2 VALUES ('db2class', 'db@gmail.com');
3
4
```

The 'History' tab is also visible, showing the execution history of the query. The history table is as follows:

Script	Date	Status	Runtime
Template - Insert Statement	Sep 24, 2022 3:05:19 PM	1	0.011 s
INSERT INTO user (Username, Email) VALUES ('db2class', 'db@gmail.com')			0.011 s

Insert Query Output

The screenshot shows the IBM Db2 on Cloud web interface. The top navigation bar includes 'Load Data', 'Load History', 'Tables', 'Views', 'Indexes', 'Aliases', 'MQTs', 'Sequences', and 'Application objects'. The left sidebar has icons for 'Data objects', 'SQL', and 'My script'. The main area displays the output of an INSERT query for the table 'KNJ63348.USER'. The output is a table with 5 columns: USERNAME, EMAIL, PASSWORD, ROLL_NUMBER, and COLUMN_4. The data is as follows:

USERNAME	EMAIL	PASSWORD	ROLL_NUMBER	COLUMN_4
aquarius	svetmak08@nealheardtrainers.com	moxVWuixTM	ATF1009	
batdonut	texakazi@hacktoy.com	tMXpLcNnPY	ATF1008	
cookiesfly	r4m4h@getmail.it	GGofNmDYwM	ATF1005	
db2class	db@gmail.com			
lee	anthonylee69@timetmail.com	LiBkivFuwp	ATF1010	
messier81	tinkergirl@asifboot.com	kIhJWnldsc	ATF1003	
novastick	bgoldman191@hacktoy.com	nvKpiU2h0R	ATF1002	
raspberry	gary441@tigo.tk	W4UIEQFSAu	ATF1004	

At the bottom of the interface, there is a status bar showing '95°F Partly sunny' and a system tray with various icons.

Update Query

The screenshot shows the IBM Db2 on Cloud web interface. The top navigation bar is the same as in the previous screenshot. The left sidebar has icons for 'Data objects', 'SQL', and 'My script'. The main area displays the 'My script' editor. The script contains the following SQL statement:

```
1 UPDATE user
2 SET Username = 'anto'
3 WHERE Username='lee';
4
```

The script is executed, and the results are shown in the 'History' tab. The history table has 4 columns: Script, Date, Status, and Runtime. The results are as follows:

Script	Date	Status	Runtime
Template - Update Statement	Sep 24, 2022 3:14:06 PM	1	0.005 s
UPDATE user SET Username = 'anto' WHERE Username='lee'			0.005 s

At the bottom of the interface, there is a status bar showing '95°F Mostly sunny' and a system tray with various icons.

Update Query Output

IBM Db2 on Cloud

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

KNJ63348.USER

Export to CSV

USERNAME	EMAIL	PASSWORD	ROLL_NUMBER	COLUMN_4
anto	anthonylee69@timetmail.com	LiBkivFuwp	ATF1010	
aquarius	svetmak08@nealheardtrainers.com	moxVWuixTM	ATF1009	
batdonut	texakazi@hacktoy.com	tMXpLcNnPY	ATF1008	
cookiesfly	r4m4h@gmail.it	GGofNmDYwM	ATF1005	
db2class	db@gmail.com			
messier81	tinkergirl@asifboot.com	kIhJWnldsc	ATF1003	
novastick	bgoldman191@hacktoy.com	nvKpiU2h0R	ATF1002	
raspberry	gary441@tigo.tk	W4UIEQFSau	ATF1004	

Delete Query

IBM Db2 on Cloud

Data objects My script

Template - Insert ... *Template - Upda... *Template - ... x +

1 DELETE FROM user
2 WHERE Username = 'db2class';
3

History Results

Script Date Status Runtime

Script	Date	Status	Runtime
Template - Delete Statement	Sep 24, 2022 3:38:56 PM	1	0.005 s
DELETE FROM user WHERE Username = 'db2class'			0.005 s

Delete Query Output

IBM Db2 on Cloud

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

KNJ63348.USER

Export to CSV

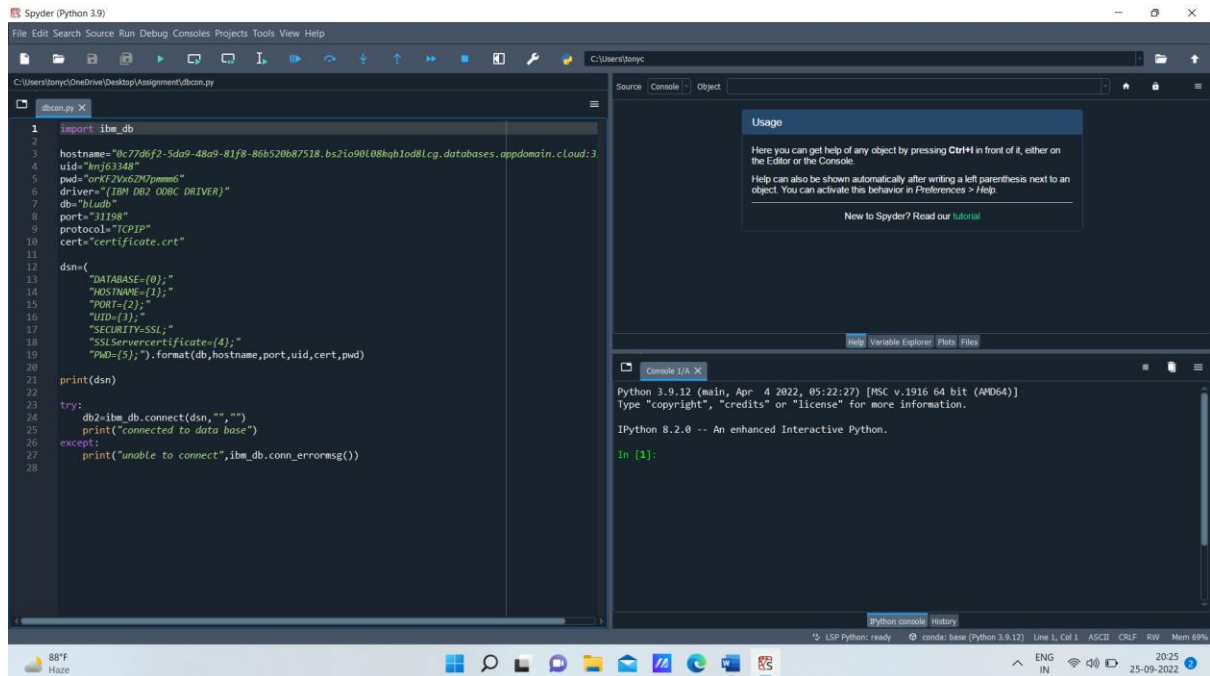
USERNAME	EMAIL	PASSWORD	ROLL_NUMBER	COLUMN_4
anto	anthonylee69@timetmail.com	LiBkivFuwp	ATF1010	
aquarius	svetmak08@nealheardtrainers.com	moxVWuixTM	ATF1009	
batdonut	texakazi@hacktoy.com	tMXpLcNnPY	ATF1008	
cookiesfly	r4m4h@gmail.it	GGofNmDYwM	ATF1005	
messier81	tinkergirl@asifboot.com	kIhJWnldsc	ATF1003	
novastick	bgoldman191@hacktoy.com	nvKpiU2h0R	ATF1002	
raspberry	gary441@tigo.tk	W4UIEQFSau	ATF1004	
rollsoda	kokorinsanja@gmailvn.net	V'inWt^Tql	ATF1007	

Question-3:

Connect Python to DB2

Solution:

Source Code for Python to DB2 Connection



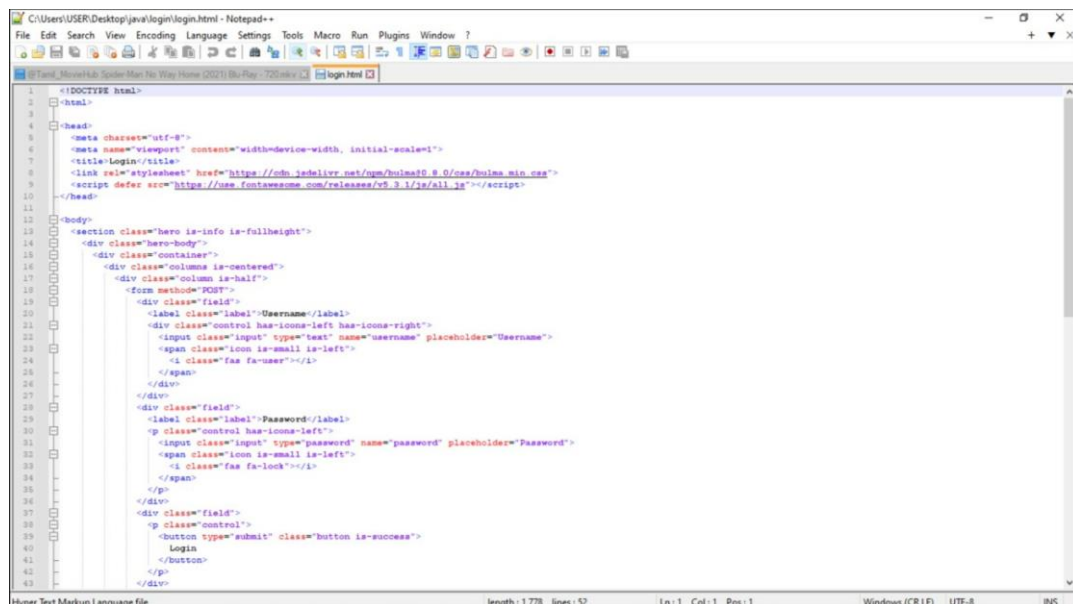
```
1 import ibm_db
2
3 hostname="bc77df2-5da9-48a9-81f8-86b520b87518.bs2io90l08qb1od8l9g.databases.appdomain.cloud:3
4 uid="my63480"
5 pwd="orKF2Vx6ZNDpmme6"
6 driver="IBM DB2 ODBC DRIVER"
7 db="bludb"
8 port="21198"
9 protocol="TCPIP"
10 cert="certificate.crt"
11
12 dsn={
13     "DATABASE={0};"
14     "HOSTNAME={1};"
15     "PORT={2};"
16     "UID={3};"
17     "SECURITY=SSL;"
18     "SSLServerCertificate={4};"
19     "PWD={5};".format(db,hostname,port,uid,cert,pwd)
20
21 print(dsn)
22
23 try:
24     db2=ibm_db.connect(dsn,"")
25     print("connected to data base")
26 except:
27     print("unable to connect",ibm_db.conn_errormsg())
28
```

Question-4:

Create a flask app with 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

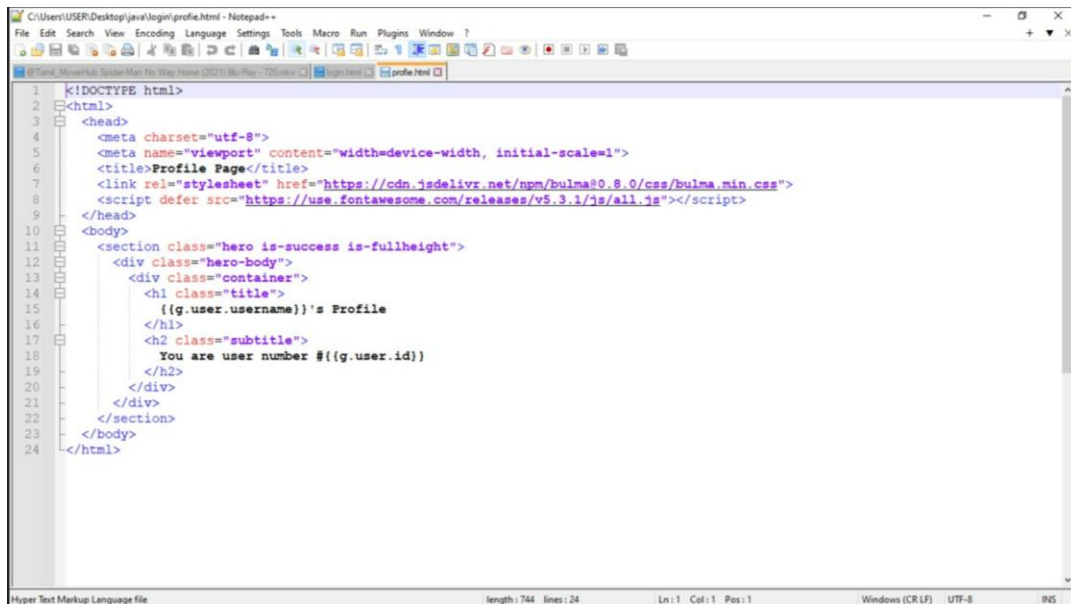
Solution:

Source code for login page



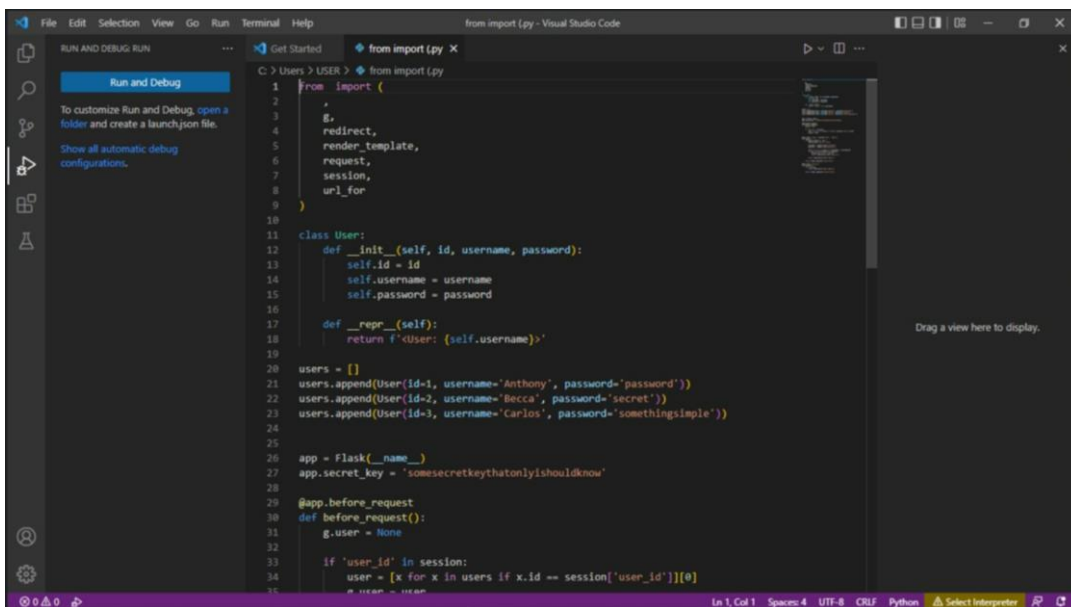
```
1 <!DOCTYPE html>
2 <html>
3
4 <head>
5 <meta charset="utf-8">
6 <meta name="viewport" content="width=device-width, initial-scale=1">
7 <title>Login</title>
8 <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0/css/bootstrap.min.css">
9 <script defer src="https://use.fontawesome.com/releases/v5.3.1/js/all.js"></script>
10 </head>
11
12 <body>
13 <section class="hero is-info is-fullheight">
14 <div class="hero-body">
15 <div class="container">
16 <div class="columns is-centered">
17 <div class="column is-half">
18 <form method="POST">
19 <div class="field">
20 <label class="label">Username</label>
21 <div class="control has-icons-left has-icons-right">
22 <input class="input" type="text" name="username" placeholder="Username">
23 <span class="icon is-small is-left"><i class="fas fa-user"></i></span>
24 </div>
25 </div>
26 <div class="field">
27 <label class="label">Password</label>
28 <div class="control has-icons-left">
29 <input class="input" type="password" name="password" placeholder="Password">
30 <span class="icon is-small is-left"><i class="fas fa-lock"></i></span>
31 </div>
32 </div>
33 <div class="field">
34 <div class="control">
35 <button type="submit" class="button is-success">
36 Login
37 </button>
38 </div>
39 </div>
40 </div>
41 </div>
42 </div>
43 </div>
```

Source code for welcome page



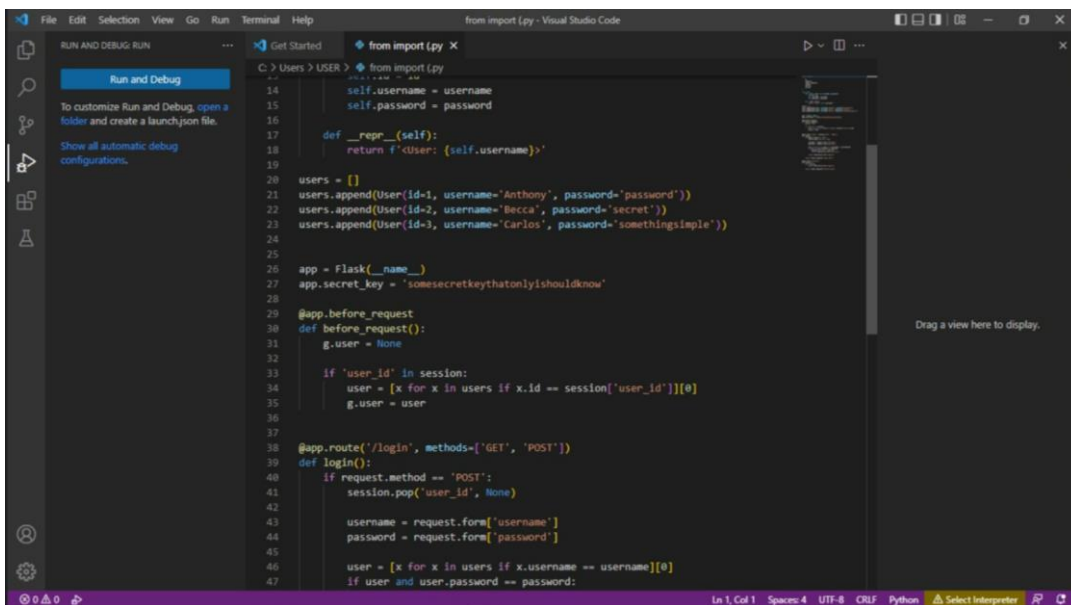
```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <meta name="viewport" content="width=device-width, initial-scale=1">
6 <title>Profile Page</title>
7 <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bulma@0.8.0/css/bulma.min.css">
8 <script defer src="https://use.fontawesome.com/releases/v5.3.1/js/all.js"></script>
9 </head>
10 <body>
11 <section class="hero is-success is-fullheight">
12 <div class="hero-body">
13 <div class="container">
14 <h1 class="title">
15 {{(g.user.username)}}'s Profile
16 </h1>
17 <h2 class="subtitle">
18 You are user number #{{(g.user.id)}}
19 </h2>
20 </div>
21 </div>
22 </section>
23 </body>
24 </html>
```

Flask code



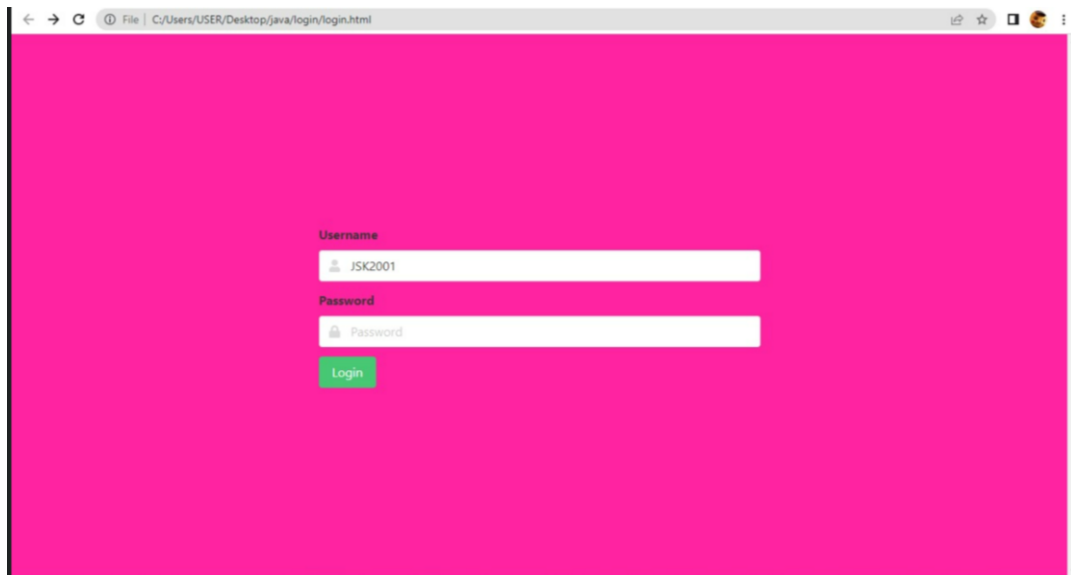
```
1 from import (
2     redirect,
3     render_template,
4     request,
5     session,
6     url_for
7 )
8
9
10
11 class User:
12     def __init__(self, id, username, password):
13         self.id = id
14         self.username = username
15         self.password = password
16
17     def __repr__(self):
18         return f'User: {self.username}'
19
20
21 users = []
22 users.append(User(id=1, username='Anthony', password='password'))
23 users.append(User(id=2, username='Becca', password='secret'))
24 users.append(User(id=3, username='Carlos', password='somethingsimple'))
25
26 app = Flask(__name__)
27 app.secret_key = 'somesecretkeythatonlyishouldknow'
28
29 @app.before_request
30 def before_request():
31     g.user = None
32
33     if 'user_id' in session:
34         user = [x for x in users if x.id == session['user_id']][0]
35         g.user = user
36
37
38 @app.route('/login', methods=['GET', 'POST'])
39 def login():
40     if request.method == 'POST':
41         session.pop('user_id', None)
42         username = request.form['username']
43         password = request.form['password']
44
45         user = [x for x in users if x.username == username][0]
46         if user and user.password == password:
```

Flask code



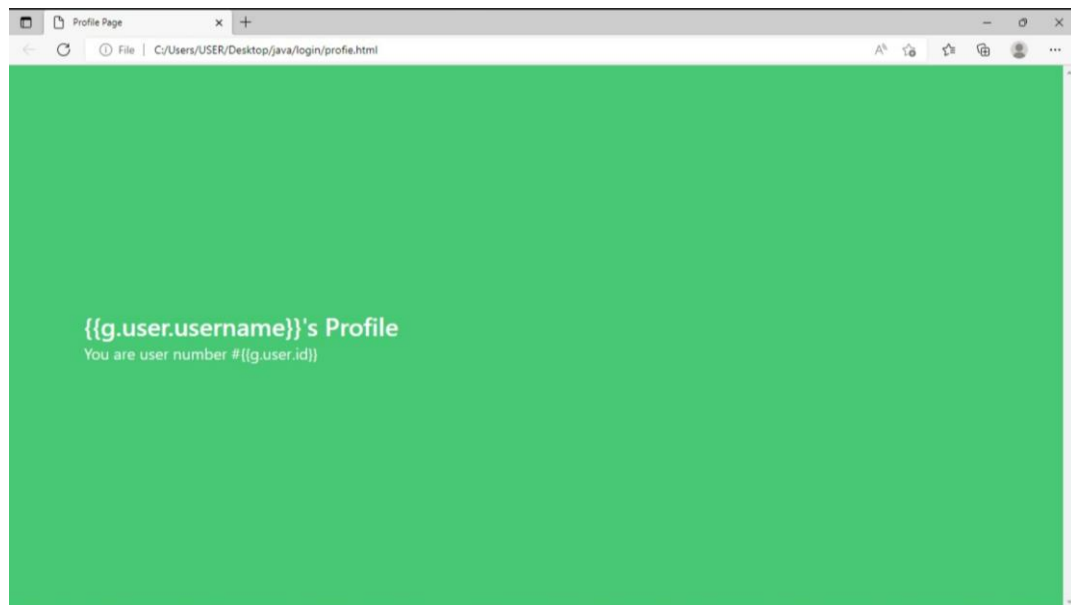
```
14 self.username = username
15 self.password = password
16
17 def __repr__(self):
18     return f'User: {self.username}'
19
20
21 users = []
22 users.append(User(id=1, username='Anthony', password='password'))
23 users.append(User(id=2, username='Becca', password='secret'))
24 users.append(User(id=3, username='Carlos', password='somethingsimple'))
25
26 app = Flask(__name__)
27 app.secret_key = 'somesecretkeythatonlyishouldknow'
28
29 @app.before_request
30 def before_request():
31     g.user = None
32
33     if 'user_id' in session:
34         user = [x for x in users if x.id == session['user_id']][0]
35         g.user = user
36
37
38 @app.route('/login', methods=['GET', 'POST'])
39 def login():
40     if request.method == 'POST':
41         session.pop('user_id', None)
42         username = request.form['username']
43         password = request.form['password']
44
45         user = [x for x in users if x.username == username][0]
46         if user and user.password == password:
```

Login Page Output



A screenshot of a web browser displaying a login page. The browser's address bar shows the file path: C:/Users/USER/Desktop/java/login/login.html. The page has a solid pink background. In the center, there is a login form with two input fields and a button. The first input field is labeled 'Username' and contains the text 'JSK2001'. The second input field is labeled 'Password' and contains the text 'Password'. Below these fields is a green button with the text 'Login'.

Welcome Page Output



A screenshot of a web browser displaying a welcome page. The browser's address bar shows the file path: C:/Users/USER/Desktop/java/login/profile.html. The page has a solid green background. On the left side, there is a heading that reads '{{g.user.username}}'s Profile' and a line of text below it that reads 'You are user number #[[g.user.id]]'.