1)Create user table with user with email, user name, roll number, password:

From flask import Flask

From flask\_mail import Mail, Message

App = Flask(\_\_name\_\_)

Mail= Mail(app)

App.config[‘MAIL\_SERVER’]=’smtp.gmail.com’

App.config[‘MAIL\_PORT’] = 465

App.config[‘MAIL\_USERNAME’] = ‘yourId@gmail.com’

App.config[‘MAIL\_PASSWORD’] = ‘\*\*\*\*\*’

App.config[‘MAIL\_USE\_TLS’] = False

App.config[‘MAIL\_USE\_SSL’] = True

Mail = Mail(app)

@app.route(“/”)

Def index():

Msg = Message(‘Hello’, sender = ‘yourId@gmail.com’, recipients = [‘someone1@gmail.com’])

Msg.body = “Hello Flask message sent from Flask-Mail”

Mail.send(msg)

Return “Sent”

If \_\_name\_\_ == ‘\_\_main\_\_’:

App.run(debug = True)

2)PERFORME UPDATE & DELETE QUERIES WITH USER TABLE:

From flask import Flask,render\_template,request,redirect

From models import db,userModel

App = Flask(\_\_name\_\_)

App.config[‘SQLALCHEMY\_DATABASE\_URI’] = ‘sqlite:///data.db’

App.config[‘SQLALCHEMY\_TRACK\_MODIFICATIONS’] = False

Db.init\_app(app)

//Update user

App.route(‘/data/<int:id>/update’,methods = [‘GET’,’POST’])

Def update(id):

Employee = UserModel.query.filter\_by(User\_id=id).first()

If request.method == ‘POST’:

If user:

Db.session.delete(user)

Db.session.commit()

Name = request.form[‘name’]

Age = request.form[‘age’]

Position = request.form[‘position’]

User = UseeModel(Usee\_id=id, name=name, age=age, position = position)

Db.session.add(User)

Db.session.commit()

Return redirect(f’/data/{id}’)

Return f”Userwith id = {id} Does nit exist”

Return render\_template(‘update.html’, User= User)

// DELETE USER

@app.route(‘/data/<int:id>/delete’, methods=[‘GET’,’POST’])

Def delete(id):

USER= UserModel.query.filter\_by(User\_id=id).first()

If request.method == ‘POST’:

If User:

Db.session.delete(User)

Db.session.commit()

Return redirect(‘/data’)

Abort(404)

Return render\_template(‘delete.flask’)

App.run(host=’localhost’, port=5000)

3) CONNECT PYTHON CODE TO db2:

db2id = { // service credential dictionary here //}

api = "/dbapi/v3"

host = db2id['https\_url']+api

userinfo = {"userid":db2id['username'],"password":db2id['password']}

service = '/auth/tokens'

r = requests.post(host+service,json=userinfo)

access\_token = r.json()['token']

auth\_header = {"Authorization": "Bearer "+access\_token}

3)CREATE A FLASK REGISTRATION & LOG IN PAGE, Welcome pagr:

From flask import Flask, render\_template, request, redirect, url\_for, session

From flask\_mysqldb import MySQL

Import MySQLdb.cursors

Import re

App = Flask(\_\_name\_\_)

App.secret\_key = ‘your secret key’

App.config[‘MYSQL\_HOST’] = ‘localhost’

App.config[‘MYSQL\_USER’] = ‘root’

App.config[‘MYSQL\_PASSWORD’] = ‘your password’

App.config[‘MYSQL\_DB’] = ‘geeklogin’

Mysql = MySQL(app)

@app.route(‘/’)

@app.route(‘/login’, methods =[‘GET’, ‘POST’])

Def login():

Msg = ‘’

If request.method == ‘POST’ and ‘username’ in request.form and ‘password’ in request.form:

Username = request.form[‘username’]

Password = request.form[‘password’]

Cursor = mysql.connection.cursor(MySQLdb.cursors.DictCursor)

Cursor.execute(‘SELECT \* FROM accounts WHERE username = % s AND password = % s’, (username, password, ))

Account = cursor.fetchone()

If account:

Session[‘loggedin’] = True

Session[‘id’] = account[‘id’]

Session[‘username’] = account[‘username’]

Msg = ‘Logged in successfully !’

Return render\_template(‘index.html’, msg = msg)

Else:

Msg = ‘Incorrect username / password !’

Return render\_template(‘login.html’, msg = msg)

@app.route(‘/logout’)

Def logout():

Session.pop(‘loggedin’, None)

Session.pop(‘id’, None)

Session.pop(‘username’, None)

Return redirect(url\_for(‘login’))

@app.route(‘/register’, methods =[‘GET’, ‘POST’])

Def register():

Msg = ‘’

If request.method == ‘POST’ and ‘username’ in request.form and ‘password’ in request.form and ‘email’ in request.form :

Username = request.form[‘username’]

Password = request.form[‘password’]

Email = request.form[‘email’]

Cursor = mysql.connection.cursor(MySQLdb.cursors.DictCursor)

Cursor.execute(‘SELECT \* FROM accounts WHERE username = % s’, (username, ))

Account = cursor.fetchone()

If account:

Msg = ‘Account already exists !’

Elif not re.match(r’[^@][+@[^@]+\.[^@](mailto:+@[%5e@]+\.%5b%5e@)]+’, email):

Msg = ‘Invalid email address !’

Elif not re.match(r’[A-Za-z0-9]+’, username):

Msg = ‘Username must contain only characters and numbers !’

Elif not username or not password or not email:

Msg = ‘Please fill out the form !’

Else:

Cursor.execute(‘INSERT INTO accounts VALUES (NULL, % s, % s, % s)’, (username, password, email, ))

Mysql.connection.commit()

Msg = ‘You have successfully registered !’

Elif request.method == ‘POST’:

Msg = ‘Please fill out the form !’

Return render\_template(‘register.html’, msg = msg)