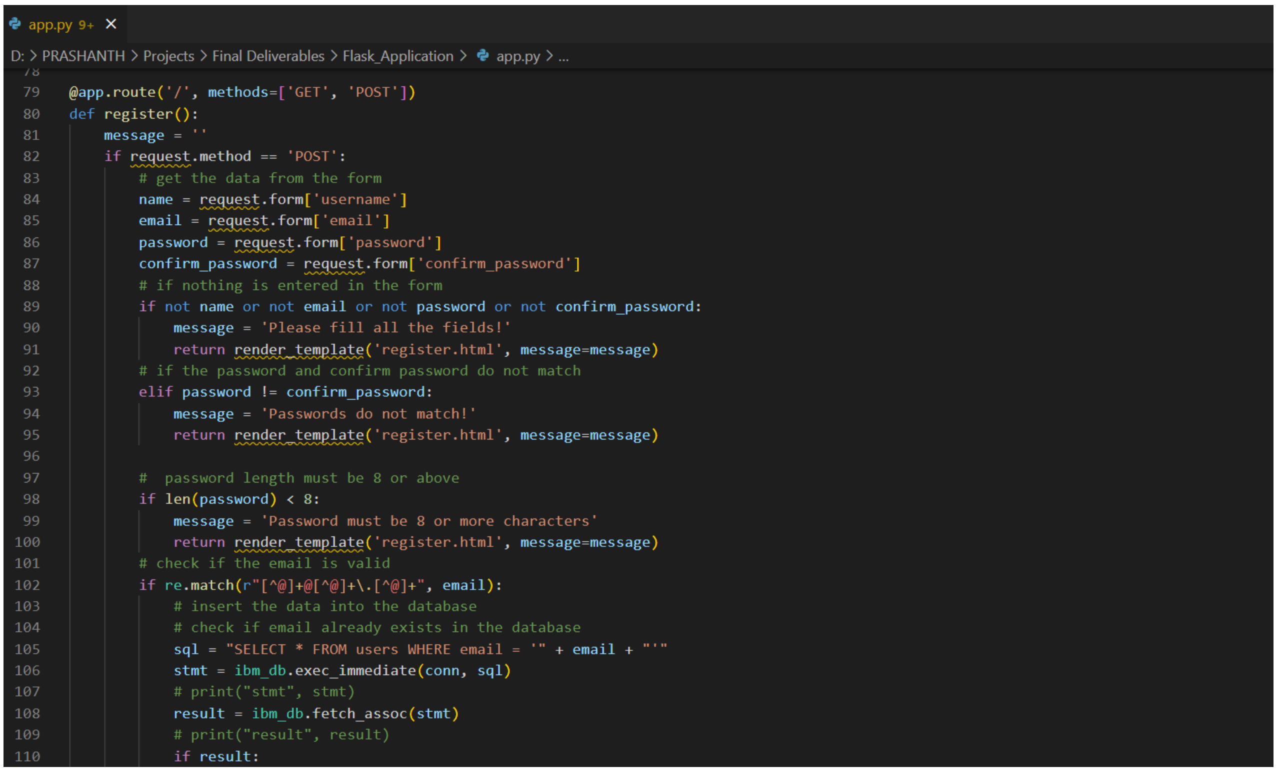
Creating APIs in Flask

Team ID	PNT2022TMID35229
Project Name	CONTAINMENT ZONE ALERTING


app.py 9+
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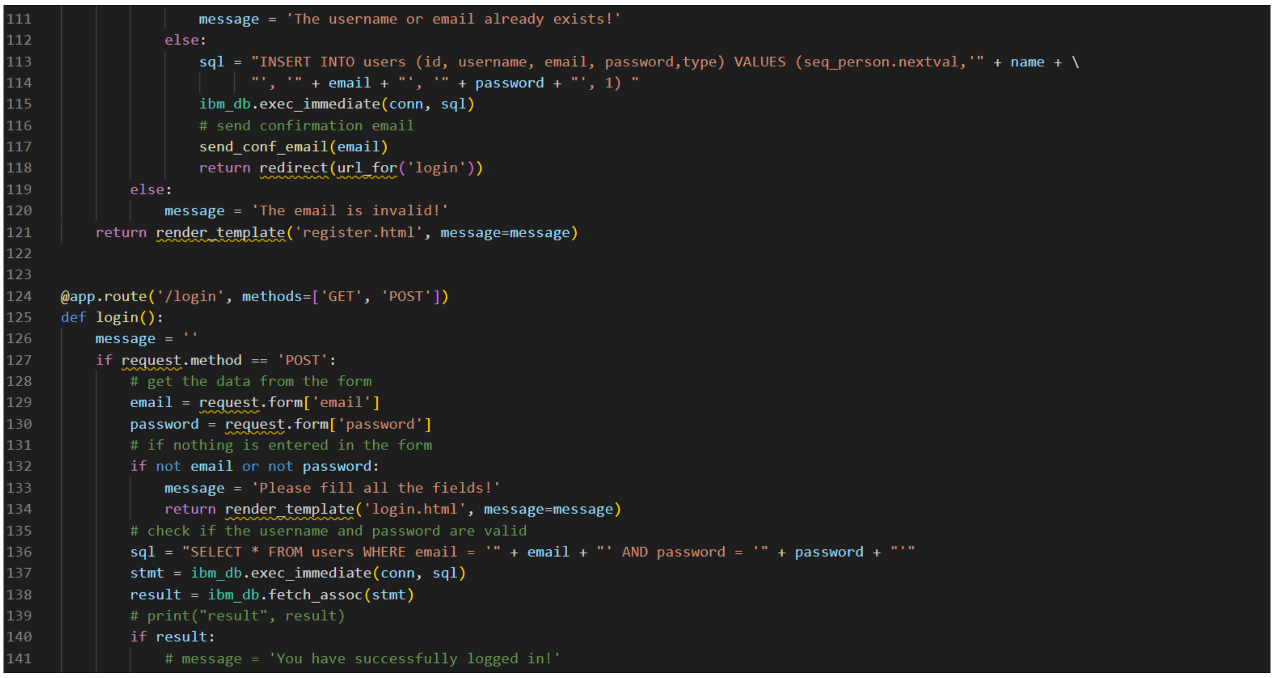
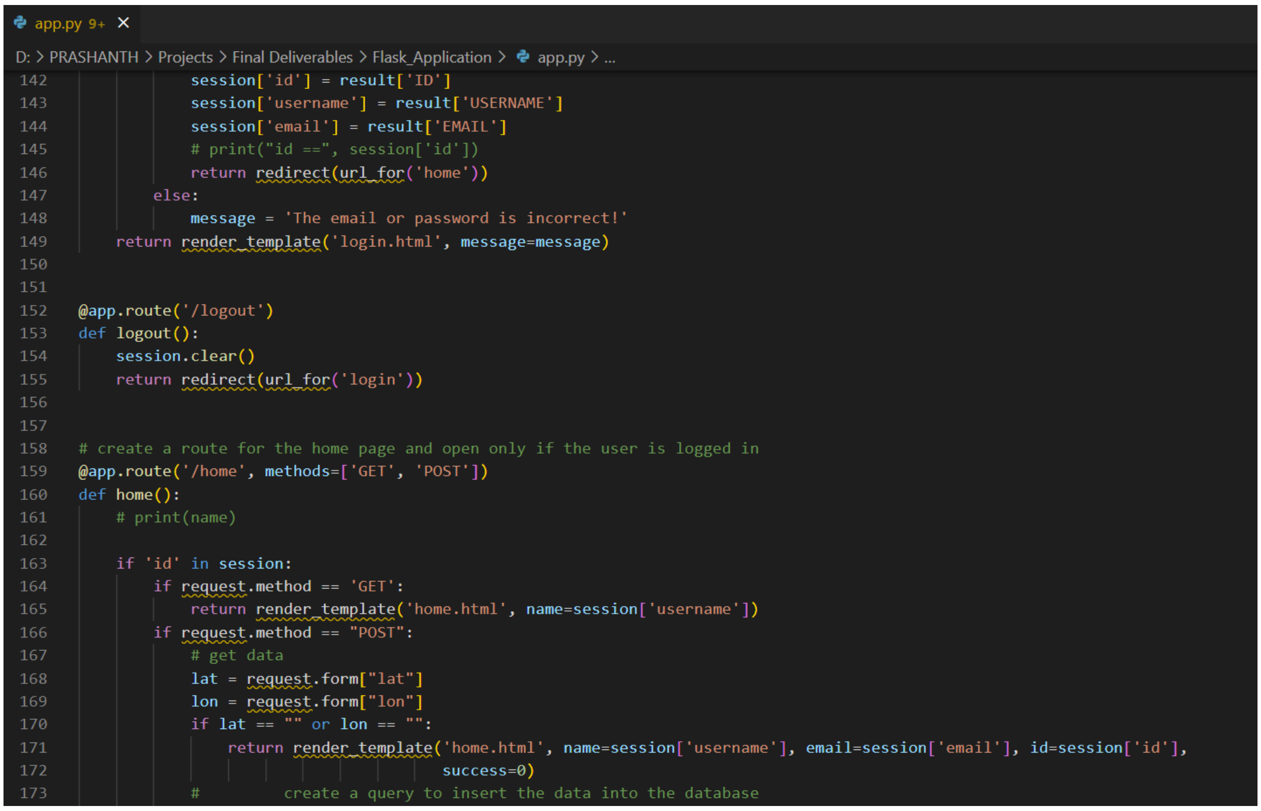
```python
@app.route('/', methods=['GET', 'POST'])
def register():
    message = ''
    if request.method == 'POST':
        # get the data from the form
        name = request.form['username']
        email = request.form['email']
        password = request.form['password']
        confirm_password = request.form['confirm_password']
        # if nothing is entered in the form
        if not name or not email or not password or not confirm_password:
            message = 'Please fill all the fields!'
            return render_template('register.html', message=message)
        # if the password and confirm password do not match
        elif password != confirm_password:
            message = 'Passwords do not match!'
            return render_template('register.html', message=message)

        #  password length must be 8 or above
        if len(password) < 8:
            message = 'Password must be 8 or more characters'
            return render_template('register.html', message=message)
        # check if the email is valid
        if re.match(r"[^@]+@[^@]+\.[^@]+", email):
            # insert the data into the database
            # check if email already exists in the database
            sql = "SELECT * FROM users WHERE email = '" + email + "'"
            stmt = ibm_db.exec_immediate(conn, sql)
            # print("stmt", stmt)
            result = ibm_db.fetch_assoc(stmt)
            # print("result", result)
            if result:
```



```python
                message = 'The username or email already exists!'
            else:
                sql = "INSERT INTO users (id, username, email, password,type) VALUES (seq_person.nextval,'" + name + \
                    "', '" + email + "', '" + password + "', 1) "
                ibm_db.exec_immediate(conn, sql)
                # send confirmation email
                send_conf_email(email)
                return redirect(url_for('login'))
        else:
            message = 'The email is invalid!'
    return render_template('register.html', message=message)


@app.route('/login', methods=['GET', 'POST'])
def login():
    message = ''
    if request.method == 'POST':
        # get the data from the form
        email = request.form['email']
        password = request.form['password']
        # if nothing is entered in the form
        if not email or not password:
            message = 'Please fill all the fields!'
            return render_template('login.html', message=message)
        # check if the username and password are valid
        sql = "SELECT * FROM users WHERE email = '" + email + "' AND password = '" + password + "'"
        stmt = ibm_db.exec_immediate(conn, sql)
        result = ibm_db.fetch_assoc(stmt)
        # print("result", result)
        if result:
            # message = 'You have successfully logged in!'
```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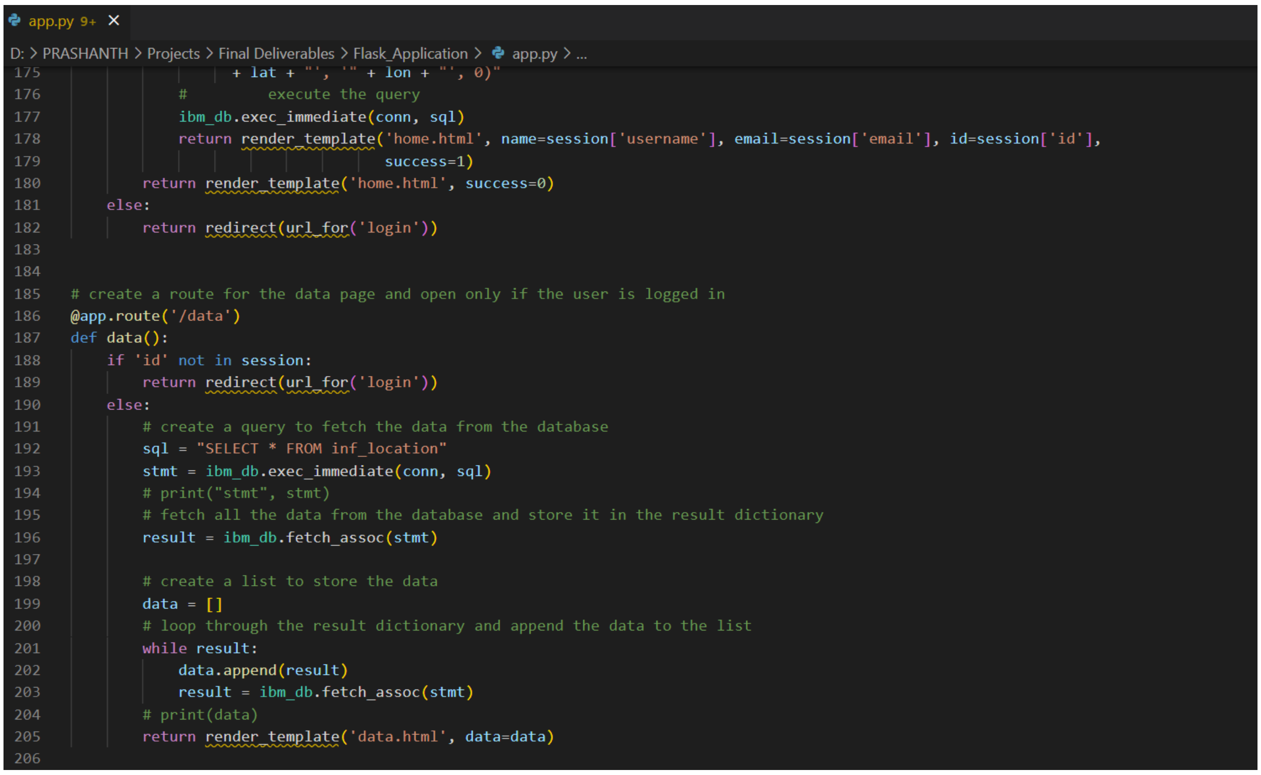
```python
            session['id'] = result['ID']
            session['username'] = result['USERNAME']
            session['email'] = result['EMAIL']
            # print("id ==", session['id'])
            return redirect(url_for('home'))
        else:
            message = 'The email or password is incorrect!'
    return render_template('login.html', message=message)


@app.route('/logout')
def logout():
    session.clear()
    return redirect(url_for('login'))


# create a route for the home page and open only if the user is logged in
@app.route('/home', methods=['GET', 'POST'])
def home():
    # print(name)

    if 'id' in session:
        if request.method == 'GET':
            return render_template('home.html', name=session['username'])
        if request.method == "POST":
            # get data
            lat = request.form["lat"]
            lon = request.form["lon"]
            if lat == "" or lon == "":
                return render_template('home.html', name=session['username'], email=session['email'], id=session['id'],
                                       success=0)
            #           create a query to insert the data into the database
```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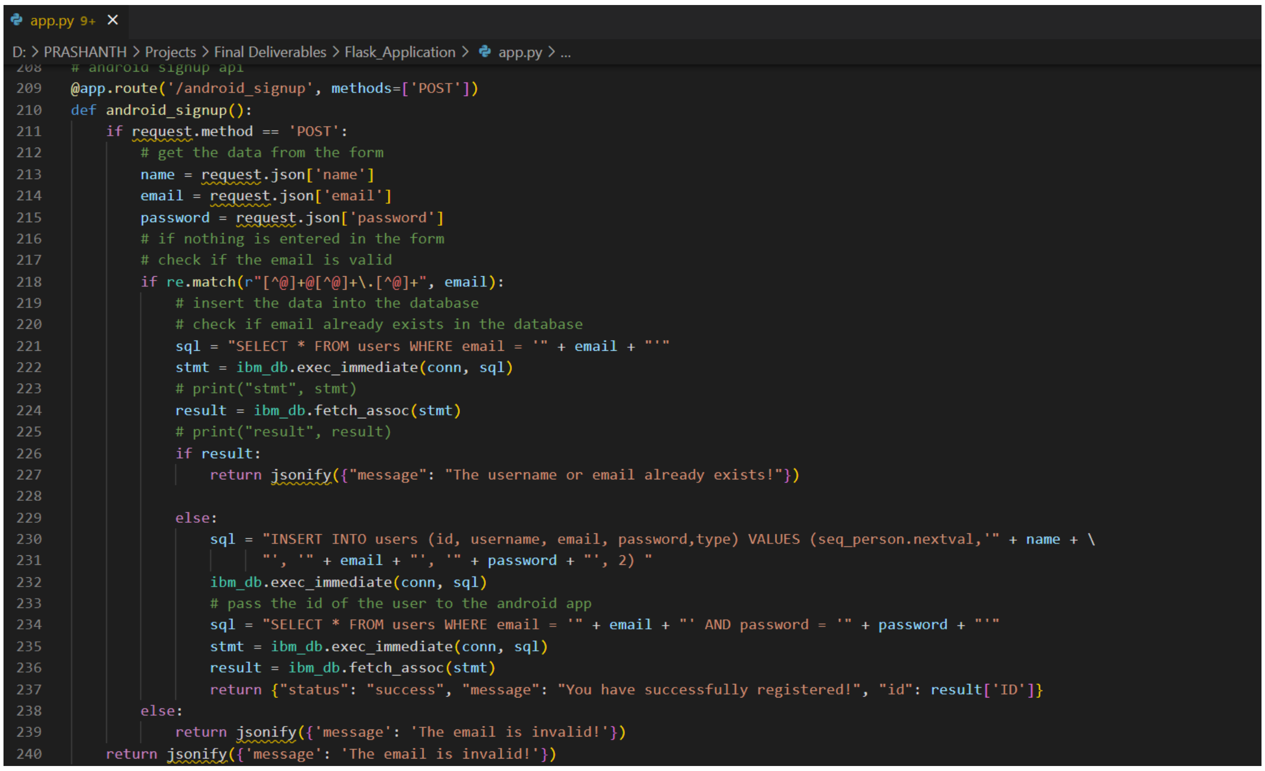
```python
                   + lat + "', '" + lon + "', 0)"
            #           execute the query
            ibm_db.exec_immediate(conn, sql)
            return render_template('home.html', name=session['username'], email=session['email'], id=session['id'],
                                   success=1)
        return render_template('home.html', success=0)
    else:
        return redirect(url_for('login'))


# create a route for the data page and open only if the user is logged in
@app.route('/data')
def data():
    if 'id' not in session:
        return redirect(url_for('login'))
    else:
        # create a query to fetch the data from the database
        sql = "SELECT * FROM inf_location"
        stmt = ibm_db.exec_immediate(conn, sql)
        # print("stmt", stmt)
        # fetch all the data from the database and store it in the result dictionary
        result = ibm_db.fetch_assoc(stmt)

        # create a list to store the data
        data = []
        # loop through the result dictionary and append the data to the list
        while result:
            data.append(result)
            result = ibm_db.fetch_assoc(stmt)
        # print(data)
        return render_template('data.html', data=data)
```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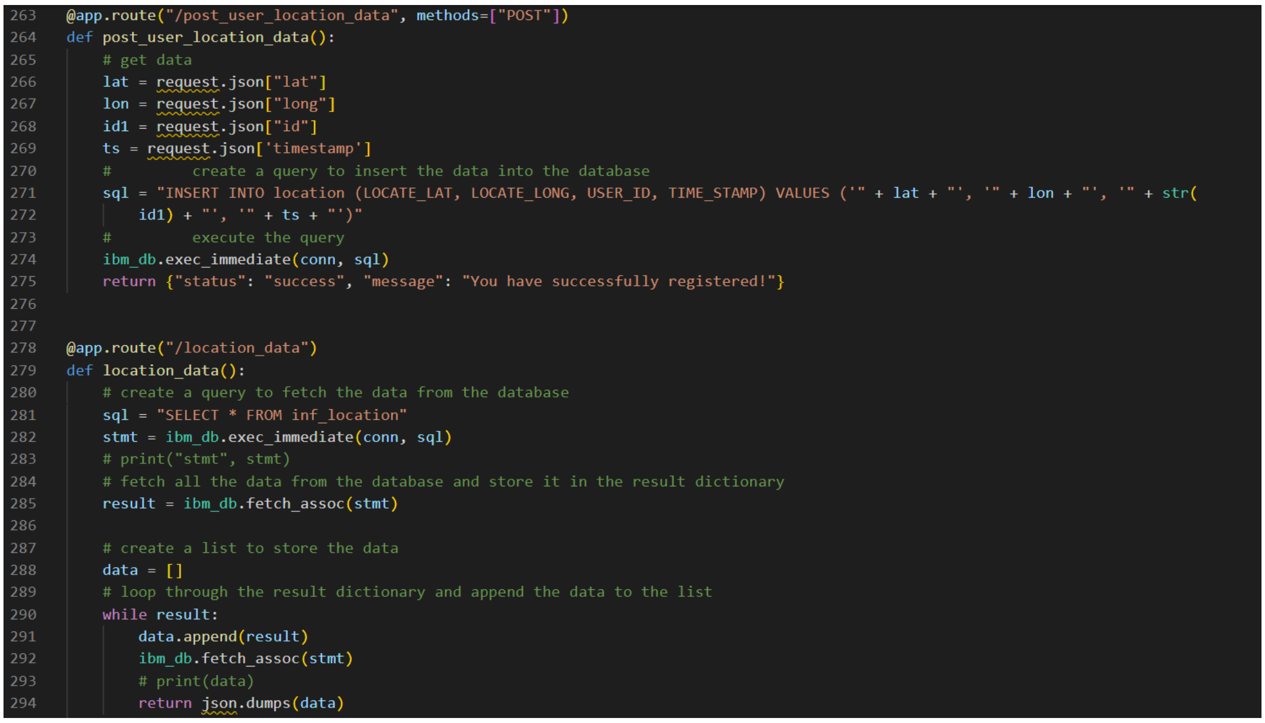
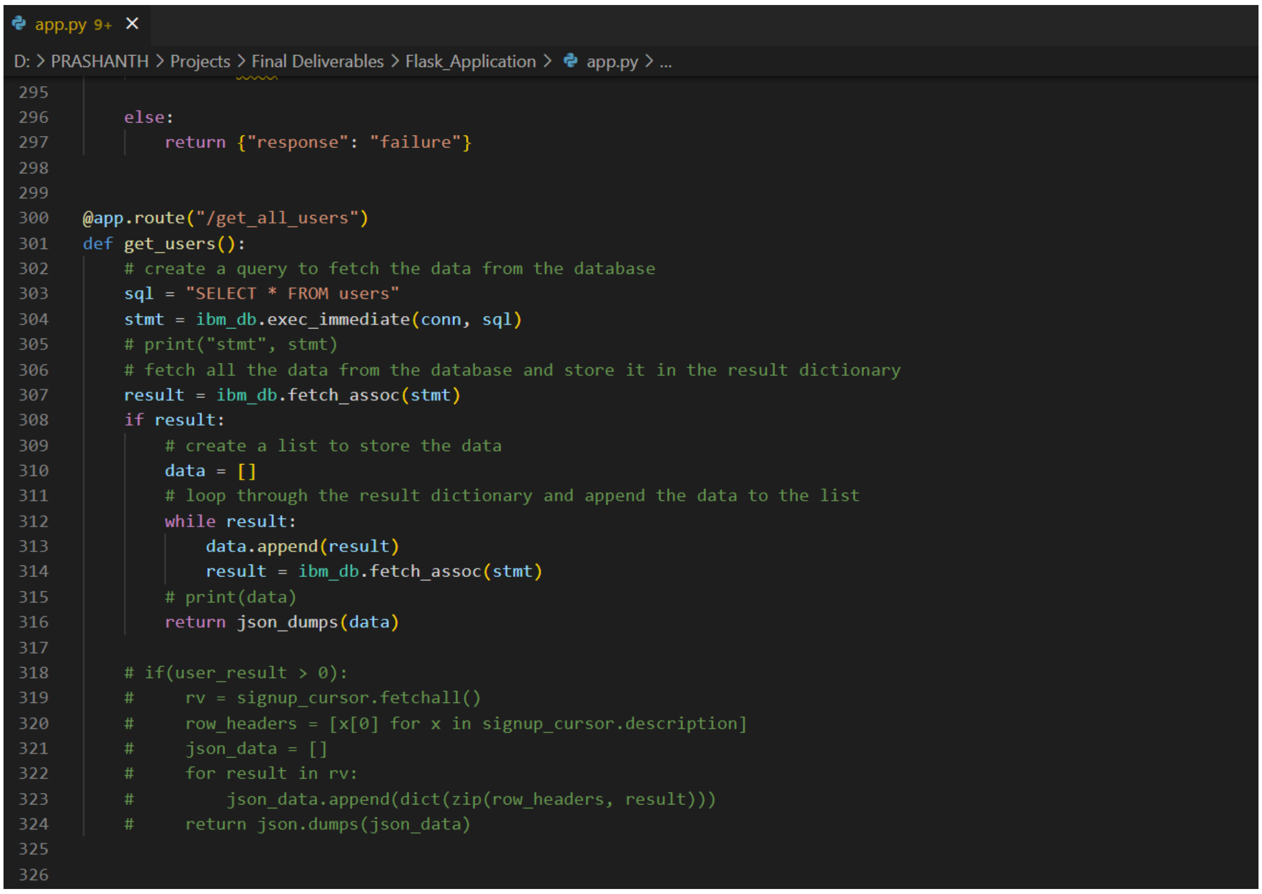
```python
# android signup api
@app.route('/android_signup', methods=['POST'])
def android_signup():
    if request.method == 'POST':
        # get the data from the form
        name = request.json['name']
        email = request.json['email']
        password = request.json['password']
        # if nothing is entered in the form
        # check if the email is valid
        if re.match(r"[^@]+@[^@]+\.[^@]+", email):
            # insert the data into the database
            # check if email already exists in the database
            sql = "SELECT * FROM users WHERE email = '" + email + "'"
            stmt = ibm_db.exec_immediate(conn, sql)
            # print("stmt", stmt)
            result = ibm_db.fetch_assoc(stmt)
            # print("result", result)
            if result:
                return jsonify({"message": "The username or email already exists!"})

            else:
                sql = "INSERT INTO users (id, username, email, password,type) VALUES (seq_person.nextval,'" + name + \
                      "', '" + email + "', '" + password + "', 2) "
                ibm_db.exec_immediate(conn, sql)
                # pass the id of the user to the android app
                sql = "SELECT * FROM users WHERE email = '" + email + "' AND password = '" + password + "'"
                stmt = ibm_db.exec_immediate(conn, sql)
                result = ibm_db.fetch_assoc(stmt)
                return {"status": "success", "message": "You have successfully registered!", "id": result['ID']}
        else:
            return jsonify({'message': 'The email is invalid!'})
    return jsonify({'message': 'The email is invalid!'})
```



```python
@app.route("/post_user_location_data", methods=["POST"])
def post_user_location_data():
    # get data
    lat = request.json["lat"]
    lon = request.json["long"]
    id1 = request.json["id"]
    ts = request.json['timestamp']
    #          create a query to insert the data into the database
    sql = "INSERT INTO location (LOCATE_LAT, LOCATE_LONG, USER_ID, TIME_STAMP) VALUES ('" + lat + "', '" + lon + "', '" + str(
        id1) + "', '" + ts + "')"
    #          execute the query
    ibm_db.exec_immediate(conn, sql)
    return {"status": "success", "message": "You have successfully registered!"}


@app.route("/location_data")
def location_data():
    # create a query to fetch the data from the database
    sql = "SELECT * FROM inf_location"
    stmt = ibm_db.exec_immediate(conn, sql)
    # print("stmt", stmt)
    # fetch all the data from the database and store it in the result dictionary
    result = ibm_db.fetch_assoc(stmt)

    # create a list to store the data
    data = []
    # loop through the result dictionary and append the data to the list
    while result:
        data.append(result)
        ibm_db.fetch_assoc(stmt)
        # print(data)
        return json.dumps(data)
```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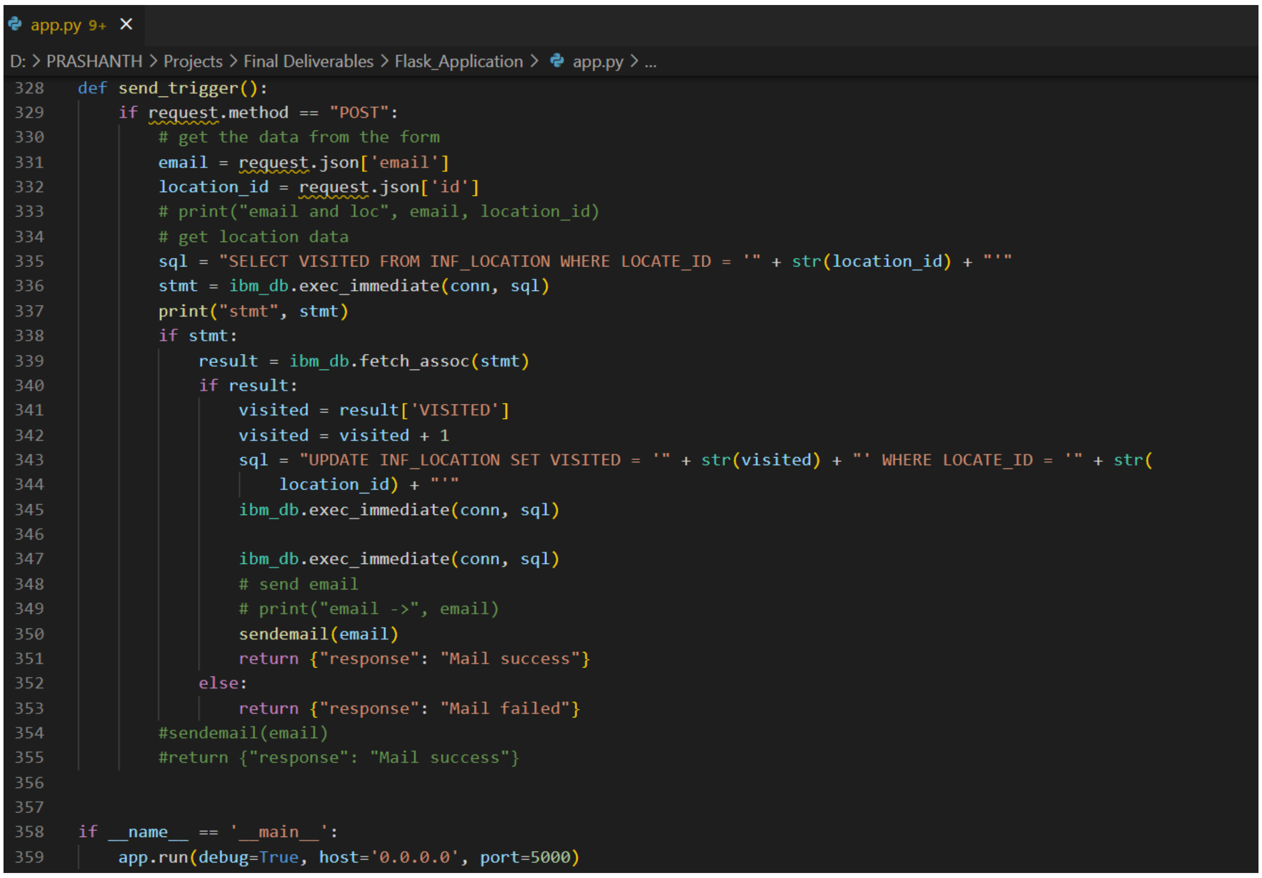
```python

    else:
        return {"response": "failure"}


@app.route("/get_all_users")
def get_users():
    # create a query to fetch the data from the database
    sql = "SELECT * FROM users"
    stmt = ibm_db.exec_immediate(conn, sql)
    # print("stmt", stmt)
    # fetch all the data from the database and store it in the result dictionary
    result = ibm_db.fetch_assoc(stmt)
    if result:
        # create a list to store the data
        data = []
        # loop through the result dictionary and append the data to the list
        while result:
            data.append(result)
            result = ibm_db.fetch_assoc(stmt)
        # print(data)
        return json_dumps(data)

    # if(user_result > 0):
    #     rv = signup_cursor.fetchall()
    #     row_headers = [x[0] for x in signup_cursor.description]
    #     json_data = []
    #     for result in rv:
    #         json_data.append(dict(zip(row_headers, result)))
    #     return json.dumps(json_data)


```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```python
def send_trigger():
    if request.method == "POST":
        # get the data from the form
        email = request.json['email']
        location_id = request.json['id']
        # print("email and loc", email, location_id)
        # get location data
        sql = "SELECT VISITED FROM INF_LOCATION WHERE LOCATE_ID = '" + str(location_id) + "'"
        stmt = ibm_db.exec_immediate(conn, sql)
        print("stmt", stmt)
        if stmt:
            result = ibm_db.fetch_assoc(stmt)
            if result:
                visited = result['VISITED']
                visited = visited + 1
                sql = "UPDATE INF_LOCATION SET VISITED = '" + str(visited) + "' WHERE LOCATE_ID = '" + str(
                    location_id) + "'"
                ibm_db.exec_immediate(conn, sql)

                ibm_db.exec_immediate(conn, sql)
                # send email
                # print("email ->", email)
                sendemail(email)
                return {"response": "Mail success"}
            else:
                return {"response": "Mail failed"}
        #sendemail(email)
        #return {"response": "Mail success"}


if __name__ == '__main__':
    app.run(debug=True, host='0.0.0.0', port=5000)
```