

ISAT 340 Mini-Project and Final Exam (Phase II)

FULL-STACK DATA DRIVEN WEB APPLICATION

Flask | Python | SQLite | HTML | CSS | GitHub | AWS



GitHub



WELCOME BACK! LET'S REVIEW WHAT WE'VE DONE SO FAR:

- 1) We created a sqlite3 database (celebrities) with two tables called members and celebs
- 2) We then set up the flask microframework in a folder called FlaskApp
- 3) We wrote python code using flask to interface to the database and to our profile.htm web page (our profile page)
- 4) After debugging (if it was necessary) we pointed our browser to the address `http://localhost:5000` and our profile.htm page was rendered in the browser.
- 5) We were then able to update the information on our profile page (if there were no errors) and the updated data was written to the database

LET'S NOW PROCEED TO PART IV

PART IV – PYTHON AND FLASK

STEP 1: WE WILL NOW CREATE CODE TO ADD TO THE PYTHON FILE THAT YOU DOWNLOADED.

IN THIS PART, WE WANT TO ACCOMPLISH SEVERAL TASKS:

- We want to be able to pull data from the celebs table in the database and from a remote server and display it on a webpage
- We want to create hypertext links on our profile page so that when they are clicked they take us to:
 - A web page that allows us to view information and a picture of a single celebrity.
 - A web page that allows us to view information on all celebrities
- We will start with the view_all_celebs.htm page which will display the information we request from the server and our database.
- The view_one_celebs.htm will be left for you to do later in the remaining tasks section

AGAIN, BEFORE YOU CONTINUE:

- **MAKE A COPY OF YOUR CELEBRITIES.DB DATABASE AND YOUR PYTHON CODE FLASKAPPPROJECT.PY AND PUT THEM IN A SAFE PLACE!**



RETURN RENDER_TEMPLATE FUNCTION ()

NOW, OPEN A CODE EDITOR AND EXAMINE YOUR PYTHON CODE IN FLASKAPPPROJECT.PY.

The profile.htm page that we browsed was made available to us by the python code :

(return render_template('profile.htm', memberID=memberID, firstname=firstname...))

at the end of the python code you added to the downloaded python file.

The function (see the code snippet below or look at the function in your code) was:

```
return render_template('profile.htm', memberID=memberID, firstname=firstname, lastname=lastname, age=age, email=email, bio=bio)
```

causes the file *profile.htm* in the templates folder to be loaded into the browser for viewing. It also sends the page the data pulled from the database to the page that is being viewed.

Since our goal is to develop a “complete” website, we need to develop more pages like this to view (and possibly modify) data and images of the celebrities.

VIEW ALL MEMBERS IN THE PROFILES DATABASE

IN THIS SECTION WE WILL CREATE ANOTHER WEBPAGE THAT WILL ALLOW US TO DISPLAY ALL THE PROFILES OF THE CELEBRITIES (ALONG WITH THEIR PICTURES) ON A SINGLE WEBPAGE. THE STEPS ARE AS FOLLOWS:

STEP 1: CREATE AN HTML PAGE CALLED VIEW_ALL_CELEBS.HTM AND ENTER THE FOLLOWING MARKUP EXACTLY AS SHOWN BELOW (THIS WILL WORK BUT IT IS VERY BASIC HTML MARKUP. YOU WILL ENHANCE IT LATER WITH STYLES, COLORS, ETC.).

IMPORTANT:

- 1) WHEN YOU HAVE COMPLETED ENTERING THE HTML, SAVE THE VIEW_ALL_CELEBS.HTM FILE.
- 2) MAKE SURE TO PUT IT INTO THE TEMPLATES FOLDER.

```

<!doctype html/>
<html>
  <head>
    <title>Flask App - Celebrities</title>
    <link type="text/css" rel="stylesheet" href="static/celebs_stylesheets.css"/>
  </head>
  <body>
    <table border =5 >
      {% for row in rows %}
        <tr>
          <td>Photo</td> <td></td>
        </tr>
        <tr>
          <td>Celebrity ID</td> <td>{{row[0]}}</td>
        </tr>
        <tr>
          <td>First Name</td> <td>{{row[1]}}</td>
        </tr>
        <tr>
          <td>Last Name</td> <td>{{row[2]}}</td>
        </tr>
        <tr>
          <td>Age</td> <td>{{row[3]}}</td>
        </tr>
        <tr>
          <td>Email</td> <td>{{row[4]}}</td>
        </tr>
        <tr>
          <td>Bio</td> <td>{{row[6]}}</td>
        </tr>
        <tr><td colspan=2><br></td></tr>
      {% endfor %}
    </table>
  </body>
</html>

```

This page will allow us to view all of the records in the database and all of the images on the remote server that the database references. It uses a loop in the HTML page to accomplish this and creates rows and tables to hold the data with each iteration through the loop.

STEP 2: NEXT, WE NEED TO ADD TO OUR PYTHON CODE IN FLASKAPP.PY. THE CODE ILLUSTRATED BELOW FETCHES ALL THE DATA FROM THE DATABASE AND SENDS IT TO THE VIEW_ALL_CELEBS.HTM HTML PAGE YOU CREATED ABOVE.

```

1 @app.route('/view_all_celebs')
2 def view_all():
3     celebID=None
4     firstname = ''
5     lastname = ''
6     age = ''
7     email = ''
8     photo = ''
9     bio = ''
10
11     conn = sqlite3.connect('celebrities.db')
12     c = conn.cursor()
13     c.execute('''SELECT * FROM celebs ORDER BY celebID''')
14     rows = c.fetchall()
15     conn.close()
16     #return
17     return render_template('view_all_celebs.htm',
        rows=rows)

```

This above code code should be entered *exactly* as indicated. It should be entered near the end of your python file BUT JUST ABOVE the line in the file that reads:

```

def get(request):
    pass

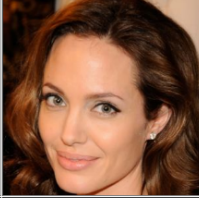

```

STEP 3: FINALLY, YOU NEED TO ADD A LINK TO THE PROFILE.HTM PAGE

- Modify your *profile.htm* webpage and add a link to the page so that when it is clicked it will take you to the *view_all_celebs.htm* page. The link should be :

 Click to view all of the celebrities

- Run your python code *flaskapp.py*, browse to the server at localhost:5000 and and click on the link you just added to the *profile.htm* page.
- If you have done everything right, you should see all of information from the database displayed as well as pictures of the celebrities! The the page should look something like:

Photo	
Celebrity ID	1
First Name	Angelina
Last Name	Jolie
Age	40
Email	angie@hollywood.us
Bio	Angelina Jolie Pitt is an American actress, filmmaker, and humanitarian. She has received an Academy Award, two Screen Actors Guild Awards, and three Golden Globe Awards, and has been cited as Hollywood's highest-paid actress
Photo	
Celebrity ID	2
First Name	Stephen
Last Name	Curry
Age	27
Email	steph@golden.bb
Bio	Wardell Stephen "Steph" Curry II is an American professional basketball player who currently plays for the Golden State Warriors of the National Basketball Association. He is considered by some to be the greatest shooter in NBA history.

IF YOU HAVE SUCCESSFULLY COMPLETED ALL OF THE PARTS AND STEPS IN THIS DOCUMENT, THEN YOUR CURRENT SCORE IS 40%. THE REMAINING TASKS (WORTH 60%) FOR YOUR TEAM WILL BE POSTED SHORTLY

REMAINING TASKS = 60 POINTS