

DASC 5333 Database Systems for Data Science
CSCI 4333 Design of Database Systems
Spring 2023
Homework #6

Web Database Development with MySQL, PyMySQL and Python

You should have already installed XAMPP so you can have Apache in your computer for development. Follow the steps in the class lecture notes to ensure that Apache supports Python CGI.

Use the relation schema for the Clear Lake Youth Swimming Team Management System (SWIM) project as the basis of this homework. Create SWIM DB in MySQL by using the following script: [createSwimDB.sql.txt](#).

Write a Python CGI application, `h6.py`, to accept zero or one HTTP parameter: `mid`, an event Id, or `eid`, an event id, (but not both)

The Web application displays primitive information about swimmers participating in an event If no HTTP parameter is supplied, e.g.

Study the following format, especially the highlight parts, to ensure that your application will reproduce it. Consider when there is no HTTP parameter.

<http://.../h6.py>

The Web application displays all meets in the following manner. Please study the details carefully.

The screenshot shows a web browser window with the address bar containing `localhost/[redacted]/h6.py`. The page content is:

There are 3 meets. Please select one.

1. [UHCL Open](#): at UHCL.
2. [Shell Trial](#): at CLHS.
3. [Clear Lake Contest](#): at CLHS

Annotations in yellow boxes with red arrows pointing to the page content:

- A box labeled "Total number of meets in the database." points to the text "There are 3 meets.".
- A box labeled "venue" points to the text "at UHCL." in the first list item.
- A box labeled "Name and link to the meet 'UHCL Open'" points to the text "UHCL Open" in the first list item.

If a link to a meet is clicked, `h6.py` should show event information of the meet in the following manner. For example, if the link for '(1): UHCL Open' is clicked, it will lead to the page

<http://.../h6.py?mid=1>

Meet #1: UHCL Open

Venue: UHCL

Date/time: 2016-03-03: 9:00:00 to 16:00:00

Events:

1. [50M Butterfly](#): 3 participants.
2. [100M Freestyle](#): 3 participants.
3. [100M Butterfly](#): 2 participants.
4. [200M Freestyle](#): 1 participants.

Link to the event "50M Butterfly": "?eid=1"

Three participants in eid 1.

Note that the event is linked and when it is clicked, simple information of the event will be shown:

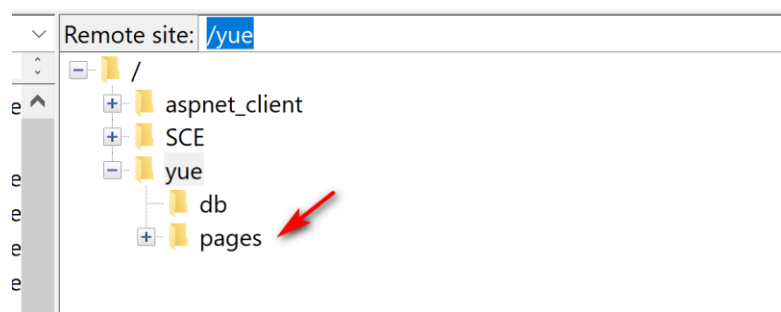
<http://.../h6.py?eid=1>



Participants in Event # 1

1. Johnson Philip: 713-222-1010
2. Khan Billy: 832-116-2992
3. Khan Nina: 832-116-2992

Host the Python application in your dcm account by uploading your Python program to the pages folder within your account by using FTP. For example, for my account, upload h6.py to the pages folder. Example:



You can then be able to access through the link <http://dcm.uhcl.edu/yue/h6.py> (after replacing yue by your account name).

Note that dcm server may have problems in using dbconfig.py and dbconfig.ini. You should use the following version of dbconfig.py:

```
import configparser
from pathlib import Path
```

```
# simplistic and no error handling.
def get_mysql_param(filename='dbconfig.ini', section='mysql'):
    config = configparser.ConfigParser()
    file_path = (Path(__file__).parent / filename).resolve()
    config.read(file_path)

    return config[section]
```

If problems persist, you may simply include your dcm's MySQL credential *directly* in h7.py. Your MySQL credential at the dcm server should be something like the following (assuming that you have not changed the password.)

dbconfig.ini:

```
Host: localhost
user: <<your dcm MySQL username>>: full last name + first character of first name (a
number 1, 2, 3, etc., may be added in case of conflict. Check your account here:
https://sceweb.sce.uhcl.edu/support/?page=sceStudentAccountLookup >>
password: <<your dcm MySQL password: "Sce" + Your 7-digit UHCL student ID + "!!">>
database: swim
```

Submit URL at dcm for the Web application and the Python code to the TA so he can grade your work.

Your program file name should be h6.py. Submit your homework through Blackboard. *Add the extension .txt in your submission as Blackboard may not know how to handle .py file.*