Database Systems
Fall 2025
Homework #6

Web Database Development with MySQL, PyMySQL and Python

For development, you should have already installed XAMPP so you can have Apache on your computer for development. Follow the steps in the class lecture notes to ensure that Apache supports Python CGI. XAMPP configuration in Mac is more error prone. If you use Mac, be sure that you start early.

You are strongly encouraged to use Python 3.10 or below for development in your local computer.

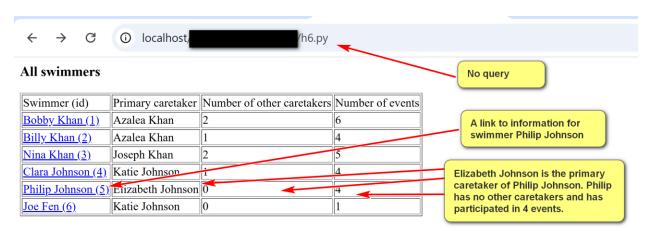Use the Swim DB: ../notes/swim/Swim.html.

Your program file name should be h6.py. Submit your homework, h6.py.txt, through Canvas. The extension .txt in your submission to Canvas is added to your work, h6.py. Port and upload h6.py to the DCM server for the TA to grade. Your URL should be http://dcm.uhcl.edu/<<your_web_account>>/h6.py. You should put your URL in a comment in h6.py at the beginning.

\# Program url: http://dcm.uhcl.edu/<<your_web_account>>/h6.py

Specification

Write a Python CGI application, h6.py. It may accept one HTTP parameter, *sid*, which is a swimmer id: SwimmerId. If no value of *sid* is submitted, the Web application initially displays information about all swimmers in the following format. Study the following format, especially the highlight parts, to ensure that your application will reproduce it.
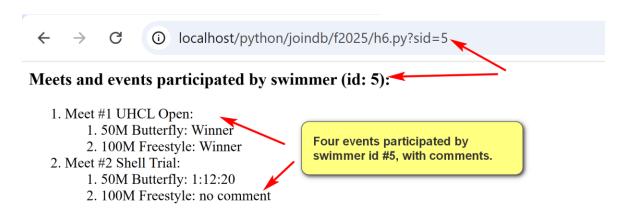
http://.../h6.py

If the link to 'Philip Johnson (5)' is clicked, it will lead to

which shows:

Meets and events participated by swimmer (id: 5):

1. Meet #1 UHCL Open:
    1. 50M Butterfly: Winner
    2. 100M Freestyle: Winner
2. Meet #2 Shell Trial:
    1. 50M Butterfly: 1:12:20
    2. 100M Freestyle: no comment

Four events participated by swimmer id #5, with comments.

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

```python
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]
```

Your MySQL credential at the DCM server should exactly be:

dbconfig.ini:

```
[mysql]
host: localhost
user: dbguest
password: uhcl__dbguest
database: swim
```

The MySQL account dbguest has been created with read privilege to both toyu and swim databases in the DCM server.