DASC 5333 Database Systems for Data Science
CSCI 4333 Design of Database Systems
Spring 2025
Homework #6

Web Database Development with MySQL, PyMySQL and Python

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: https://dcm.uhcl.edu/yue/courses/joinDB/Spring2025/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 immediately following the she-bang line if there is a she-bang line. If there is not a she-bang line, it should be the first line. For example:

```
#  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, e*id*, which is an event id: eventId. The Web application initially displays information about all events in the database categorized by event titles in the following format. Study the following format, especially the highlight parts, to ensure that your application will reproduce it.

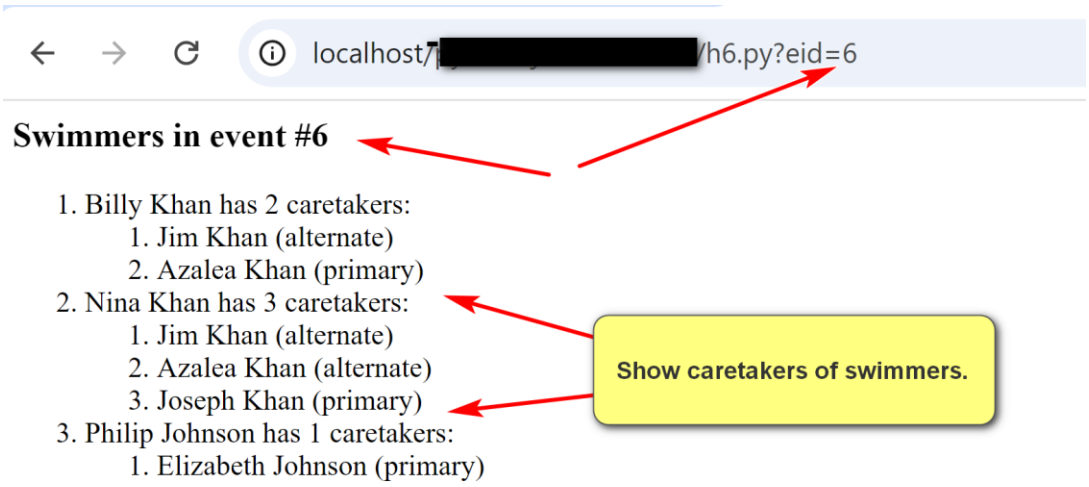
http://.../h6.py

the Web application displays all meets and their events in the following manner:

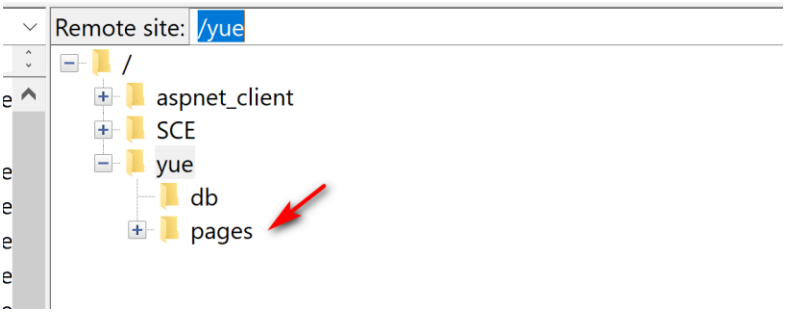
If the link for 'Shell Trial' at UHCL for 100M Freestyle is clicked, it will lead to

http://.../h6.py?eid=6

which shows:



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 of your DCM directory:



You can then be able to access through the link http://dcm.uhcl.edu/yue/h6.py (after replacing yue by your course Web directory 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]
```

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.