

**Database Systems**  
**Spring 2026**  
**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](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, 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.

localhost/.../h6.py

There are 3 meets. Please select one.

1. [UHCL Open](#): at UHCL.

2. [Shell Trial](#): at CLHS.

3. [Clear Lake Contest](#): at CLHS

venue

Total number of meets in the database.

Name and link to the meet "UHCL Open"

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>

localhost/.../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

Three participants in eid 1.

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.