

DASC 5333 Database Systems for Data Science
CSCI 4333 Design of Database Systems
Fall 2023
Homework #5

More SQL

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 script: createSwimDB.sql.txt.

Provide the SQL statements for the following queries. Please pay attention to the column names and formats. The orders of the results are not important unless explicitly stated otherwise.

(1) Provide the ids and names of all swimmers and their records in the level history in the following manner.

```
+-----+-----+-----+-----+-----+
| swimmerId | swimmer      | levelId | level  | since      |
+-----+-----+-----+-----+-----+
|          2 | Billy Khan   |         1 | Green  | 2015-12-12 |
|          1 | Bobby Khan   |         1 | Green  | 2014-02-12 |
|          4 | Clara Johnson |         1 | Green  | 2013-05-12 |
|          3 | Nina Khan    |         1 | Green  | 2016-05-12 |
|          5 | Philip Johnson |         1 | Green  | 2015-05-15 |
|          2 | Billy Khan   |         2 | Blue   | 2016-04-15 |
|          1 | Bobby Khan   |         2 | Blue   | 2014-07-15 |
|          4 | Clara Johnson |         2 | Blue   | 2014-06-01 |
|          3 | Nina Khan    |         2 | Blue   | 2016-07-12 |
|          5 | Philip Johnson |         2 | Blue   | 2016-03-15 |
|          1 | Bobby Khan   |         3 | Yellow | 2016-01-19 |
|          4 | Clara Johnson |         3 | Yellow | 2015-10-02 |
|          6 | Joe Fen      |         4 | Pink   | 2018-01-01 |
|          6 | Joe Fen      |         5 | Orange | 2018-02-14 |
+-----+-----+-----+-----+-----+
14 rows in set
```

(2) Provide the meet name, venue name, and the coach name of all meets in the year 2016 in the following manner. Note that the function YEAR(d) returns the year of the date d.

```
+-----+-----+-----+
| meet      | venue | main coach |
+-----+-----+-----+
| UHCL Open | UHCL  | Joe Smith  |
| Shell Trial | CLHS  | Joe Smith  |
+-----+-----+-----+
2 rows in set
```

(3) Provide the names of all swimmers with two or more 'other caretakers' in the following format.

```

+-----+-----+
| swimmer | Number of other caretakers |
+-----+-----+
| Bobby Khan | 2 |
| Nina Khan | 2 |
+-----+-----+
2 rows in set

```

(4) List the names of all caretakers (primary and other secondary) of every swimmer in the following manner.

```

+-----+-----+-----+
| swimmer | caretaker | type |
+-----+-----+-----+
| Bobby Khan | Jim Khan | secondary |
| Bobby Khan | Joseph Khan | secondary |
| Bobby Khan | Azalea Khan | primary |
| Billy Khan | Jim Khan | secondary |
| Billy Khan | Azalea Khan | primary |
| Nina Khan | Jim Khan | secondary |
| Nina Khan | Azalea Khan | secondary |
| Nina Khan | Joseph Khan | primary |
| Clara Johnson | Elizabeth Johnson | secondary |
| Clara Johnson | Katie Johnson | primary |
| Philip Johnson | Elizabeth Johnson | primary |
| Joe Fen | Katie Johnson | primary |
+-----+-----+-----+
12 rows in set

```

(5) List the name of the swimmers who have participated in both a '50M Butterfly' event and a '100M Butterfly' event in the following format.

```

+-----+
| swimmer |
+-----+
| Clara Johnson |
+-----+
1 row in set

```

(6) List the names of all swimmers and the total numbers of events they have participated in using the following format. List only those swimmers that do not have the last name 'Khan' and have participated in three or more events.

```

+-----+-----+
| Swimmer | Number of Events |
+-----+-----+
| Clara Johnson | 4 |
| Philip Johnson | 4 |
+-----+-----+
2 rows in set

```

(7) List all swimmers who have participated in three or more events, including a '50M Butterfly' event but not a '200M Freestyle' event. For targeted practice, you must use CTE and EXCEPT in this question.

```

+-----+-----+
| Swimmer | Number of Events |
+-----+-----+

```

```
| Billy Khan      |          4 |
| Nina Khan      |          5 |
| Philip Johnson |          4 |
+-----+-----+
3 rows in set
```

Turn in DASC5333_<<Section #>>_H5_<<Your name>>_<<Your Student ID>>.sql.txt (or CSCI4333 as the prefix) and submit your homework through Blackboard. It must be done in a text format executable by the TA using the source command, or using copying and pasting into a SQL client.