

**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) List the names, phones and join times of all swimmers joining in the years of 1/2014 to 6/2016 ordered by join time in the following manner.

```
+-----+-----+-----+-----+
| LName  | FName | Phone       | joinTime |
+-----+-----+-----+-----+
| Khan   | Bobby | 832-116-2992 | 2014-02-12 |
| Johnson | Philip | 713-222-1010 | 2015-05-15 |
| Khan   | Billy | 832-116-2992 | 2015-12-12 |
| Khan   | Nina  | 832-116-2992 | 2016-05-12 |
+-----+-----+-----+-----+
4 rows in set
```

(2) List the names of the swimmers who have the same last name as their primary care takers in the following manner.

```
+-----+-----+
| swimmer      | primary caretaker |
+-----+-----+
| Bobby Khan   | Azalea Khan       |
| Billy Khan   | Azalea Khan       |
| Nina Khan    | Joseph Khan       |
| Clara Johnson | Katie Johnson     |
| Philip Johnson | Elizabeth Johnson |
+-----+-----+
5 rows in set
```

(3) List all swimmers (their names, levels) event titles, and meet titles in which the swimmers have participated in a butterfly event of the meet.

```
+-----+-----+-----+-----+
| swimmer      | level | meet       | event       |
+-----+-----+-----+-----+
| Billy Khan   | Blue  | UHCL Open  | 50M Butterfly |
| Nina Khan    | Blue  | UHCL Open  | 50M Butterfly |
| Philip Johnson | Blue  | UHCL Open  | 50M Butterfly |
| Bobby Khan   | Yellow | UHCL Open  | 100M Butterfly |
| Clara Johnson | Yellow | UHCL Open  | 100M Butterfly |
```

Clara Johnson	Yellow	Shell Trial	50M Butterfly	
Billy Khan	Blue	Shell Trial	50M Butterfly	
Nina Khan	Blue	Shell Trial	50M Butterfly	
Philip Johnson	Blue	Shell Trial	50M Butterfly	
Bobby Khan	Yellow	Shell Trial	100M Butterfly	
Clara Johnson	Yellow	Shell Trial	100M Butterfly	

11 rows in set

(4) List the names of the swimmers who have participated in a 100M Freestyle event and a 50M Butterfly event in the following manner.

swimmerId	swimmer	100M Freestyle eventId	50M Butterfly eventId
2	Billy Khan	2	1
2	Billy Khan	2	5
2	Billy Khan	6	1
2	Billy Khan	6	5
3	Nina Khan	2	1
3	Nina Khan	2	5
3	Nina Khan	6	1
3	Nina Khan	6	5
5	Philip Johnson	2	1
5	Philip Johnson	2	5
5	Philip Johnson	6	1
5	Philip Johnson	6	5

12 rows in set

(5) Redo (4), but show the result in the following manner.

swimmerId	Swimmer	100M Freestyle eventIds	50M Butterfly eventIds
2	Billy Khan	2, 6	1, 5
3	Nina Khan	2, 6	1, 5
5	Philip Johnson	2, 6	1, 5

3 rows in set

(6) List the numbers of events on distances. Assume that the event title uses the format of "<distance>M <style>", e.g. "50M Butterfly". Note the order of the result is in ascending distance.

event distance	number of events
50	3
100	5
200	3

3 rows in set

(7) List the swimmers (names and their number of participated events) who have participated in two or more non-'100M' events (events without the substring '100M' in their titles) in the following format. Note that the order of the result is in

descending of the counts of non-100M event participations.

```
+-----+-----+
| Swimmer      | # of non-100M Events |
+-----+-----+
| Bobby Khan   |          3           |
| Billy Khan   |          2           |
| Nina Khan    |          2           |
| Clara Johnson|          2           |
| Philip Johnson|          2           |
+-----+-----+
5 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 Canvas. It must be done in a text format. The file should be executable by the TA using the source command, or using copying and pasting into a SQL client.