

Database Systems Fundamentals
Chapter 2-MySQL & PDO
Amirkabir University of Technology – Winter 2017

Reminders

- a. Out of 100 points (Each part)
- b. There could be more than one correct answer. I shall accept them all.

Homework Assignment #2

Q1- What's the difference between WHERE and HAVING clauses in SQL? [20 points]

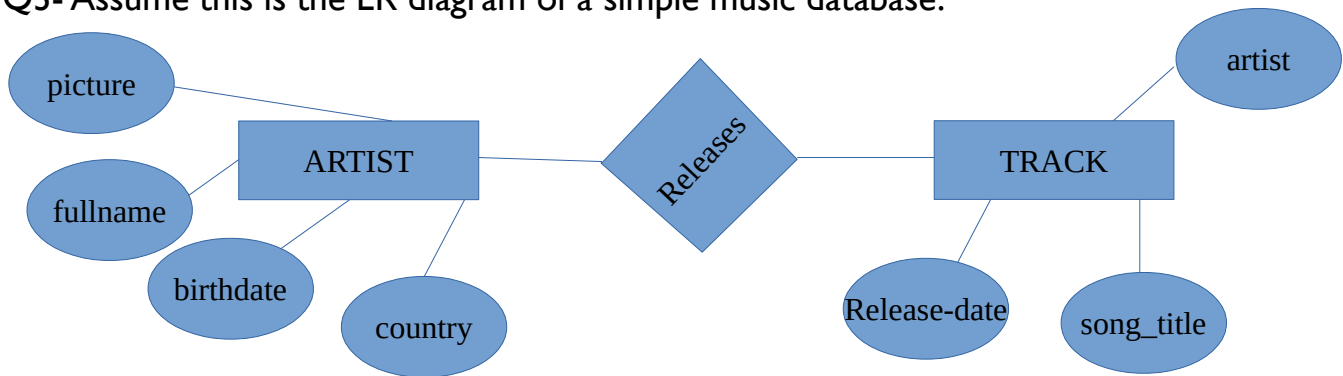
Q2- Assume that table 'world' is given.

name	continent	area	population	gdp
Afghanistan	Asia	652230	25500100	20343000000
Albania	Europe	28748	2831741	12960000000
Algeria	Africa	2381741	37100000	188681000000
Andorra	Europe	468	78115	3712000000
Angola	Africa	1246700	20609294	100990000000
...				

- a) Write a query to list each country name where the population is larger than that of 'Russia' and smaller than that of 'Algeria'.
- b) Write a query to count the number of countries where the area is less than 1,000,000.
- c) Write a query to change the area of all countries to zero.
- d) Which field is suitable for PRIMARY KEY? Which one is suitable for FOREIGN KEY?

[40 points]

Q3- Assume this is the ER diagram of a simple music database.



- Write a query to list all of the songs released by 'Michael Jackson'.
 - Write a query to get the 'fullname' of the artists who have released at least 20 songs.
 - Write a query to list all of the artists who are from 'South Africa'.
 - Write a query to list all of the songs released by an artist from 'South Africa'.
- [40 points]

Special Assignment #2

Q1- Explain which one of the ways below is better for saving a picture in a database.

- Saving it as a BLOB object.
- Saving the address of the picture. (Like 'http://img.jpg')

[40 points]

Q2- Assume that you were talking with a database administrator. He left for a while and you were alone with the RDBMS. The keyboard didn't have a backspace or a delete key. So, once a command was written, no part of it could be erased.

Assume that the command below was written by the DB-Admin and you wanted to make 'users' table empty after executing it. How could you complete it?

```
SELECT * FROM users WHERE
```

[60 points]

Good Luck!