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Professor Wenying Feng

Trent University

COIS-3400H, LAB #4, SQL by MySQL

Instruction

1. Create the following tables under your phpMyAdmin account:

Emp(*eid:* integer, *ename:* string, *age:* integer, *salary:* real)

Works(*eid:* integer, *did:* integer, *pct time:* integer)

Dept(*did:* integer, *dname:* string, *budget:* real, *managerid:* integer)

*Personal Note: There will be an error adding budget and salary as reals through GUI, if the length isn’t given a decimal point (10,2). This will not be apparent through the error messages.*

2. Load data from emp.csv, dept.csv, works.csv (from the SQL data folder on blackboard) into these tables. Make sure you click on the table then import, otherwise it will make a new table with the csv file.

3. Give the **Primary Key** and **Foreign Key** for each table. NOTE: after adding the Foreign Keys to Works you may only see one grey coloured key, that is just a visual glitch. If you get the message that the keys have been added after running the query you have added them correctly.

Emp: PK eid

Works: (eid, did) FK eid, did

Dept: PK did

*Personal Note: PK and FK things must be done after importing data otherwise works will attempt to throw errors with duplicate eid’s being present*

4. Complete and run the following queries. Answer the questions from your output. NOTE: Copy-pasting into phpMyAdmin may cause SQL to not recognize functions or quotes (“ or ‘) if you are having problems with that manually type the queries.

(a) Print the names and ages of each employee who works in the Hardware department. **Fill in the blank, before running the query**.

SELECT DISTINCT E.ename, E.age

FROM Emp E, , Dept D

WHERE E.eid=W.eid AND W.did=D.did AND D.dname = “Hardware”

1. How many records are in the output table?

A screenshot of a computer

Description automatically generated

1. Show a quick screenshot of the output, include the query in the screenshot:

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(b) Print the names and ages of each employee who works in both the Hardware department and the Software department. This query is given to you. Just type it out then run it, then answer the questions.

SELECT DISTINCT E.ename, E.age

FROM Emp E, Works W, Dept D

WHERE E.eid=W.eid AND W.did=D.did AND D.dname = “Hardware” AND E.eid IN ( SELECT E2.eid FROM Emp E2, Works W2, Dept D2

WHERE E2.eid=W2.eid AND W2.did=D2.did AND

­­­­­­­­D2.dname = “Software”);

1. How many records are in the output table?

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1. Show a quick screenshot of the output, include the query in the screenshot:

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1. For each department, print the *did* together with the number of employees that work

in that department. **Fill in the blank then run the query.**

SELECT W.did, COUNT (W.eid)

FROM Works W

GROUP BY \_\_\_\_ ;

1. Show a quick screenshot of the output, include the query in the screenshot:

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1. Print the name of each employee whose salary exceeds 100,000! **Write this yourself.**

Output, include the query in the screenshot:

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