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CSCI 391

Homework 2

**1.** What makes SQL a nonprocedural language?  
The database must implement the SQL request. As result, this feature is in cross-platform and cross-language development.

**2.** How can you tell whether a database is truly relational?  
Apply Dr. Codd's 12 rules.

**3.** What can you do with SQL?  
SQL enables you to select, insert, modify, and delete the information in a database. Handle online transaction processing within an application and perform system security functions and set user permissions on tables and databases.

**4.** Name the process that separates data into distinct, unique sets.  
Normalization reduces the amount of repetition and complexity of the structure of the previous level.

**5.** Do the following statements return the same or different output?

SELECT\* FROM ARRESTS;

Select\* from arrests;

This two statement came out with the same statement because in SQL the lowercase ir uppercase doesn’t matter a lot.

**6.** None of the following queries work. Why not?

a. Select \*

The FROM clause is missing.

b. Select \* from checks

The semicolon is missing.

c. Select amount name payee FROM checks;

The comma is missing.

7. Which of the following SQL statements will work?

a. Select \* from checks;

b. Select \* from checks;

c. Select \* from checks /

All of the statements work.

8. using the CHECK table, write a query to return just the check numbers and the remarks

. SELECT CHECK #, REMARKS FROM CHECKS;

9. Rewrite the query from exercise 1 so that the remarks will appear as the first column in your query results.

SELECT REMARKS, CHECK # FROM CHECKS;

10. using the arrests table, write a query to return all the unique remarks.

SELECT DISTINCT REMARKS FROM CHECKS;

1. Write a query that returns everyone in the database whose last name begins with M.

SELECT \* FROM EVERYONE WHERE LASTNAME LIKE ‘M%’;

1. Write a query that returns everyone who lives in Illinois with a first name of AL.

SELECT \* FROM EVERYONE

WHERE STATE =’AL’

AND FIRST\_NAME =’AL’;

1. What shorthand could you use instead of WHERE a >= 10 AND a <=30?

WHERE A BETWEEN 10 AND 30;

1. What will this query return?

SELECT FIRSTNAME

FROM DOUBLE\_AGENTS

WHERE FIRSTNAME = 'AL'

AND LASTNAME = 'BULHER';

The result came nothing because the two condition statements are not correct.

1. Using the DOUBLEAGENTS table, write a query that returns the following:

SQL> SELECT LASTNAME || ‘,’|| FIRSTNAME NAME,

2 AREACODE || ‘,’|| PHONE

3 FROM DOUBLEAGENTS

4 WHERE AREACODE BETWEEN 300 AND 400;

1. Which function capitalizes the first letter of a character string and makes the rest lowercase?

INITCAP

1. Which functions are also known by the *same* name?

Group function and aggregate functions are the same things.

1. Will this query work?

SELECT COUNT(LASTNAME) FROM CHARACTERS;

Yes, it will work.

19. How about this one?

SELECT SUM(LASTNAME) FROM CHARACTERS

No, it’s not working because LASTNAME is a character field.

1. Assuming that they are separate columns, which function(s) would splice together FIRSTNAME and LASTNAME?

The CONCAT function and the | | symbol.

1. What does the answer 37 mean from the following SELECT?

SELECT COUNT(\*) FROM drone\_strikes;

I think 37 meant the number of records.

1. Will the following statement work? (Hint: look up substr)

SELECT SUBSTR LASTNAME,1,5 FROM NAME\_TBL;

This statements missing the ( ) around lastname.

1. Using a table called SHOOTSTATS table, write a query to determine who is are on target less than .25.

Input:

SQL> SELECT NAME FROM TEAMSTATS

2 WHERE (HITS/AB) < .25;

Output:

NAME

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HAMHOCKER

CASEY

1. Using today's OFFICERS table, write a query that will return the following:

Output:

INITIALS……………CODE

K.A.P. 32

1 row selected.

SQL> select substr(firstname,1,1)||'.'||

substr(middlename,1,1)||'.'||

substr(lastname,1,1)||'.' INITIALS, code

from characters

where code = 32;

1. Which clause works just like LIKE(%)? (HINT: Look it up on google.)

I think we can use STARTING WITH.

1. What is the function of the GROUP BY clause, and what other clause does it act like?

The GROUP BY clause acts like the ORDER BY clause in that it orders the results of the query in the order the columns are listed in the GROUP BY.

1. Will this SELECT work?

NAME, AVG(SALARY), DEPARTMENT FROM PAY\_TBL WHERE DEPARTMENT = 'SWAT' ORDER BY NAME GROUP BY DEPARTMENT, SALARY;

No, I didn’t think so because it looks have some errors.

1. When using the HAVING clause, do you always have to use a GROUP BY also?

Yes, it can.

1. Can you use ORDER BY on a column that is not one of the columns in the SELECT statement?

Yes it can.

1. Using the ORGCHART table from the following examples, find out how many people on each team have 30 or more days of sick leave.

##### INPUT:

SELECT TEAM, COUNT(TEAM)

FROM ORGCHART

GROUP BY TEAM;

##### OUTPUT:

TEAM COUNT

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COLLECTIONS 2

MARKETING 3

PR 1

RESEARCH 2

The output shows the number of people on each team with a SICKLEAVE balance of 30 days or more.

Compare it to the query that solves the question:

INPUT:

SELECT TEAM, COUNT(TEAM)

FROM ORGCHART

WHERE SICKLEAVE >=30

GROUP BY TEAM;

OUTPUT:

##### OUTPUT:

TEAM COUNT

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COLLECTIONS 1

MARKETING 1

RESEARCH 1

Same result.