SQL Self-Test

These questions are provided to help you to assess your own level of knowledge. To be eligible to apply for this Certificate, you should be able to answer *all* of the questions. If you cannot answer these questions, or are uncertain of your answers, we recommend completing the W3 Schools SQL tutorial or, for more in-depth training, enrolling in our Database Management Foundations course before applying to the Certificate.
You do not need to submit your answers to UW PCE, but you must confirm that you are comfortable with the level of SQL in these questions, and that you understand that you are expected to know this level of SQL if you are accepted into and start the Certificate.

SELF-TEST

1. What is structured query language and how is it used?
2. What is a primary key?
3. What is a foreign key?
4. Why would you need to join two tables?
5. What is the difference between a one-to-one and a one-to-many relationship? Can you join 2 tables to create a many-to-many relationship?
6. Write a SQL statement which does the following:
    a. Creates a new table with 3 fields: Firstname, Lastname, PID.
    b. Make PID the primary key
    c. Why might this table contain a foreign key?
7. Write an SQL statement for the above table that would find all people with the last name "Sweeney" and sort the results alphabetically by last name & first name.
8. Consider the following tables:

Employees:

Employee_ID	Name
01	Hansen, Ola
02	Svendson, Tove
03	Svendson, Stephen
04	Pettersen, Kari

Orders:

Prod_ID	Product	Employee_ID
234	Printer	01
657	Table	03

    a. Write a SQL statement that finds the name of employees who have a printer.
    b. Write a SQL statement that finds anyone named "Svendson" and any products they own.

9. What is the difference between DDL and DML?

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10. Consider the following tables:

Product:

Product ID	Product Name	Product Category
12	Bike ABC	Road Bike
13	Bike DEF	Mountain Bike
14	Bike GHI	Road Bike
15	Bike JKL	Touring Bike

Sales:

Product ID	Customer	Sales Amount
12	Joe	1000
13	Tom	2000
14	Joe	1500
12	Bill	1000

a. Write a SQL statement that returns the distinct list of product categories from the Product table.
b. Write a SQL statement that returns the total record count from the Sales table.
c. Write a SQL statement that returns the Sum of Sales Amount grouped by Product Category.
d. Write a SQL statement that returns the Sum of Sales Amount grouped by Product Category having sales greater than 1500
e. Write a SQL Statement that returns the Distinct count of customers from the Sales table
f. Write a SQL Statement that returns a list of products that do not appear the Sales table.

END

Thank you for completing this self-test. If you are comfortable with the level of SQL in these questions, and you understand that you are expected to know this level of SQL when you start the Certificate, **please add this statement to your admissions letter, "I have completed the SQL Self-Test."** If you cannot answer all these questions, or are uncertain of your answers, we recommend completing the W3 Schools SQL tutorial or, for more in-depth training, enrolling in our Database Management Foundations course before applying to the Certificate.