SQL Query Tasks and Solutions

# Task 1

Question:

Query all columns (attributes) for every row in the CITY table.

Solution:

SELECT \* FROM CITY;

# Task 2

Question:

Query all columns for a city in CITY with the ID 1661.

Solution:

SELECT \* FROM CITY  
WHERE ID = 1661;

# Task 3

Question:

Write a query that prints a list of employee names (i.e.: the name attribute) from the Employee table in alphabetical order.

Solution:

SELECT name  
FROM Employee  
ORDER BY name ASC;

# Task 4

Question:

Query all attributes of every Japanese city in the CITY table. The COUNTRYCODE for Japan is JPN.

Solution:

SELECT \*   
FROM CITY  
WHERE COUNTRYCODE = 'JPN';

# Task 5

Question:

Query a list of CITY and STATE from the STATION table.

Solution:

SELECT DISTINCT CITY, STATE  
FROM STATION;

# Task 6

Question:

Query a list of CITY names from STATION for cities that have an even ID number. Print the results in any order, but exclude duplicates from the answer.

Solution:

SELECT DISTINCT CITY  
FROM STATION  
WHERE MOD(ID, 2) = 0;

# Task 7

Question:

Find the difference between the total number of CITY entries in the table and the number of distinct CITY entries in the table.

Solution:

SELECT COUNT(CITY) - COUNT(DISTINCT CITY) AS CITY\_NAME\_DIFFERENCE  
FROM STATION;

# Task 8

Question:

Query the two cities in STATION with the shortest and longest CITY names, as well as their respective lengths. If there is more than one smallest or largest city, choose the one that comes first alphabetically.

Solution:

(  
 SELECT CITY, LENGTH(CITY) AS LEN  
 FROM STATION  
 ORDER BY LEN ASC, CITY ASC  
 LIMIT 1  
)  
UNION ALL  
(  
 SELECT CITY, LENGTH(CITY) AS LEN  
 FROM STATION  
 ORDER BY LEN DESC, CITY ASC  
 LIMIT 1  
);

# Task 9

Question:

Query the average population for all cities in CITY, rounded down to the nearest integer.

Solution:

SELECT FLOOR(AVG(POPULATION)) AS avg\_population  
FROM CITY;

# Task 10

Question:

Given the CITY and COUNTRY tables, query the names of all the continents and their respective average city populations rounded down to the nearest integer.

Solution:

SELECT   
 COUNTRY.Continent,   
 FLOOR(AVG(CITY.Population)) AS avg\_city\_population  
FROM CITY  
JOIN COUNTRY ON CITY.CountryCode = COUNTRY.Code  
GROUP BY COUNTRY.Continent;