

SQL WEEK 2 PRACTICE

TOPICS COVERED :

1. SELECT QUERIES
2. QUERIES WITH CONSTRAINTS
3. FILTERING AND SORTING QUERY RESULTS

Question 1

In the exercise below, you will be working with a table named “north_american_cities”. This table instead contains information about a few of the most populous cities of North America including their population and geo-spatial location in the world.

table: north_american_cities

city	country	population	latitude	longitude
Guadalajara	Mexico	1500800	20.659699	-103.349609
Toronto	Canada	2795060	43.653226	-79.383184
Houston	United States	2195914	29.760427	-95.369803
New York	United States	8405837	40.712784	-74.005941
Philadelphia	United States	1553165	39.952584	-75.165222
Havana	Cuba	2106146	23.05407	-82.345189
Mexico City	Mexico	8555500	19.432608	-99.133208
Phoenix	United States	1513367	33.448377	-112.074037
Los Angeles	United States	3884307	34.052234	-118.243685
Ecatepec de Morelos	Mexico	1742000	19.601841	-99.050674
Montreal	Canada	1717767	45.501689	-73.567256
Chicago	United States	2718782	41.878114	-87.629798

Try and write some queries to find the information requested in the tasks below. You may have to use a different combination of clauses in your query for each task.

Q1) List all the Canadian cities and their populations

```
SELECT City, population FROM north_american_cities WHERE country="Canada"
```

Q2) Order all the cities in the United States by their latitude from north to south

```
SELECT city, latitude FROM north_american_cities WHERE country=" United States" ORDER BY latitude DESC;
```

Q3) List all the cities west of Chicago, ordered from west to east

```
SELECT city , longitude FROM north_american_cities WHERE longitude< -87.629798 ORDER BY longitude ASC ;
```

Q4)List the two largest cities in Mexico (by population)

```
SELECT City, population FROM north_american_cities WHERE country LIKE " Mexico" ORDER BY population DESC LIMIT 2;
```

Q5)List the third and fourth largest cities (by population) in the United States and their population.

```
SELECT city, population FROM north_american_cities WHERE country LIKE "United States" ORDER BY population DESC LIMIT 2 OFFSET 2;
```

REVISION QUIZ

SQL Quiz: SELECT, Constraints, Filtering, Sorting

1. Q: What is the purpose of the SELECT statement in SQL?

A: To retrieve data from one or more tables.

2. Q: How do you retrieve all columns from the table customers?

A: `SELECT * FROM customers;`

3. Q: Which clause filters records based on a condition?

A: The WHERE clause.

4. Q: How would you select all employees from the employees table whose age is greater than 30?

A: `SELECT * FROM employees WHERE age > 30;`

5. Q: How do you select records where a column city is exactly 'New York'?

A: `SELECT * FROM table_name WHERE city = 'New York';`

6. Q: What SQL operator is used to combine multiple conditions?

A: AND or OR

7. Q: How would you select employees who are either in the 'HR' department or the 'Sales' department?

A: `SELECT * FROM employees WHERE department = 'HR' OR department = 'Sales';`

8. Q: How do you retrieve records where the salary is between 50000 and 100000?

A: `SELECT * FROM employees WHERE salary BETWEEN 50000 AND 100000;`

9. Q: How would you retrieve rows where the name starts with the letter 'A'?

A: `SELECT * FROM table_name WHERE name LIKE 'A%';`

10. Q: Which clause is used to sort the result set?

A: The ORDER BY clause.

11. Q: How would you sort employees by last_name in descending order?

A: `SELECT * FROM employees ORDER BY last_name DESC;`

12. Q: How do you select only unique values from the column country?

A: `SELECT DISTINCT country FROM table_name;`

13. Q: How do you retrieve the first 10 rows from a table?

A: `SELECT * FROM table_name LIMIT 10;`