

Exercise 12

Query a count of the number of cities in **CITY** having a Population larger than 100,000.

Input Format

The **CITY** table is described as follows:

CITY

Field	Type
ID	NUMBER
NAME	VARCHAR2(17)
COUNTRYCODE	VARCHAR2(3)
DISTRICT	VARCHAR2(20)
POPULATION	NUMBER

Exercise 13

Query the total population of all cities in **CITY** where District is **California**.

Input Format

The **CITY** table is described as follows:

CITY

Field	Type
ID	NUMBER
NAME	VARCHAR2 (17)
COUNTRYCODE	VARCHAR2 (3)
DISTRICT	VARCHAR2 (20)
POPULATION	NUMBER

Exercise 14

Query the average population of all cities in **CITY** where District is **California**.

Input Format

The **CITY** table is described as follows:

CITY

Field	Type
ID	NUMBER
NAME	VARCHAR2(17)
COUNTRYCODE	VARCHAR2(3)
DISTRICT	VARCHAR2(20)
POPULATION	NUMBER

Exercise 15

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

Input Format

The **CITY** table is described as follows:

CITY

Field	Type
ID	NUMBER
NAME	VARCHAR2(17)
COUNTRYCODE	VARCHAR2(3)
DISTRICT	VARCHAR2(20)
POPULATION	NUMBER

Exercise 16

Query the sum of the populations for all Japanese cities in **CITY**. The COUNTRYCODE for Japan is **JPN**.

Input Format

The **CITY** table is described as follows:

CITY

Field	Type
ID	NUMBER
NAME	VARCHAR2(17)
COUNTRYCODE	VARCHAR2(3)
DISTRICT	VARCHAR2(20)
POPULATION	NUMBER

Exercise 17

Query the difference between the maximum and minimum populations in **CITY**.

Input Format

The **CITY** table is described as follows:

CITY

Field	Type
ID	NUMBER
NAME	VARCHAR2(17)
COUNTRYCODE	VARCHAR2(3)
DISTRICT	VARCHAR2(20)
POPULATION	NUMBER

Exercise 18

Samantha was tasked with calculating the average monthly salaries for all employees in the **EMPLOYEES** table, but did not realize her keyboard's **0** key was broken until after completing the calculation. She wants your help finding the difference between her miscalculation (using salaries with any zeros removed), and the actual average salary.

Write a query calculating the amount of error (i.e.: *actual* – *miscalculated* average monthly salaries), and round it up to the next integer.

Input Format

The **EMPLOYEES** table is described as follows:

<i>Column</i>	<i>Type</i>
<i>ID</i>	<i>Integer</i>
<i>Name</i>	<i>String</i>
<i>Salary</i>	<i>Integer</i>

Exercise 19

Write a query identifying the type of each record in the **TRIANGLES** table using its three side lengths. Output one of the following statements for each record in the table:

- **Equilateral:** It's a triangle with **3** sides of equal length.
- **Isosceles:** It's a triangle with **2** sides of equal length.
- **Scalene:** It's a triangle with **3** sides of differing lengths.
- **Not A Triangle:** The given values of A, B, and C don't form a triangle.

Input Format

The **TRIANGLES** table is described as follows:

<i>Column</i>	<i>Type</i>
<i>A</i>	<i>Integer</i>
<i>B</i>	<i>Integer</i>
<i>C</i>	<i>Integer</i>

Exercise 20

We define an employee's total earnings to be their monthly *salary* \times *months* worked, and the maximum total earnings to be the maximum total earnings for any employee in the **Employee** table. Write a query to find the maximum total earnings for all employees as well as the total number of employees who have maximum total earnings. Then print these values as 2 space-separated integers.

Input Format

The **Employee** table containing employee data for a company is described as follows:

Column	Type
employee_id	Integer
name	String
months	Integer
salary	Integer

Exercise 21

Query the following two values from the **STATION** table:

1. The sum of all values in LAT_N rounded to a scale of **2** decimal places.
2. The sum of all values in LONG_W rounded to a scale of **2** decimal places.

Input Format

The **STATION** table is described as follows:

STATION

Field	Type
ID	NUMBER
CITY	VARCHAR2(21)
STATE	VARCHAR2(2)
LAT_N	NUMBER
LONG_W	NUMBER

Exercise 22

Query the sum of Northern Latitudes (LAT_N) from **STATION** having values greater than 38.7880 and less than 137.2345. Truncate your answer to 4 decimal places.

Input Format

The **STATION** table is described as follows:

STATION

Field	Type
ID	NUMBER
CITY	VARCHAR2(21)
STATE	VARCHAR2(2)
LAT_N	NUMBER

Exercise 23

Query the greatest value of the Northern Latitudes (LAT_N) from **STATION** that is less than 137.2345. Truncate your answer to 4 decimal places.

Input Format

The **STATION** table is described as follows:

STATION

Field	Type
ID	NUMBER
CITY	VARCHAR2(21)
STATE	VARCHAR2(2)
LAT_N	NUMBER

Exercise 24

Query the Western Longitude (LONG_W) for the largest Northern Latitude (LAT_N) in **STATION** that is less than 137.2345. Round your answer to 4 decimal places.

Input Format

The **STATION** table is described as follows:

STATION

Field	Type
ID	NUMBER
CITY	VARCHAR2(21)
STATE	VARCHAR2(2)
LAT_N	NUMBER
LONG_W	NUMBER

Exercise 25

Query the smallest Northern Latitude (LAT_N) from **STATION** that is greater than 38.7780 . Round your answer to 4 decimal places.

Input Format

The **STATION** table is described as follows:

STATION

Field	Type
ID	NUMBER
CITY	VARCHAR2(21)
STATE	VARCHAR2(2)
LAT_N	NUMBER

Exercise 26

Query the Western Longitude (LONG_W) where the smallest Northern Latitude (LAT_N) in **STATION** is greater than 38.7780. Round your answer to 4 decimal places.

Input Format

The **STATION** table is described as follows:

STATION

Field	Type
ID	NUMBER
CITY	VARCHAR2(21)
STATE	VARCHAR2(2)
LAT_N	NUMBER
LONG_W	NUMBER