

SQL CHALLENGES – HACKERRANK

Table 1

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

1. Query the two cities in **STATION** with the shortest and longest *CITY* names, as well as their respective lengths (i.e.: number of characters in the name). If there is more than one smallest or largest city, choose the one that comes first when ordered alphabetically.
2. Query the list of *CITY* names starting with vowels (i.e., a, e, i, o, or u) from **STATION**. Your result *cannot* contain duplicates.
3. Query the list of *CITY* names from **STATION** which have vowels (i.e., a, e, i, o, and u) as both their first *and* last characters. Your result cannot contain duplicates.
4. Query the list of *CITY* names from **STATION** that *do not start* with vowels and *do not end* with vowels. Your result cannot contain duplicates.
5. 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.
6. Query the smallest *Northern Latitude* (*LAT_N*) from **STATION** that is greater than 38.7780. Round your answer to 4 decimal places.

Tables 2 and 3

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

COUNTRY	
Field	Type
CODE	VARCHAR2(3)
NAME	VARCHAR2(44)
CONTINENT	VARCHAR2(13)
REGION	VARCHAR2(25)
SURFACEAREA	NUMBER
INDEPYEAR	VARCHAR2(5)
POPULATION	NUMBER
LIFEEXPECTANCY	VARCHAR2(4)
GNP	NUMBER
GNPOLD	VARCHAR2(9)
LOCALNAME	VARCHAR2(44)
GOVERNMENTFORM	VARCHAR2(44)
HEADOFSTATE	VARCHAR2(32)
CAPITAL	VARCHAR2(4)
CODE2	VARCHAR2(2)

1. Given the **CITY** and **COUNTRY** tables, query the sum of the populations of all cities where the *CONTINENT* is 'Asia'.
2. Given the **CITY** and **COUNTRY** tables, query the names of all cities where the *CONTINENT* is 'Africa'.
3. Given the **CITY** and **COUNTRY** tables, query the names of all the continents (*COUNTRY.Continent*) and their respective average city populations (*CITY.Population*) rounded down to the nearest integer.

Tables 4 and 5

Column	Type
employee_id	Integer
name	String
months	Integer
salary	Integer

employee_id	name	months	salary
12228	Rose	15	1968
33645	Angela	1	3443
45692	Frank	17	1608
56118	Patrick	7	1345
59725	Lisa	11	2330
74197	Kimberly	16	4372
78454	Bonnie	8	1771
83565	Michael	6	2017
98607	Todd	5	3396
99989	Joe	9	3573

1. Write a query that prints a list of employee names (i.e.: the *name* attribute) from the **Employee** table in alphabetical order.
2. Write a query that prints a list of employee names (i.e.: the *name* attribute) for employees in **Employee** having a salary greater than \$2000 per month who have been employees for less than 10 months. Sort your result by ascending *employee_id*.
3. We define an employee's *total earnings* to be their monthly **Salary x 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.