

MY SQL

Q1. Query all columns for all American cities in the CITY table with populations larger than 100000.

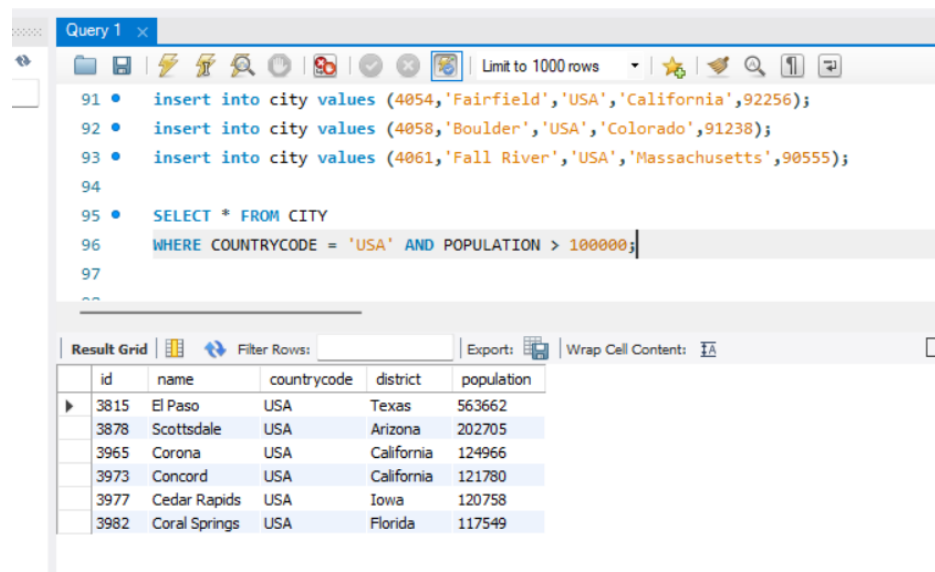
The CountryCode for America is USA.

The CITY table is described as follows:

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

Answer: **SELECT * FROM CITY**

WHERE COUNTRYCODE = 'USA' AND POPULATION > 100000;



Query 1

```
91 • insert into city values (4054,'Fairfield','USA','California',92256);
92 • insert into city values (4058,'Boulder','USA','Colorado',91238);
93 • insert into city values (4061,'Fall River','USA','Massachusetts',90555);
94
95 • SELECT * FROM CITY
96 WHERE COUNTRYCODE = 'USA' AND POPULATION > 100000;
97
98
```

Result Grid

	id	name	countrycode	district	population
▶	3815	El Paso	USA	Texas	563662
	3878	Scottsdale	USA	Arizona	202705
	3965	Corona	USA	California	124966
	3973	Concord	USA	California	121780
	3977	Cedar Rapids	USA	Iowa	120758
	3982	Coral Springs	USA	Florida	117549

Q2. Query the NAME field for all American cities in the CITY table with populations larger than 120000. The CountryCode for America is USA.

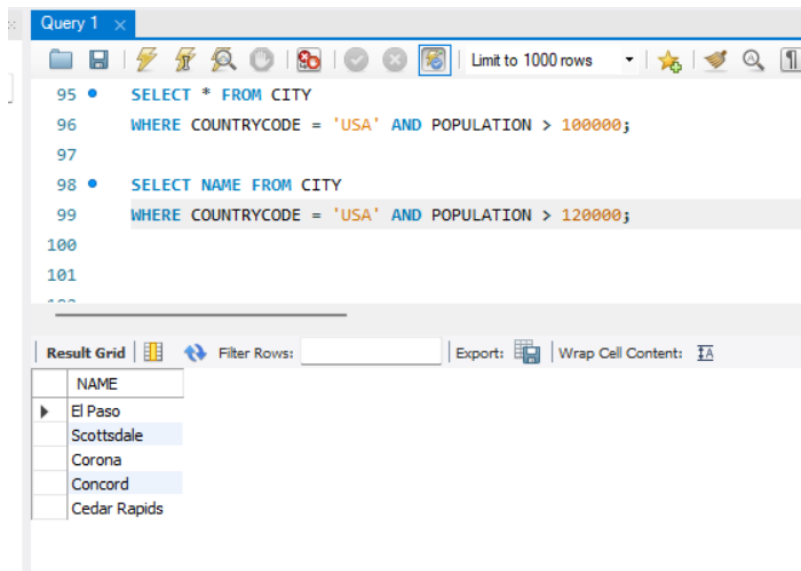
The CITY table is described as follows:

CITY

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

Answer: **SELECT NAME FROM CITY**

WHERE COUNTRYCODE = 'USA' AND POPULATION > 120000;



Q3. Query all columns (attributes) for every row in the CITY table. The CITY table is described as follows:

CITY

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

Answer: **SELECT * FROM CITY;**

Query 1

```

95 • SELECT * FROM CITY
96 WHERE COUNTRYCODE = 'USA' AND POPULATION > 100000;
97
98 • SELECT NAME FROM CITY
99 WHERE COUNTRYCODE = 'USA' AND POPULATION > 120000;
100
101 • SELECT * FROM CITY;

```

Result Grid

id	name	countrycode	district	population
19	Zaanstad	NLD	Noord-Holland	135621
214	Porto Alegre	BRA	Rio Grande do Sul	1314032
397	Lauro de Freitas	BRA	Bahia	109236
547	Dobric	BGR	Varna	100399
552	Bujumbura	BDI	Bujumbura	300000
554	Santiago de Chile	CHL	Santiago	4703954
626	al-Minya	EGY	al-Minya	201360
646	Santa Ana	SLV	Santa Ana	139389
762	Bahir	Dar	ETH Amhara	96140
796	Baguio	PHL	CAR	252386
896	Malungon	PHL	Southern Mindanao	93232
904	Banjul	GMB	Banjul	42326

CITY 3

Q4. Query all columns for a city in CITY with the ID 1661. The CITY table is described as follows:

CITY

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

Answer: **SELECT * FROM CITY WHERE ID = 1661;**

Query 1

```

97
98 • SELECT NAME FROM CITY
99 WHERE COUNTRYCODE = 'USA' AND POPULATION > 120000;
100
101 • SELECT * FROM CITY;
102
103 • SELECT * FROM CITY WHERE ID = 1661;

```

Result Grid

id	name	countrycode	district	population
1661	Sayama	JPN	Saitama	162472

Q5. Query all attributes of every Japanese city in the CITY table. The COUNTRYCODE for Japan is JPN.

The CITY table is described as follows:

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

Answer: **SELECT * FROM city WHERE countrycode = 'JPN';**

The screenshot shows a SQL query editor with a query window titled "Query 1". The query text is: `SELECT * FROM city WHERE countrycode = 'JPN';`. Below the query window, there is a "Result Grid" section showing the results of the query. The results are displayed in a table with columns: id, name, countrycode, district, and population. The results show five rows of data for Japanese cities.

id	name	countrycode	district	population
1613	Neyagawa	JPN	Osaka	257315
1630	Ageo	JPN	Saitama	209442
1661	Sayama	JPN	Saitama	162472
1681	Omuta	JPN	Fukuoka	142889
1739	Tokuyama	JPN	Yamaguchi	107078

Q6. Query the names of all the Japanese cities in the CITY table. The COUNTRYCODE for Japan is JPN.

The CITY table is described as follows:

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

Answer: **SELECT * FROM city WHERE countrycode = 'JPN';**

Query 1

```

99 WHERE COUNTRYCODE = 'USA' AND POPULATION > 120000;
100
101 • SELECT * FROM CITY;
102
103 • SELECT * FROM CITY WHERE ID = 1661;
104
105 • SELECT * FROM city WHERE countrycode = 'JPN';

```

Result Grid

	id	name	countrycode	district	population
▶	1613	Neyagawa	JPN	Osaka	257315
	1630	Ageo	JPN	Saitama	209442
	1661	Sayama	JPN	Saitama	162472
	1681	Omuta	JPN	Fukuoka	142889
	1739	Tokuyama	JPN	Yamaguchi	107078

Q7. Query a list of CITY and STATE from the STATION table. The STATION table is described as follows:

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

where LAT_N is the northern latitude and LONG_W is the western longitude.

Answer: **SELECT city, state FROM station;**

Query 1

```

607 • insert into station values(446,'Mid Florida','FL',110,50);
608 • insert into station values(249,'Acme','LA',73,67);
609 • insert into station values(376,'Gorham','KS',111,64);
610 • insert into station values(136,'Bass Harbor','ME',137,61);
611 • insert into station values(455,'Granger','IA',33,102);
612
613 • SELECT city, state FROM station;

```

Result Grid

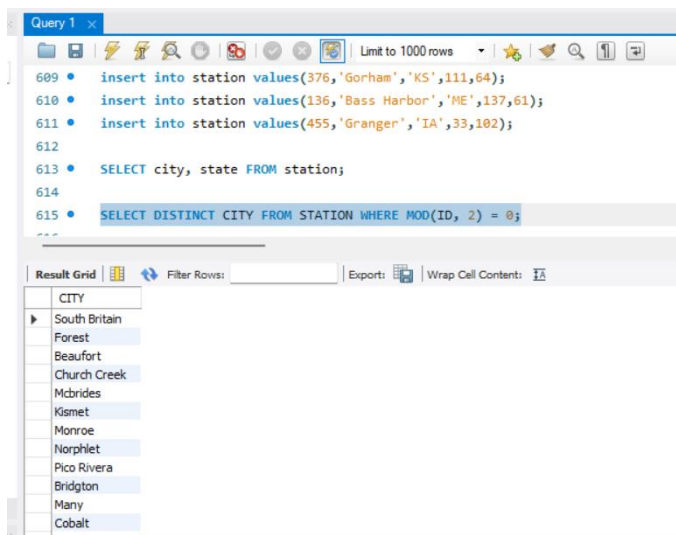
	city	state
▶	Pfeifer	KS
	Hesperia	CA
	South Britain	CT
	Crescent City	FL
	Forest	MS
	Ducor	CA
	Beaufort	MO
	Fredericktown	MO
	Honolulu	HI
	New Century	KS
	Church Creek	MD
	South Carroll...	KY

Q8. 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. The STATION table is described as follows:

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

where LAT_N is the northern latitude and LONG_W is the western longitude

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



Q9. Find the difference between the total number of CITY entries in the table and the number of distinct CITY entries in the table.

The STATION table is described as follows:

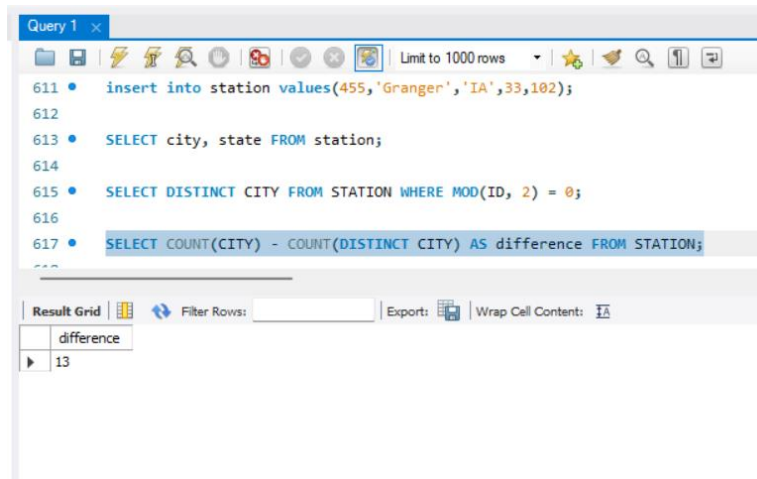
STATION	
Field	Type
ID	NUMBER
CITY	VARCHAR2(21)
STATE	VARCHAR2(2)
LAT_N	NUMBER
LONG_W	NUMBER

where LAT_N is the northern latitude and LONG_W is the western longitude.

For example, if there are three records in the table with CITY values 'New York', 'New York', 'Bengaluru', there are 2 different city names: 'New York' and 'Bengaluru'. The query returns , because total number of records - number of unique city names = 3-2 =1

Answer:

SELECT COUNT(CITY) - COUNT(DISTINCT CITY) AS difference FROM STATION;



Q10. 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. The STATION table is described as follows:

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

where LAT_N is the northern latitude and LONG_W is the western longitude.

Sample Input

For example, CITY has four entries: DEF, ABC, PQRS and WXY.

Sample Output

ABC 3

PQRS 4

Hint -

When ordered alphabetically, the CITY names are listed as ABC, DEF, PQRS, and WXY, with lengths and. The longest name is PQRS, but there are options for shortest named city. Choose ABC, because it comes first alphabetically.

Note:

You can write two separate queries to get the desired output. It need not be a single query.

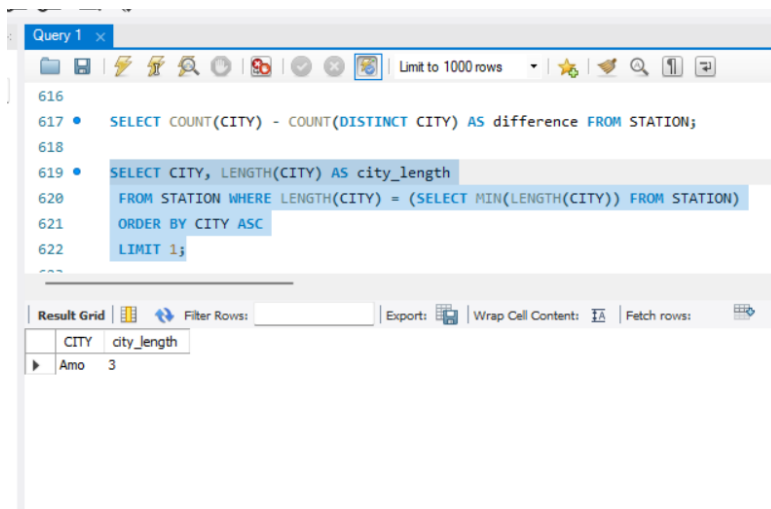
Answer:

```
SELECT CITY, LENGTH(CITY) AS city_length
```

```
FROM STATION WHERE LENGTH(CITY) = (SELECT MIN(LENGTH(CITY)) FROM STATION)
```

```
ORDER BY CITY ASC
```

```
LIMIT 1;
```



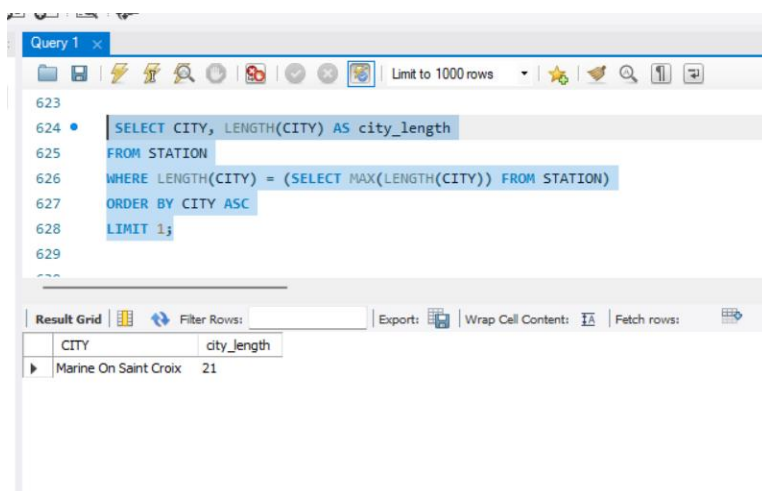
```
SELECT CITY, LENGTH(CITY) AS city_length
```

```
FROM STATION
```

```
WHERE LENGTH(CITY) = (SELECT MAX(LENGTH(CITY)) FROM STATION)
```

```
ORDER BY CITY ASC
```

```
LIMIT 1;
```



Q11. Query the list of CITY names starting with vowels (i.e., a, e, i, o, or u) from STATION. Your result cannot contain duplicates.

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

where LAT_N is the northern latitude and LONG_W is the western longitude.

Answer:

SELECT DISTINCT CITY FROM STATION

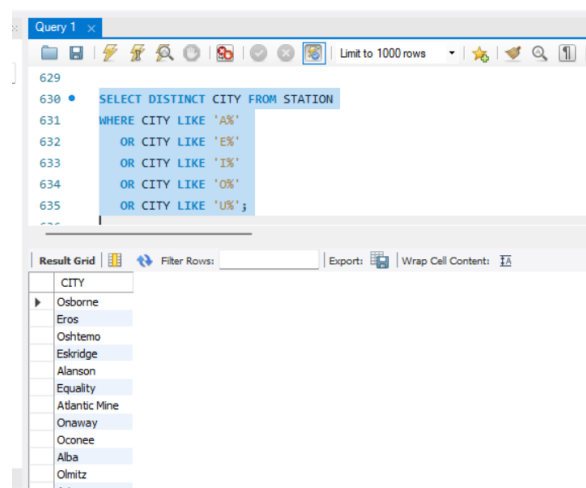
WHERE CITY LIKE 'A%'

OR CITY LIKE 'E%'

OR CITY LIKE 'I%'

OR CITY LIKE 'O%'

OR CITY LIKE 'U%';



Q12. Query the list of CITY names ending with vowels (a, e, i, o, u) from STATION. Your result cannot contain duplicates.

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

where LAT_N is the northern latitude and LONG_W is the western longitude.

Answer:

SELECT DISTINCT CITY FROM STATION

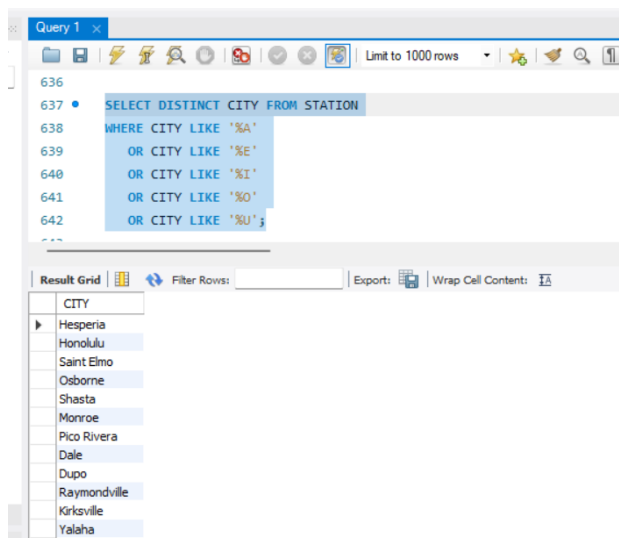
WHERE CITY LIKE '%A'

OR CITY LIKE '%E'

OR CITY LIKE '%I'

OR CITY LIKE '%O'

OR CITY LIKE '%U';



Q13. Query the list of CITY names from STATION that do not start with vowels. Your result cannot contain duplicates.

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

where LAT_N is the northern latitude and LONG_W is the western longitude.

Answer:

SELECT DISTINCT CITY FROM STATION

WHERE CITY NOT LIKE 'A%'

AND CITY NOT LIKE 'E%'

AND CITY NOT LIKE 'I%'

AND CITY NOT LIKE 'O%'

AND CITY NOT LIKE 'U%';

The screenshot shows a SQL query editor with the following query:

```

SELECT DISTINCT CITY FROM STATION
WHERE CITY NOT LIKE 'A%'
AND CITY NOT LIKE 'E%'
AND CITY NOT LIKE 'I%'
AND CITY NOT LIKE 'O%'
AND CITY NOT LIKE 'U%';

```

The results are displayed in a table with the following cities:

CITY
Pfeifer
Hesperia
South Britain
Crescent City
Forest
Ducor
Beaufort
Fredericktown
Honolulu
New Century
Church Creek
South Carroll...

Q14. Query the list of CITY names from STATION that do not end with vowels. Your result cannot contain duplicates.

Input Format

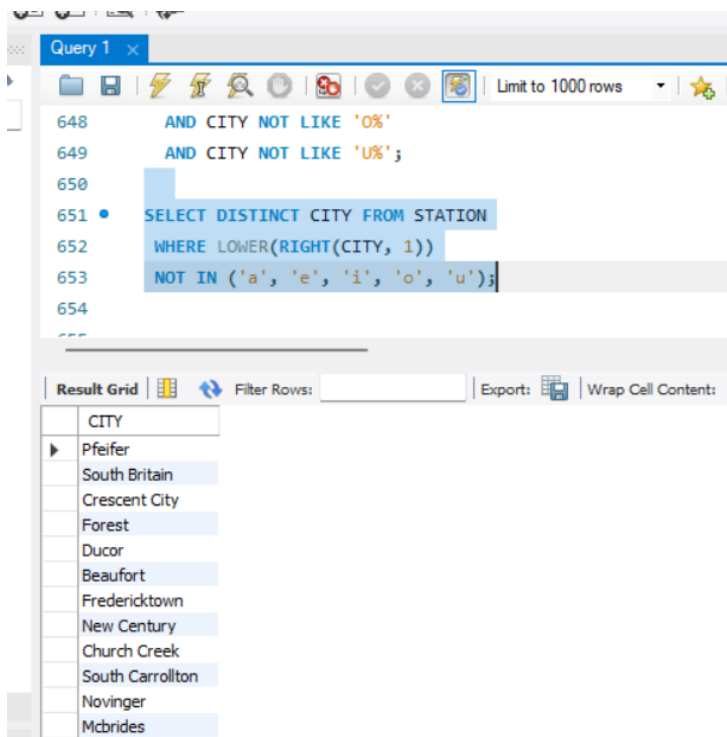
The STATION table is described as follows:

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

where LAT_N is the northern latitude and LONG_W is the western longitude.

Answer:

```
SELECT DISTINCT CITY
FROM STATION
WHERE LOWER(RIGHT(CITY, 1)) NOT IN ('a', 'e', 'i', 'o', 'u');
```



Q15. Query the list of CITY names from STATION that either do not start with vowels or do not end with vowels. Your result cannot contain duplicates.

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

where LAT_N is the northern latitude and LONG_W is the western longitude.

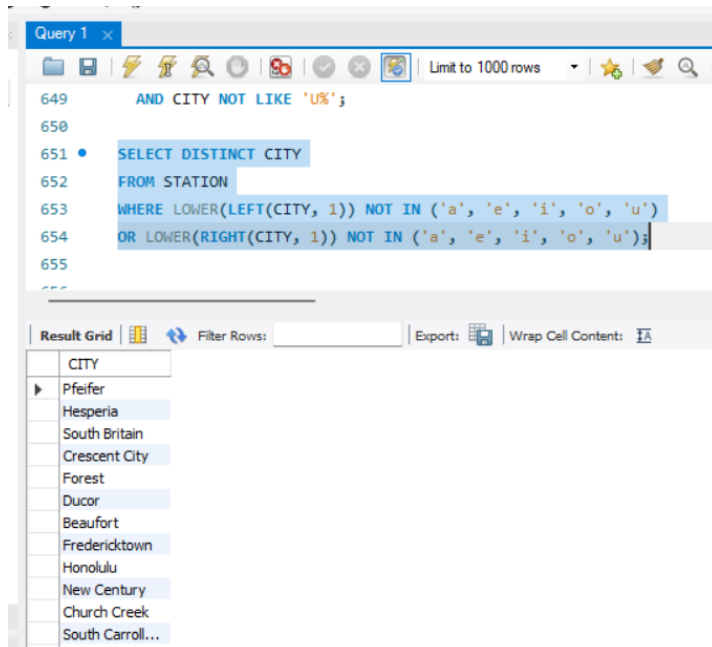
Answer:

SELECT DISTINCT CITY

FROM STATION

WHERE LOWER(LEFT(CITY, 1)) NOT IN ('a', 'e', 'i', 'o', 'u')

OR LOWER(RIGHT(CITY, 1)) NOT IN ('a', 'e', 'i', 'o', 'u');



Q16. 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.

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

where LAT_N is the northern latitude and LONG_W is the western longitude.

Answer:

```
SELECT DISTINCT CITY
FROM STATION
WHERE LOWER(LEFT(CITY, 1)) NOT IN ('a', 'e', 'i', 'o', 'u')
AND LOWER(RIGHT(CITY, 1)) NOT IN ('a', 'e', 'i', 'o', 'u');
```

The screenshot shows a SQL query editor with a query window titled 'Query 1'. The query is as follows:

```
649 AND CITY NOT LIKE 'U%';
650
651 • SELECT DISTINCT CITY
652 FROM STATION
653 WHERE LOWER(LEFT(CITY, 1)) NOT IN ('a', 'e', 'i', 'o', 'u')
654 AND LOWER(RIGHT(CITY, 1)) NOT IN ('a', 'e', 'i', 'o', 'u');
655
```

Below the query window, there is a 'Result Grid' showing the results of the query. The results are as follows:

CITY
Pfeifer
South Britain
Crescent City
Forest
Ducor
Beaufort
Fredericktown
New Century
Church Creek
South Carrollton
Novinger
Mcbrides

The bottom of the screenshot shows a tab labeled 'STATION 19'.

