

3 Use Cases (Tutorial 8)

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Started: 2 Nov at 20:46

Quiz instructions

Purpose

Databases are queried and updated to ensure they help us find accurate information. These activities help us understand how to extract information from a database.

This is an individual assessment worth 5% of your final mark.

Unit learning outcomes

1. Apply a design thinking approach to understand and solve a stakeholder problem.
3. Apply ethical, professional and technical considerations in the development of the project (data management) solution.
5. Identify project-related skills requirements, locate suitable resources and acquire the appropriate skills mostly independently.

Graduate Attributes

- Communication 1 - Verbal communication
- Digital literacies 1 – Information literacy
- Digital Literacies 2 – Technical literacy

Submission Requirements

These activities should be completed as **part of tutorial 8**. You are **required to come to the tutorial to answer potential questions** about it. The tutor **may not mark it** in your absence. The submission is due after the tutorial of week 9, to give you extra time to complete the activities if needed.

Question 1

1 pts

Run a query that returns the name, continent, region and population of countries that have over ten million inhabitants.

Upload a screenshot of your query and result set.

First I choose the database by: **USE test;**

Then I executing the query for get required information from the database and I get **78 rows** from the database, I also have order by the **population** to make sure that the population of each country is **over ten million inhabitants**:

The screenshot shows a database query interface. At the top, there is a toolbar with various icons. Below the toolbar, the query is entered in a text area:

```
1 • USE test;
2 • SELECT Name, Continent, Region, Population FROM country WHERE Population > 10000000 ORDER BY Population;
3
```

Below the query, the results are displayed in a table. The table has four columns: Name, Continent, Region, and Population. The results are sorted by Population in descending order.

Name	Continent	Region	Population
Hungary	Europe	Eastern Europe	10043200
Somalia	Africa	Eastern Africa	10097000
Belarus	Europe	Eastern Europe	10236000
Belgium	Europe	Western Europe	10239000
Czech Republic	Europe	Eastern Europe	10278100
Greece	Europe	Southern Europe	10545700
Yugoslavia	Europe	Southern Europe	10640000
Niger	Africa	Western Africa	10730000
Malawi	Africa	Eastern Africa	10075000

Country	Continent	Region	Population
Cambodia	Asia	Southeast Asia	
Cuba	North A...	Caribbean	
Mali	Africa	Western Africa	
Guatemala	North A...	Central America	
Zimbabwe	Africa	Eastern Africa	11889000
Burkina Faso	Africa	Western Africa	11937000
Ecuador	South A...	South America	12646000
Angola	Africa	Central Africa	12878000
Côte d'Ivoire	Africa	Western Africa	14786000
Cameroon	Africa	Central Africa	15085000

country 10 x

Read On

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5340	21:24:31	USE test	0 row(s) affected	0.000 sec
5341	21:24:31	SELECT Name, Continent, Region, Population FROM country WHERE Population > 10000000 ORDER ...	78 row(s) returned	0.000 sec / 0.000 sec

p

49 words |

Question 2

1 pts

Write a query that shows how many such countries (countries with over 10 million people) there are per region.

Upload a screenshot of your query and result set.

First I choose the database by: **USE test;**

Then I executing the query for get required information from the database and I get **18 rows** from the database, I also have order by the **NumberOfCountries** to make sure that the population of each country is **over ten million inhabitants**:

```
1 • USE test;
2 • SELECT Region, COUNT(*) AS NumberOfCountries FROM country WHERE Population > 10000000 GROUP BY Region ORDER BY NumberOfCountries;
```

Region	NumberOfCountries
British Islands	1
Caribbean	1
Australia and New Zealand	1
Southern Africa	1
North America	2
Central America	2
Central Africa	3
Northern Africa	4
Western Europe	4
Southern Europe	4
Eastern Asia	5
Middle East	5
Western Africa	6
South America	7
Southeast Asia	7

Eastern Europe	/
Eastern Africa	9
Southern and Central Asia	9

Result 11 x

Output

#	Time	Action	Message	Duration / Fetch
5350	21:28:57	USE test	0 row(s) affected	0.000 sec
5351	21:28:57	SELECT Region, COUNT(*) AS NumberOfCountries FROM country WHERE Population > 10000000 GROUP BY Reg...	18 row(s) returned	0.000 sec / 0.000 sec

p


 1 | 49 words |   

Question 3

1 pts

Write a query that shows the names of the countries where Dutch is spoken as an official language.

Upload a screenshot of your query and result set.

First I choose the database by: **USE test;**

Then I executing the query for get required information from the database and I get **4 rows** from the database and I also have ordered by **Country Name**:

```

1 • USE test;
2 • SELECT c.Name
3 FROM country c
4 JOIN countrylanguage cl ON c.Code = cl.CountryCode
5 WHERE cl.Language = 'Dutch' AND cl.IsOfficial = 'T'
6 GROUP BY c.Name;
```

Result Grid	Filter Rows:	Exports	Wrap Cell Contents
Name			
Aruba			
Belgium			
Netherlands			
Netherlands Antilles			

Result 15 x

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5385	21:53:30	USE test	0 row(s) affected	0.000 sec
5386	21:53:30	SELECT c.Name FROM country c JOIN countrylanguage cl ON c.Code = cl.CountryCode WHERE cl.Language = 'Dutch' AND cl.IsOfficial = 'T' GROUP BY c.Name LIMIT 0, 1000	4 row(s) returned	0.000 sec / 0.000 sec

p


 1 | 36 words |   

Question 4

Show the countries (country code and name) and their numbers of official languages, highest number of languages first.

Upload a screenshot of your query and result set.

First I choose the database by: **USE test;**
Then I executing the query for get required information from the database and I get **239 rows** from the database and I also have ordered by **highest number of languages**.
At first, I **SELECT Country Code** and **Country name**. Then, I use **COUNT countrylanguage** for counting the number of official languages for each country. I also specify the country table with an alias **c** for easier to mention it again. I have performed the **LEFT JOIN** with the **countrylanguage** table and only choose the **IsOfficial Language is T**.
Then, I **GROUP BY** the results by **Country Code** and **Name**. Lastly, I order the results by the number of languages in descending order so the countries with the highest number of official languages come first.

```
1 • USE test;
2 • SELECT c.Code, c.Name, COUNT(c1.Language) AS NumberOfLanguages
3   FROM country c
4  LEFT JOIN countrylanguage c1 ON c.Code = c1.CountryCode AND c1.IsOfficial = 'T'
5  GROUP BY c.Code, c.Name
6  ORDER BY NumberOfLanguages DESC;
```

Code	Name	NumberOfLanguages
ZAF	South Africa	4
CHE	Switzerland	4
BEL	Belgium	3
BOL	Bolivia	3
SGP	Singapore	3
LUX	Luxembourg	3
PER	Peru	3
VUT	Vanuatu	3
MLT	Malta	2
LSO	Lesotho	2
CYP	Cyprus	2
RWA	Rwanda	2

Output

#	Time	Action	Message	Duration / Fetch
5391	22:04:40	USE test	0 row(s) affected	0.000 sec
5392	22:04:40	SELECT c.Code, c.Name, COUNT(c1.Language) AS NumberOfLanguages FROM country c LEFT JOIN countrylanguage c1 ON c.Code = c1.CountryCode AND c1.IsOfficial = 'T' GROUP BY c.Code, c.Name O...	239 row(s) returned	0.000 sec / 0.000 sec

p