|  |
| --- |
|  |
| World Database Exercise Book |
| module 7 – databases |

#### Prepared by

Nick Johnson

+447701 35968

[nicholas.johnson@qa.com](mailto:Team.QAC.All.Trainers@qa.com)

## Module 7 – Databases

## Exercises Introduction

This Exercise Book makes use of the pre-loaded **World** database which comes with your **MySQL** installation.

These exercises should provide a good test for your knowledge of Structured Query Language (SQL). Please work through this book at your own pace: it is more important that you use this book to enhance your SQL abilities than to speed through it as fast as you can without retaining anything.

You may be tested on some of this material at the end of the week, so please bear this in mind when completing each Exercise.

You do not need to store the answers to each Exercise in this book, but you are free to use it as an extension of your notes, if you wish.

World database Exercises

Each Exercise should return at least one record, according to its individual specification. They are not listed in order of difficulty.

1. Using count, get the number of cities in the USA. 274

SELECT

COUNT(\*)

FROM city

WHERE CountryCode = ‘USA’;

1. Find out what the population and average life expectancy for people in Argentina (ARG) is. 0 /null

SELECT AVG(\*)

FROM Country

1. Using IS NOT NULL, ORDER BY, LIMIT, what country has the highest life expectancy?

SELECT \*

From country

Where lifeexpectancy is not null;

SELECT \*

FROM country

ORDER BY lifeexpectancy ASC;

SELECT lifeexpectancy

FROM country

WHERE lifeexpectancy is not null

LIMIT 10;

1. Using LEFT JOIN, ON, what is the capital of Spain (ESP)?

SELECT country.name, city.name

FROM COUNTRY

LEFT JOIN city ON country .code=city.code

ORDER BY country.code

1. Using LEFT JOIN, ON, list all the languages spoken in the 'Southeast Asia' region.
2. Select 25 cities around the world that start with the letter 'F' in a single SQL query.
3. Using COUNT, get the number of cities in China.
4. Using IS NOT NULL, ORDER BY, & LIMIT, what country has the lowest population?
5. Using aggregation, return the number of countries in the database.
6. What are the top ten largest countries?
7. List the top five largest cities in Japan.
8. List the names and country codes of every country which has Elizabeth II as its Head of State.
9. List the top ten countries which have the smallest population-to-area ratio.
10. List every unique world language, according to the World database.
11. What are the top 10 richest countries by GDP?
12. What are the top 10 largest countries by surface area?
13. List every country where over 50% of its population can speak French.
14. Which country has the worst life expectancy?
15. What is the most common government form?
16. How many countries have gained independence since records began?