**Lab – MySQL**

**Objectives:**

* + Get familiar with basic commands in MySQL
  + Learn how to write simple queries in MySQL

1. **Getting Information about a database**

**--show all databases**

show databases;

**--invoke a specific database (world)**

use world;

**--list tables in this database**

show tables;

**--describe a table**

describe city;

**--show columns from table city**

show columns from city

**--Show create table**

show create table city

1. **Working With SELECT CLAUSE**

**-- All countries**

SELECT \* FROM country;

**-- Total number of countries**

SELECT COUNT(\*) FROM country;

**-- Using limit clause to select 10 rows from table**

SELECT \* FROM country limit 10;

**-- All countries in alphabetical order**

SELECT \* FROM country ORDER BY Name;

**-- List the first 5 countries in alphabetical order**

SELECT \* FROM country ORDER BY Name limit 5;

**Selecting few columns from table**

SELECT Name, LifeExpectancy FROM country;

SELECT Name, CountryCode, Population from city;

**-- Using alias for columns AS**

SELECT Name AS Country, Code AS ISO, Region, Population AS Pop FROM country;

**-- Using basic operations in Select clause**

SELECT Name AS Country, Code AS ISO, Region, Population / 1000 AS 'Population (1000s)' FROM country;

1. **Working with Where clause**

**-- List of countries with population greater than 100 million**

SELECT Name, Continent, Population FROM country WHERE Population > 100000000

**-- List of countries that have population less than 100,000**

SELECT Name, Continent, Population FROM country WHERE Population < 100000

1. **Working With Order By**

**-- Country name and life expectancy in descending order**

SELECT Name, LifeExpectancy AS 'Life Expectancy' FROM country ORDER BY LifeExpectancy DESC;

**-- Country Name, ISO code, region and population ordered by ISO Code**

SELECT Name AS Country, Code AS ISO, Region, Population FROM country ORDER BY Code;

**-- City name, country code and population ordered by city name**

SELECT Name, CountryCode, Population from city ORDER BY Name;

**-- Country name, continent and region and order by continent, region and name**

SELECT Name, Continent, Region FROM country ORDER BY Continent DESC, Region, Name;

**-- List official languages of China**

SELECT language FROM countrylanguage WHERE Countrycode = 'chn'

**5. Updating**

**-- change Workbench Preference /SQL editor and then uncheck safe updates. Reconnect to Workbench**

**-- change country name--**

UPDATE country SET name = ‘China Republic’ WHERE Countrycode = 'chn';

**6. Working With Operators (Like and IN)**

**-- Country names that start with United --**

SELECT Name, Continent, Population FROM country WHERE Name LIKE 'United%' ORDER BY Name;

**-- Country names that end with Island --**

SELECT Name, Continent, Population FROM country WHERE Name LIKE '%island' ORDER BY Name;

**-- All countries that are in Africa and North America continents --**

SELECT Name, Continent FROM country WHERE Continent IN ( 'Africa', 'North America' );

**7. Working With JOINS**

**-- List all countries and corresponding cities**

SELECT co.Name as Country, c.Name as City

FROM country co, city c

WHERE co.Code = c.CountryCode

ORDER BY Country, city;

SELECT co.Name as Country, c.Name as City

FROM country co

INNER JOIN city c on co.Code = c.CountryCode

ORDER BY Country, City;

**8. Deleting**

**-- Delete John's record --**

DELETE FROM country WHERE Name = 'China Republic';

**-- Query the People table after the delete --**

SELECT \* FROM country;

**9. Drop table**

**-- Drop the city table --**

DROP TABLE city;