Title: Introduction to MySQL

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Instructions: Fill in your answers in the space after each section. Include pictures of the query outputs where applicable.

What is SQL how it is useful

SQL is a computer language for storing, manipulating and retrieving data from a relational database.

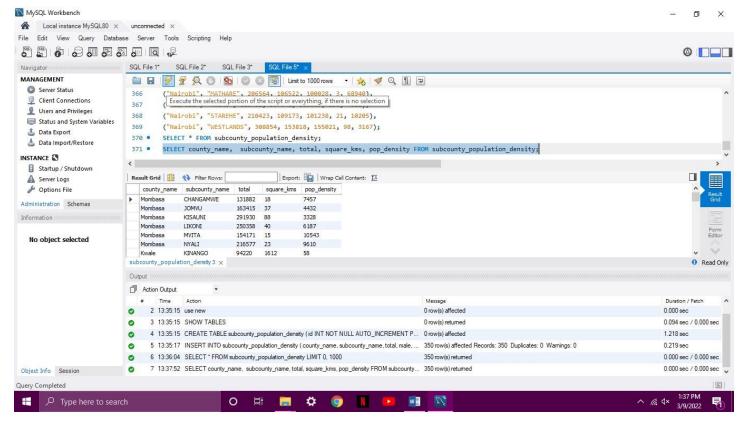
It is mainly used as a:

- 1. Data definition language- To define and modify the structure of data. The commands here are used to add, remove or modify tables. One can create and structure a database here and drop it later.
- 2. Data control language- It mainly controls the permissions and rights to perform certain actions on the database.
- 3. Data manipulation language- These commands are used to make changes in a database; insert, update, delete.
- 4. Client server language and structuring internet architecture- Builds a connection between front-end to back-end, lending assistance to the design.

Subcounty Population density

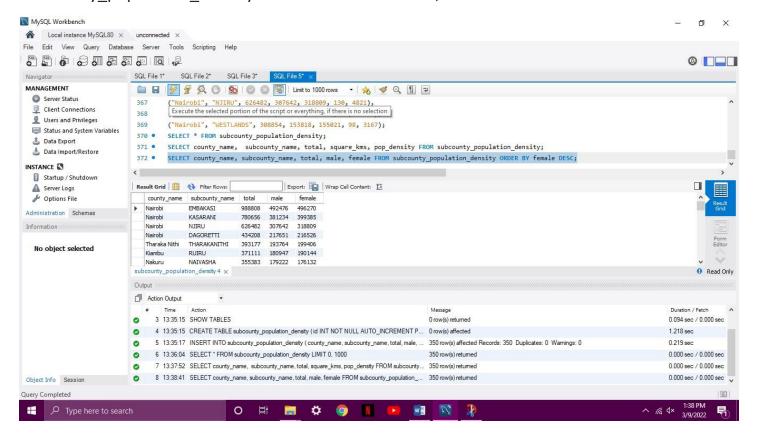
SQL statement to display specific columns the county name, subcounty name, total population, square kilometers and population density for all records.

SELECT county_name, subcounty_name, total, square_kms, pop_density FROM subcounty_population_density;



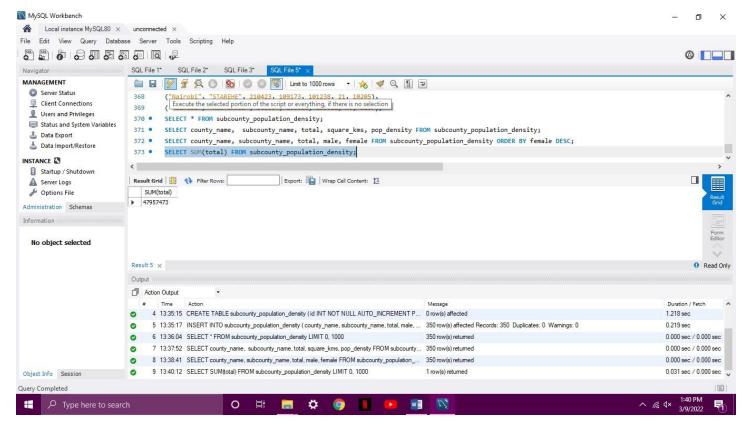
SQL Query to display the county_name, subcounty_name, total, male, female sorted by female population. Subcounty with highest female population is on top.

SELECT county_name, subcounty_name, total, male, female FROM subcounty population density ORDER BY female DESC;



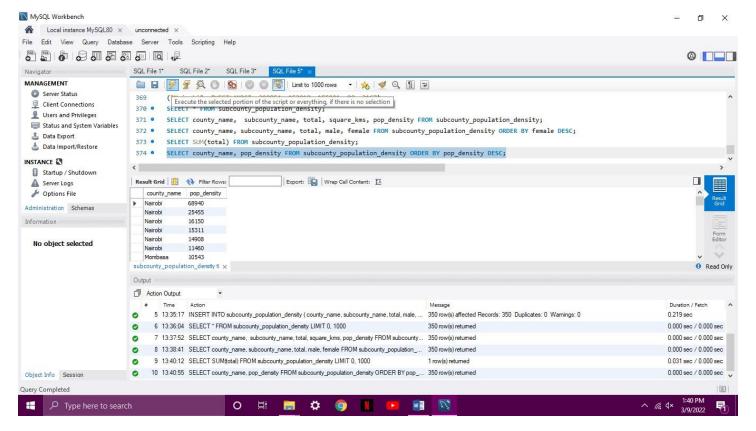
SQL query to calculate total population of all sub counties. (Use SQL aggregate functions)

SELECT SUM(total) FROM subcounty_population_density;



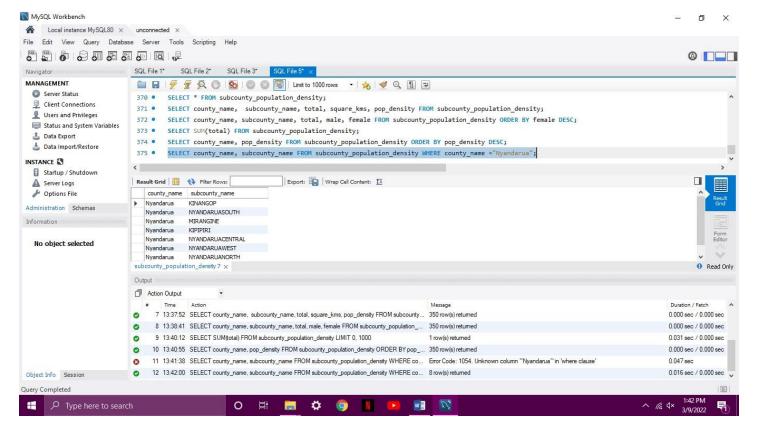
SQL query that retrieves the county_name, the average population density of the subcounties. Order the retrieved results by county name first and then population density descending. (Group by aggregate function)

SELECT county_name, pop_density FROM subcounty_population_density ORDER BY pop_density DESC;



SQL query to retrieve rows where the subcounty is in Nyandarua county. Notice some of these subcounties have typing mistakes. Update the names of the subcounties without typing mistakes. (SQL UPDATE query)

SELECT county_name, subcounty_name FROM subcounty_population_density WHERE county_name ="Nyandarua";



UPDATE subcounty_population_density SET subcounty_name = "NYANDARUA SOUTH" WHERE subcounty_name = "NYANDARUASOUTH";

UPDATE subcounty_population_density SET subcounty_name = "NYANDARUA CENTRAL"
WHERE subcounty_name = "NYANDARUACENTRAL";

UPDATE subcounty_population_density SET subcounty_name = "NYANDARUA WEST" WHERE
subcounty_name = "NYANDARUAWEST";

UPDATE subcounty_population_density SET subcounty_name = "NYANDARUA WEST" WHERE subcounty_name = "NYANDARUAWEST";

UPDATE subcounty_population_density SET subcounty_name = "NYANDARUA NORTH"
WHERE subcounty_name = "NYANDARUANORTH";

