

## Question 1

### Explain what is SQL?

It stands for Structured Query Language. It's a domain-specific language used in programming and designed for managing data held in a relational database management system. It also enables the same database to be run on several computers at the same time, thus making it highly useful while working in an office.

### How is SQL useful.

Sql is used as a data definition language.

Sql is used as a database administration.

It is used in back-end development.

It is used as a data manipulation language.

It is used as a client-server language and structuring Internet Architecture.

It is used in data analysis.

It is used in marketing as it can help analyze the impact of marketing campaigns, find out target demographics, consumer behavior and then curate effective campaigns accordingly.

## Question 2

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

```
372 • select county_name, subcounty_name, total, square_kms, pop_density
373 from subcounty_population_density;
```

Write an SQL Query to display the county\_name, subcounty\_name, total,

male, female sorted by female population. Subcounty with highest female population is on top

```
375 • select county_name, subcounty_name, total, male, female
376 from subcounty_population_density
377 order by female desc;
```

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

```
379 • SELECT SUM(total)
380 FROM subcounty_population_density;
381
```

Write an 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*)

```
383 • SELECT county_name, AVG(pop_density)
384 FROM subcounty_population_density
385 GROUP BY county_name
386 order by pop_density desc;
387
```

Write an 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*)

```
389 • select * FROM subcounty_population_density
390     where county_name = "nyandarua";
391
392 • UPDATE subcounty_population_density
393     SET subcounty_name = "NYANDARUA SOUTH"
394     WHERE subcounty_name = "NYANDARUASOUTH";
395
396 • UPDATE subcounty_population_density
397     SET subcounty_name = "NYANDARUA CENTRAL"
398     WHERE subcounty_name = "NYANDARUACENTRAL";
399
400
401 • UPDATE subcounty_population_density
402     SET subcounty_name = "NYANDARUA WEST"
403     WHERE subcounty_name = "NYANDARUAWEST";
404
405 • UPDATE subcounty_population_density
406     SET subcounty_name = "NYANDARUA NORTH"
407     WHERE subcounty_name = "NYANDARUANORTH";
```