

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.

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_pop, 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.

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

```
SELECT subcounty_name, SUM(TOTAL) AS total_pop  
FROM subcounty_population_density  
GROUP BY subcounty_name  
ORDER BY total_pop;
```

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, subcounty_name, AVG(pop_density)
FROM subcounty_population_density
GROUP BY subcounty_name;
SELECT * , AVG(pop_density)
FROM subcounty_population_density
GROUP BY subcounty_name;
```

```
SELECT * ,AVG(pop_density)
FROM subcounty_population_density
GROUP BY subcounty_name
ORDER BY county_name;
```

```
SELECT * , AVG(pop_density) AS avg_pop_density
FROM subcounty_population_density
GROUP BY subcounty_name
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 * FROM subcounty_population_density
WHERE county_name = 'Nyandarua';
```

```
SET SQL_SAFE_UPDATES = 0
```

```
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 NORTH"
WHERE subcounty_name = "NYANDARUANORTH";
```

Employees schema (a schema is a database)

Create the necessary tables for the employee schema.

Identify which are the primary keys and foreign keys per table.

Identify which are the primary keys and foreign keys per table.

Insert multiple records

SQL query that retrieves all employees and the devices they own. If they do not own a device, exclude them from results. (INNER JOIN)

SQL query that retrieves all employees and the devices they own. If they do not own a device, include them and show null for devices (LEFT JOIN)

query that retrieves all employees and their job title.



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