



**Explain What is SQL how it is useful** SQL is the most commonly used database language, and so it can be used for almost any company that needs to store relational data. Queries within SQL are used to retrieve data from the database, but the queries vary in efficiency

**Subcounty\_population\_density • Write a SQL statement to display specific columns the county name, subcounty name, total population, square kilometers and population density for all records.**

| county_name | subcounty_name | total  | square_kms |
|-------------|----------------|--------|------------|
| Mombasa     | THARAKA NITHI  | 131882 | 18         |
| Mombasa     | THARAKA NITHI  | 163415 | 37         |
| Mombasa     | THARAKA NITHI  | 291930 | 88         |
| Mombasa     | THARAKA NITHI  | 250358 | 40         |
| Mombasa     | THARAKA NITHI  | 154171 | 15         |
| Mombasa     | THARAKA NITHI  | 216577 | 23         |
| Kwale       | THARAKA NITHI  | 94220  | 1612       |
| Kwale       | THARAKA NITHI  | 198423 | 2765       |
| Kwale       | THARAKA NITHI  | 194252 | 1034       |
| Kwale       | THARAKA NITHI  | 177690 | 412        |
| Kwale       | THARAKA NITHI  | 202235 | 2430       |
| Kilifi      | THARAKA NITHI  | 62335  | 193        |
| Kilifi      | THARAKA NITHI  | 143906 | 3218       |
| Kilifi      | THARAKA NITHI  | 193682 | 706        |
| Kilifi      | THARAKA NITHI  | 22638  | 181        |
| Kilifi      | THARAKA NITHI  | 178824 | 264        |
| Kilifi      | THARAKA NITHI  | 206753 | 290        |
| Kilifi      | THARAKA NITHI  | 191610 | 5229       |
| Kilifi      | THARAKA NITHI  | 333226 | 2263       |
| Kilifi      | THARAKA NITHI  | 120813 | 208        |
| Tana River  | THARAKA NITHI  | 110640 | 15432      |
| Tana River  | THARAKA NITHI  | 116757 | 13305      |

ubcounty\_population\_density 7 x

- 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.

ult Grid 
Filter Rows: 
Export: 

| county_name   | subcounty_name | total  | male   | female |
|---------------|----------------|--------|--------|--------|
| Nairobi       | THARAKA NITHI  | 988808 | 492476 | 496270 |
| Nairobi       | EMBAKASI       | 988808 | 492476 | 496270 |
| Nairobi       | EMBAKASI       | 988808 | 492476 | 496270 |
| Nairobi       | THARAKA NITHI  | 780656 | 381234 | 399385 |
| Nairobi       | KASARANI       | 780656 | 381234 | 399385 |
| Nairobi       | KASARANI       | 780656 | 381234 | 399385 |
| Nairobi       | THARAKA NITHI  | 626482 | 307642 | 318809 |
| Nairobi       | NJIRU          | 626482 | 307642 | 318809 |
| Nairobi       | NJIRU          | 626482 | 307642 | 318809 |
| Nairobi       | THARAKA NITHI  | 434208 | 217651 | 216526 |
| Nairobi       | DAGORETTI      | 434208 | 217651 | 216526 |
| Nairobi       | DAGORETTI      | 434208 | 217651 | 216526 |
| Tharaka Nithi | THARAKA NITHI  | 393177 | 193764 | 199406 |
| Tharaka Nithi | THARAKANITHI   | 393177 | 193764 | 199406 |
| Tharaka Nithi | THARAKANITHI   | 393177 | 193764 | 199406 |
| Kiambu        | THARAKA NITHI  | 371111 | 180947 | 190144 |
| Kiambu        | RUIRU          | 371111 | 180947 | 190144 |
| Kiambu        | RUIRU          | 371111 | 180947 | 190144 |
| Nakuru        | THARAKA NITHI  | 355383 | 179222 | 176132 |
| Nakuru        | NAIVASHA       | 355383 | 179222 | 176132 |
| Nakuru        | NAIVASHA       | 355383 | 179222 | 176132 |
| Kilifi        | THARAKA NITHI  | 333226 | 163351 | 169866 |



county\_population\_density 12 ×

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

| subcounty_name | total_population |
|----------------|------------------|
| THARAKA NITHI  | 47957473         |
| CHANGAMWE      | 395646           |
| JOMVU          | 490245           |
| KISAUNI        | 875790           |
| LIKONI         | 751074           |
| MVITA          | 462513           |
| NYALI          | 649731           |
| KINANGO        | 282660           |
| LUNGA LUNGA    | 595269           |
| MATUGA         | 582756           |
| MSAMBWENI      | 533070           |
| SAMBURU        | 606705           |
| CHONYI         | 187005           |
| GANZE          | 431718           |
| KALOLENI       | 581046           |
| KAUMA          | 67914            |
| KILIFI NORTH   | 536472           |
| KILIFI SOUTH   | 620259           |
| MAGARINI       | 574830           |
| MALINDI        | 999678           |
| RABAI          | 362439           |
| TANA DELTA     | 331920           |

Result 1 x

- 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)
- 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)

Result Grid |   Filter Rows:

| county_name | subcounty_name     |
|-------------|--------------------|
| Nyandarua   | THARAKA NITHI      |
| Nyandarua   | THARAKA NITHI      |
| Nyandarua   | THARAKA NITHI      |
| Nyandarua   | THARAKA NITHI      |
| Nyandarua   | THARAKA NITHI      |
| Nyandarua   | THARAKA NITHI      |
| Nyandarua   | THARAKA NITHI      |
| Nyandarua   | THARAKA NITHI      |
| Nyandarua   | KINANGOP           |
| Nyandarua   | NYANDARUA SOUTH    |
| Nyandarua   | MIRANGINE          |
| Nyandarua   | KIPIPIRI           |
| Nyandarua   | NYANDARUA CENT...  |
| Nyandarua   | NYANDARUA WEST     |
| Nyandarua   | NYANDARUANORTH     |
| Nyandarua   | ABERDARE NATION... |
| Nyandarua   | KINANGOP           |
| Nyandarua   | NYANDARUASOUTH     |
| Nyandarua   | MIRANGINE          |
| Nyandarua   | KIPIPIRI           |
| Nyandarua   | NYANDARUACENTRAL   |
| Nyandarua   | NYANDARUAWEST      |

```
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";
```