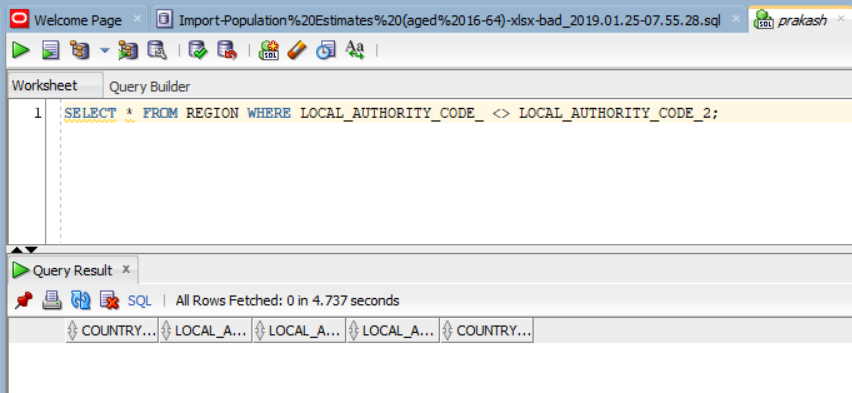
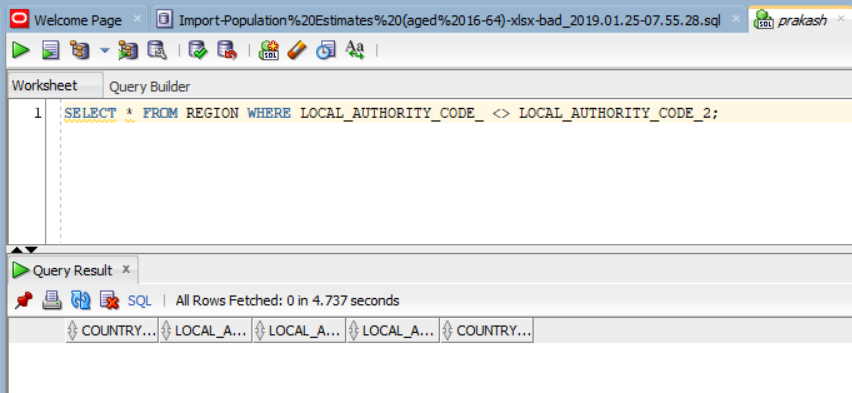
# **Task 1:**

# SELECT \* FROM REGION WHERE LOCAL\_AUTHORITY\_CODE\_ <> LOCAL\_AUTHORITY\_CODE\_2;



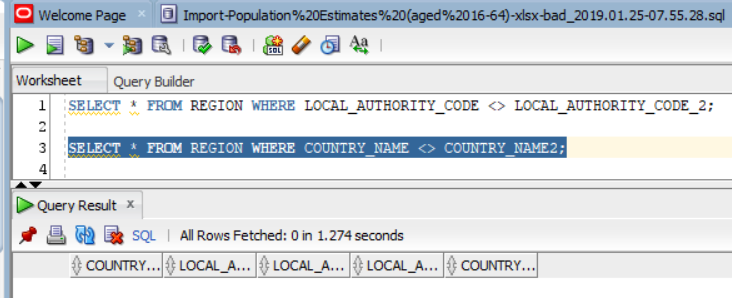
# **Task 2:**

# SELECT \* FROM REGION WHERE LOCAL\_AUTHORITY\_CODE <> LOCAL\_AUTHORITY\_CODE\_2;



# **Task 3:**

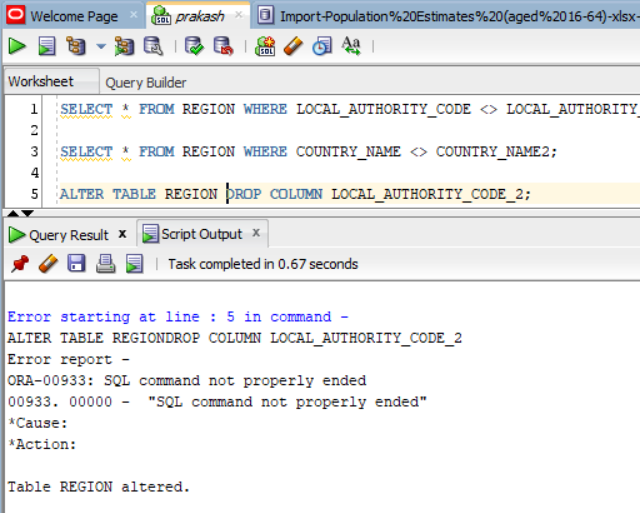
# SELECT \* FROM REGION WHERE COUNTRY\_NAME <> COUNTRY\_NAME2;



# **Task 4:**

Dropping Redundant table.

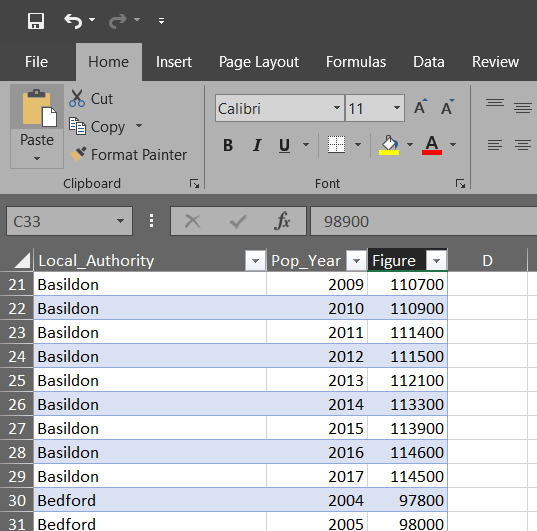
1. ALTER TABLE REGION DROP COLUMN LOCAL\_AUTHORITY\_CODE\_2;



# ALTER TABLE REGION DROP COLUMN COUNTRY\_NAME2;

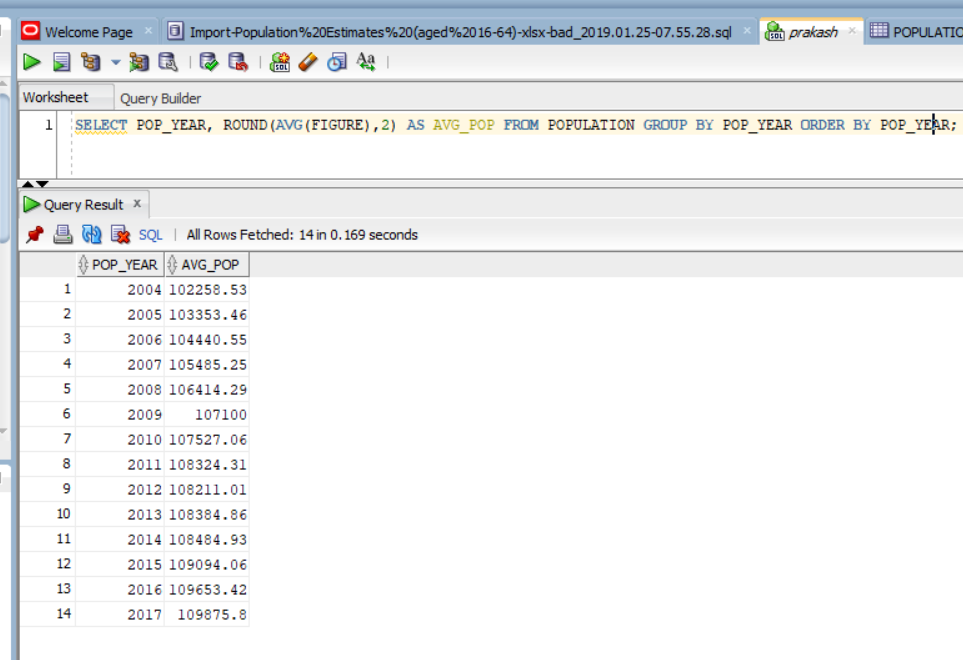
# 

# Task 4: Creating Pivot table.



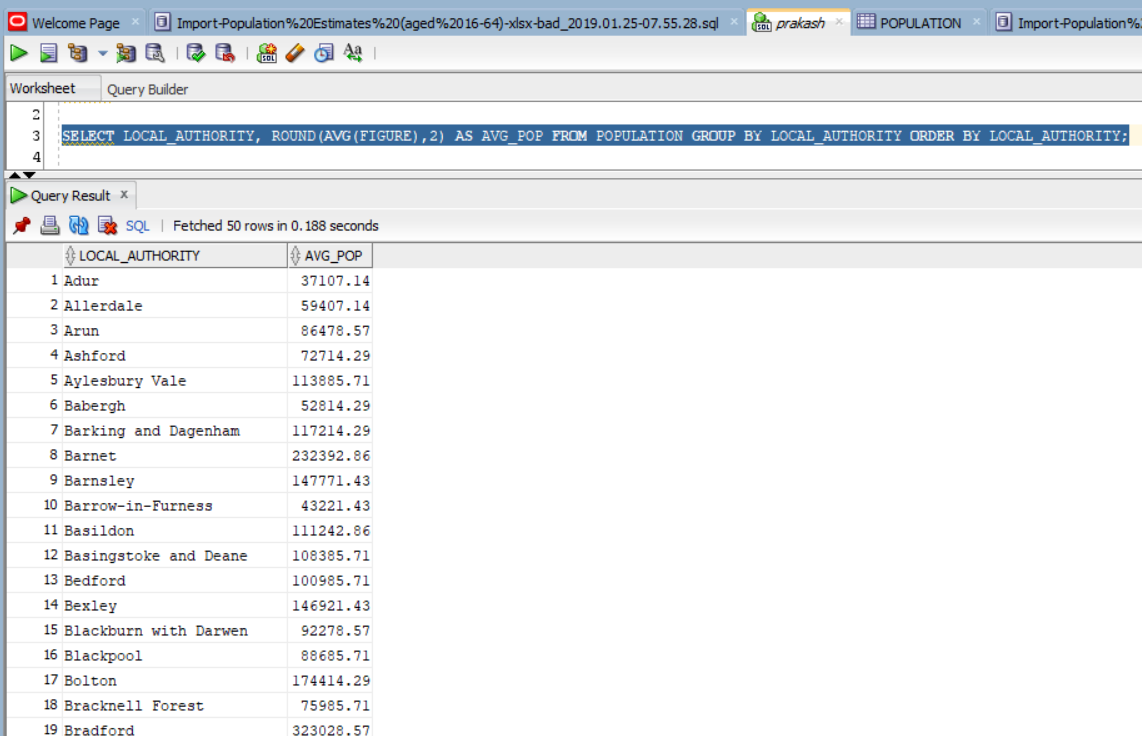
# Task 5: Finding Average of data.

1. SELECT POP\_YEAR, ROUND(AVG(FIGURE),2) AS AVG\_POP FROM POPULATION GROUP BY POP\_YEAR ORDER BY POP\_YEAR;

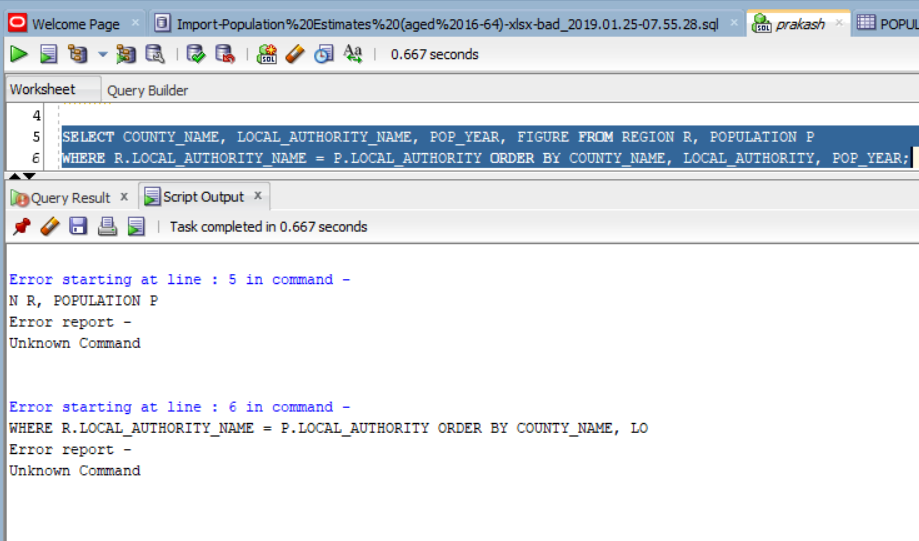


Or it can be achieved from authority.

1. SELECT LOCAL\_AUTHORITY, ROUND(AVG(FIGURE),2) AS AVG\_POP FROM POPULATION GROUP BY LOCAL\_AUTHORITY ORDER BY LOCAL\_AUTHORITY;



# Task 6: Trying to Select deleted column.



# Task 7: OLAP (On-Line Analytical Processing)

1. Roll Up Example

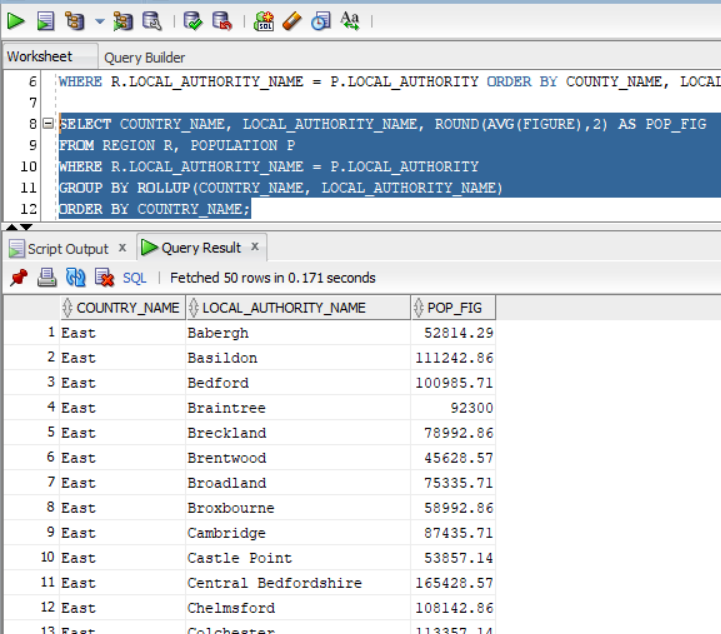
SELECT COUNTRY\_NAME, LOCAL\_AUTHORITY\_NAME, ROUND(AVG(FIGURE),2) AS POP\_FIG

FROM REGION R, POPULATION P

WHERE R.LOCAL\_AUTHORITY\_NAME = P.LOCAL\_AUTHORITY

GROUP BY ROLLUP(COUNTRY\_NAME, LOCAL\_AUTHORITY\_NAME)

ORDER BY COUNTRY\_NAME;



1. Cube

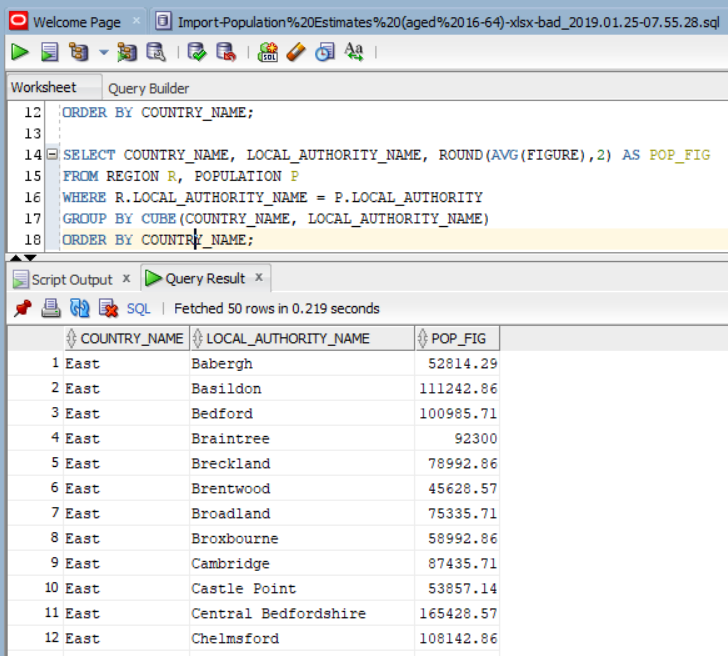
SELECT COUNTRY\_NAME, LOCAL\_AUTHORITY\_NAME, ROUND(AVG(FIGURE),2) AS POP\_FIG

FROM REGION R, POPULATION P

WHERE R.LOCAL\_AUTHORITY\_NAME = P.LOCAL\_AUTHORITY

GROUP BY CUBE(COUNTRY\_NAME, LOCAL\_AUTHORITY\_NAME)

ORDER BY COUNTRY\_NAME;



# Task 8: Missing data.

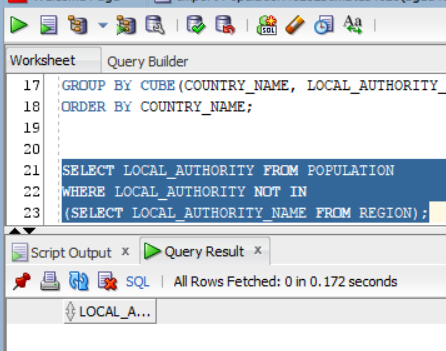
1. Checking Authority

SELECT LOCAL\_AUTHORITY

FROM POPULATION

WHERE LOCAL\_AUTHORITY NOT IN

(SELECT LOCAL\_AUTHORITY\_NAME FROM REGION);



No result is obtained. There might be something wrong while importing. So checking with

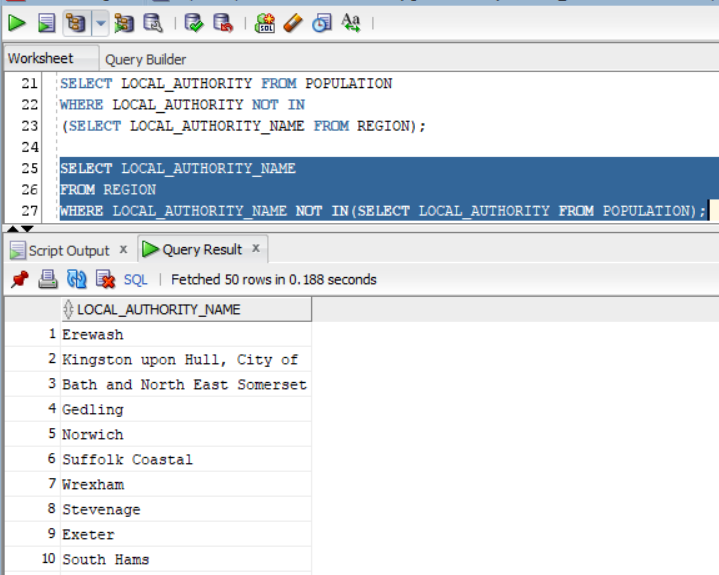
1. Checking Authority

SELECT LOCAL\_AUTHORITY

FROM POPULATION

WHERE LOCAL\_AUTHORITY NOT IN

(SELECT LOCAL\_AUTHORITY\_NAME FROM REGION);



Further investigation gave one area.

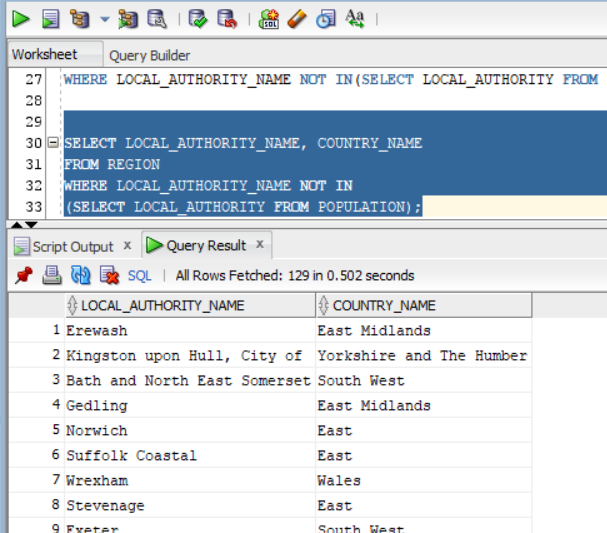
1. Further investigation

SELECT LOCAL\_AUTHORITY\_NAME, COUNTY\_NAME

FROM REGION

WHERE LOCAL\_AUTHORITY\_NAME NOT IN

(SELECT LOCAL\_AUTHORITY FROM POPULATION);



Welsh data were missing from the dataset.

# Task 9: Missing Values.