Large-Scale Databases – Part B

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Question 1:

Input:

SELECT COUNT(DISTINCT D.NAME)

FROM MOTORWAYSSOUTHWALES M, CARDIFFDISTRICTS D
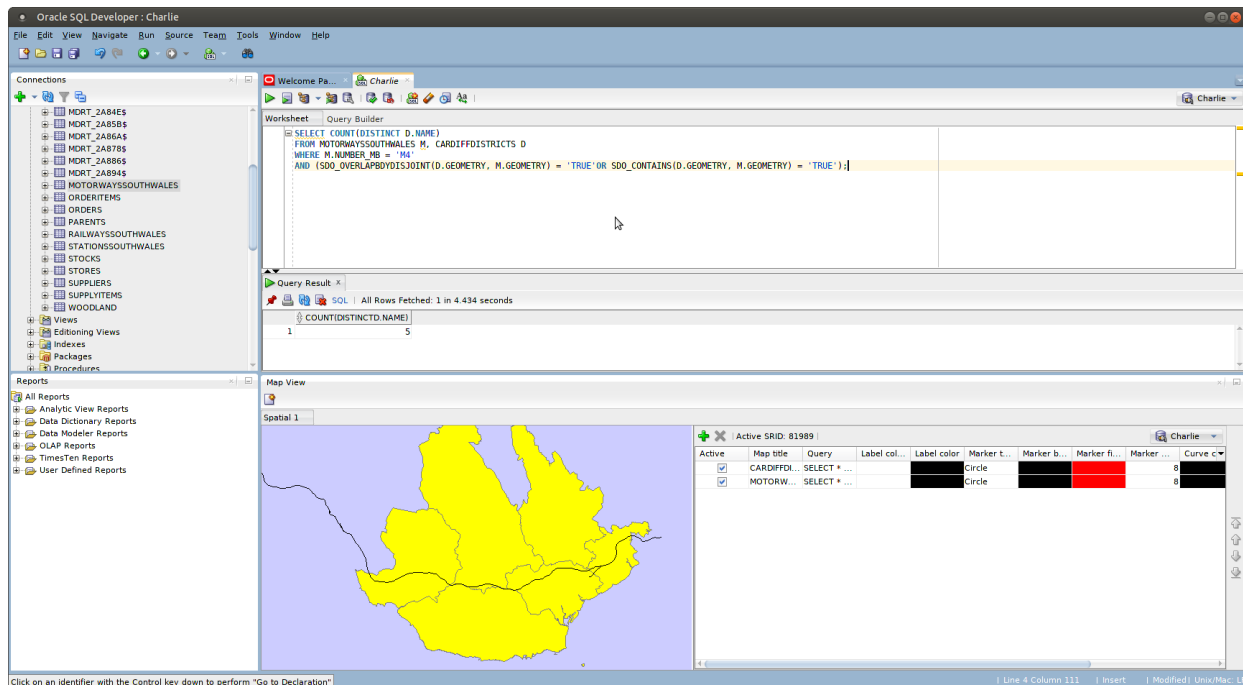
WHERE M.NUMBER_MB = 'M4'

AND (SDO_OVERLAPBDYDISJOINT(D.GEOMETRY, M.GEOMETRY) = 'TRUE'OR SDO_CONTAINS(D.GEOMETRY, M.GEOMETRY) = 'TRUE');

Output:

	COUNT(DISTINCT D.NAME)
1	5

Screenshot:

Question 2:

Input:

SELECT COUNT(DISTINCT S.IDENTIFIER)

FROM CARDIFFDISTRICTS D, COASTLINESOUTHWALES C, STATIONSSOUTHWALES S

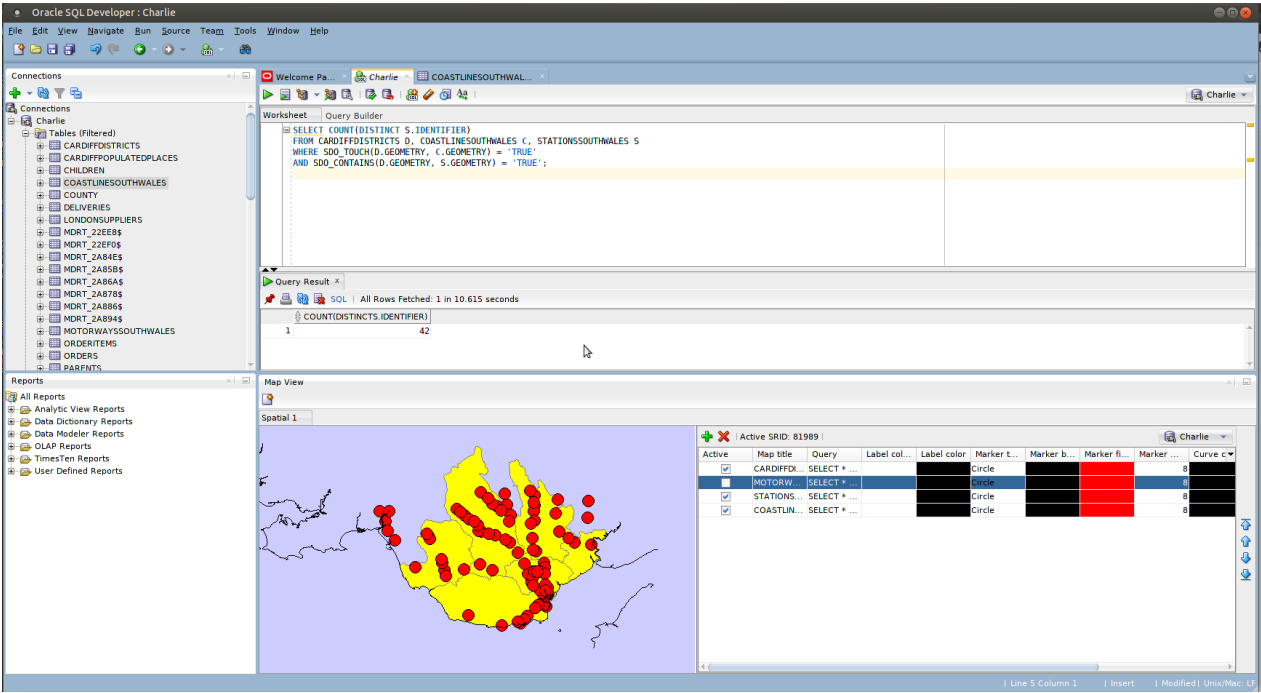WHERE SDO_TOUCH(D.GEOMETRY, C.GEOMETRY) = 'TRUE'

AND SDO_CONTAINS(D.GEOMETRY, S.GEOMETRY) = 'TRUE';

Output:

	COUNT(DISTINCT S.IDENTIFIER)
1	42

Screenshot:
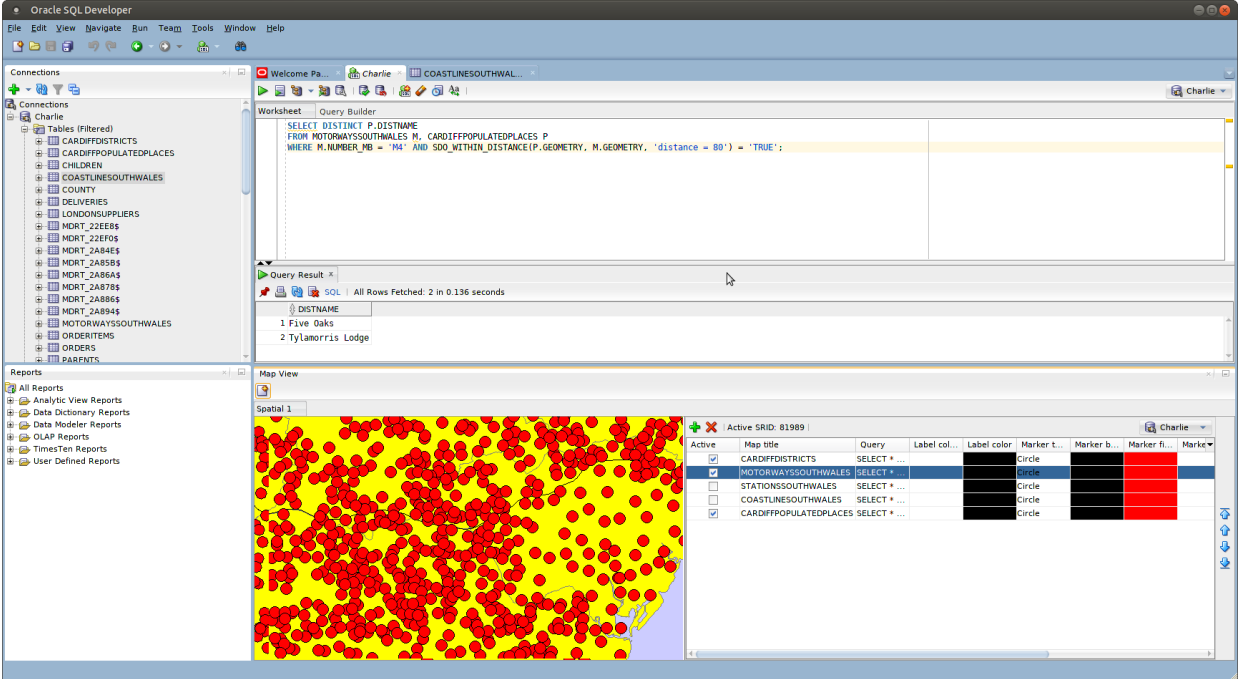

Question 3:

Input:

SELECT DISTINCT P.DISTNAME

FROM MOTORWAYSSOUTHWALES M, CARDIFFPOPULATEDPLACES P

WHERE M.NUMBER_MB = 'M4' AND SDO_WITHIN_DISTANCE(P.GEOMETRY, M.GEOMETRY, 'distance = 80') = 'TRUE';

Output:

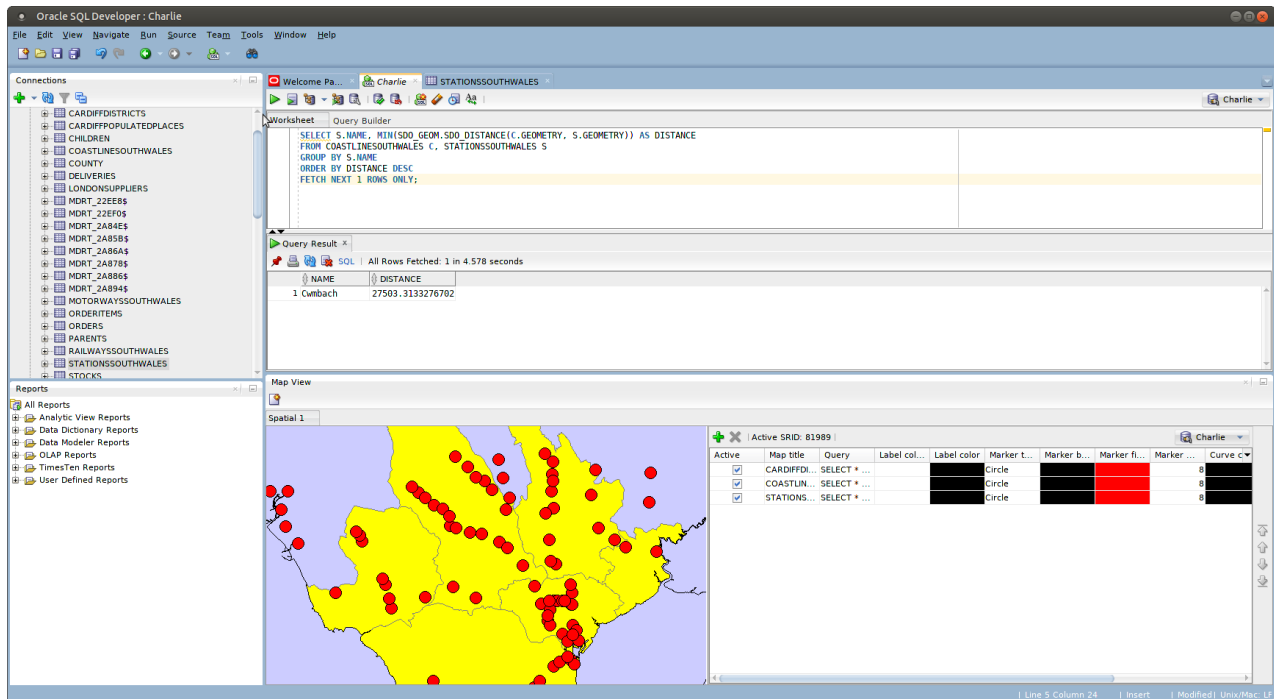|	DISTNAME
1	Five Oaks
2	Tylamorris Lodge

Screenshot:

Question 4:

Input:

SELECT S.NAME, MIN(SDO_GEOM.SDO_DISTANCE(C.GEOMETRY, S.GEOMETRY)) AS DISTANCE

FROM COASTLINESOUTHWALES C, STATIONSSOUTHWALES S

GROUP BY S.NAME

ORDER BY DISTANCE DESC

FETCH NEXT 1 ROWS ONLY;

Output:

	NAME	DISTANCE
1	Cwmbach	27503.3133276702

Screenshot:

Question 5:

Input:

SELECT * FROM

(SELECT D.NAME,
SUM(SDO_GEOM.SDO_LENGTH(SDO_GEOM.SDO_INTERSECTION(D.GEOMETRY, M.GEOMETRY)))
AS LENGTH

FROM MOTORWAYSSOUTHWALES M, CARDIFFDISTRICTS D

WHERE M.NUMBER_MB = 'M4'

GROUP BY D.NAME

ORDER BY LENGTH DESC)

WHERE LENGTH IS NOT NULL

FETCH NEXT 1 ROWS ONLY;

Output:

	NAME	LENGTH
1	PEN-Y-BONT AR OGWR - BRIDGEND	18459.166897191724

Screenshot: