UNIVERSITY PARTNER

UNIVERSITY OF WOLVERHAMPTON

HERALD COLLEGE KATHMANDU

Big Data (6CS030)

Workshop 2

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Queries of Region table

```
SELECT * FROM REGION
WHERE LOCAL_AUTHORITY_CODE <> LOCAL_AUTHORITY_CODE_2;
SELECT * FROM REGION
WHERE REGION_COUNTRY_NAME <> REGION_COUNTRY_NAME2;
```

Script Output | Query Result

SQL | All Rows Fetched: 0 in 0.166 seconds

REGION_...	LOCAL_A...	LOCAL_A...	LOCAL_A...	REGION_...

Start Page | myOracle | REGION

Worksheet | Query Builder

```
ALTER TABLE REGION
DROP COLUMN LOCAL_AUTHORITY_CODE_2;
ALTER TABLE REGION
DROP COLUMN REGION_COUNTRY_NAME2;
```

Start Page | myOracle | REGION

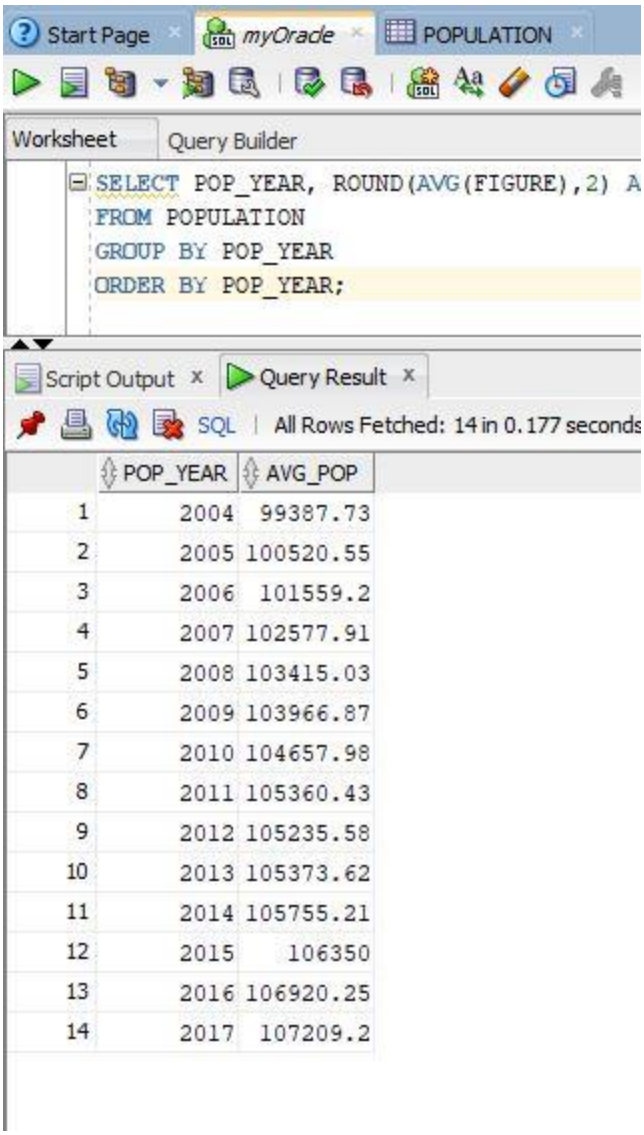
Columns | Data | Constraints | Grants | Statistics | Triggers | Flashback | Dependencies | Details | Partitions | Indexes | SQL

Actions...

	COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1	REGION_COUNTRY_NAME	VARCHAR2(26 BYTE)	Yes	(null)	1	(null)
2	LOCAL_AUTHORITY_CODE_	VARCHAR2(9 BYTE)	Yes	(null)	2	(null)
3	LOCAL_AUTHORITY_NAME	VARCHAR2(28 BYTE)	Yes	(null)	3	(null)

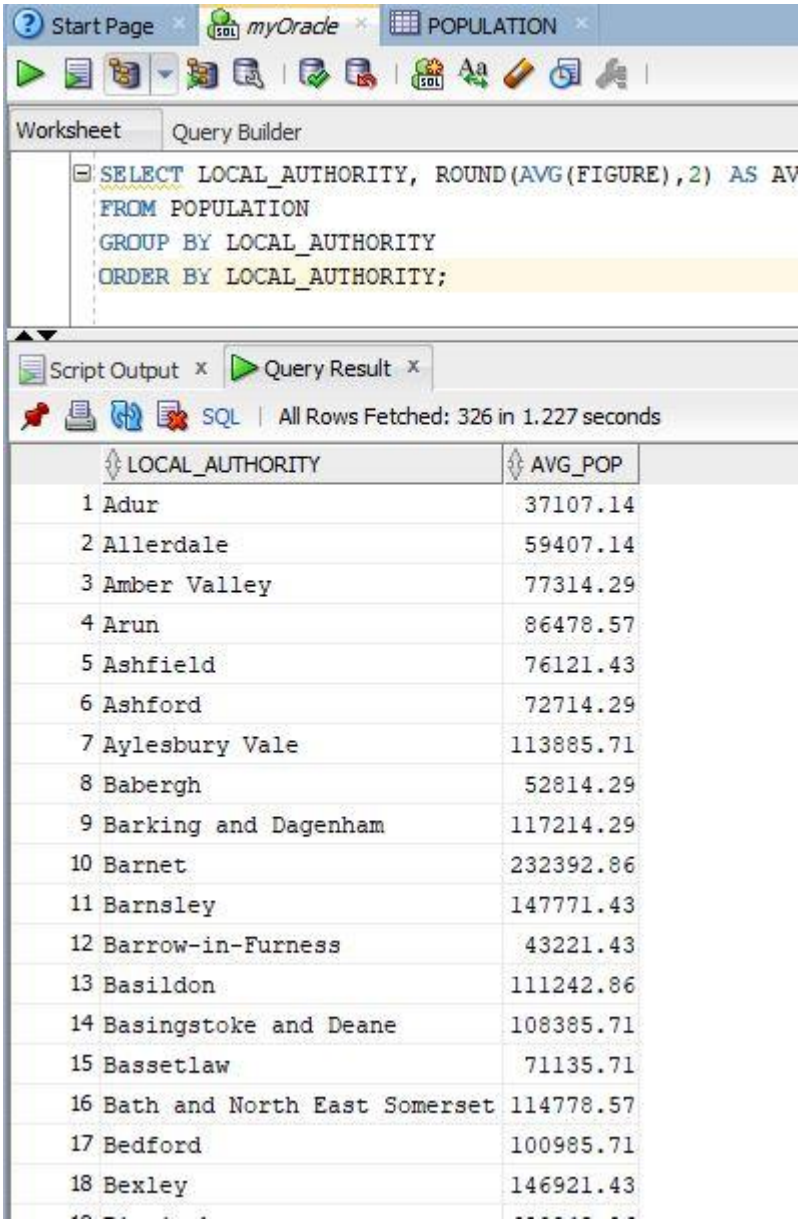
Queries of Population table version 2

- **Finding the average population by year.**



	POP_YEAR	AVG_POP
1	2004	99387.73
2	2005	100520.55
3	2006	101559.2
4	2007	102577.91
5	2008	103415.03
6	2009	103966.87
7	2010	104657.98
8	2011	105360.43
9	2012	105235.58
10	2013	105373.62
11	2014	105755.21
12	2015	106350
13	2016	106920.25
14	2017	107209.2

- **Finding the average population by authority.**



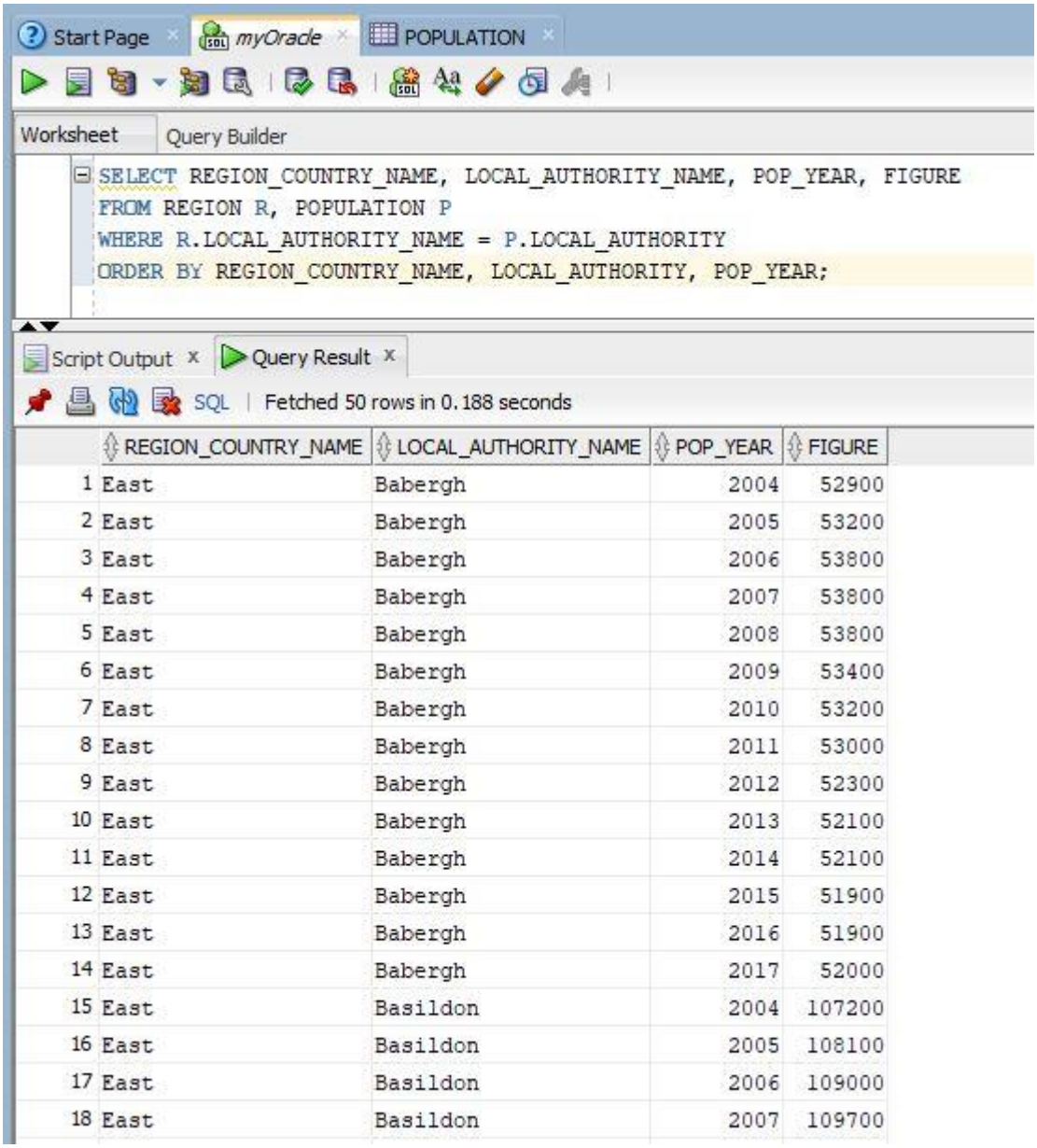
	LOCAL_AUTHORITY	AVG_POP
1	Adur	37107.14
2	Allerdale	59407.14
3	Amber Valley	77314.29
4	Arun	86478.57
5	Ashfield	76121.43
6	Ashford	72714.29
7	Aylesbury Vale	113885.71
8	Babergh	52814.29
9	Barking and Dagenham	117214.29
10	Barnet	232392.86
11	Barnsley	147771.43
12	Barrow-in-Furness	43221.43
13	Basildon	111242.86
14	Basingstoke and Deane	108385.71
15	Bassetlaw	71135.71
16	Bath and North East Somerset	114778.57
17	Bedford	100985.71
18	Bexley	146921.43

Script Output | Query Result

SQL | All Rows Fetched: 326 in 1.227 seconds

	LOCAL_AUTHORITY	AVG_POP
309	West Somerset	19564.29
310	Westminster	166392.86
311	Weymouth and Portland	40057.14
312	Wigan	203242.86
313	Wiltshire	292800
314	Winchester	72814.29
315	Windsor and Maidenhead	90935.71
316	Wirral	196464.29
317	Woking	62550
318	Wokingham	100042.86
319	Wolverhampton	157707.14
320	Worcester	64664.29
321	Worthing	63450
322	Wychavon	72164.29
323	Wycombe	108064.29
324	Wyre	63800
325	Wyre Forest	60742.86
326	York	131264.29

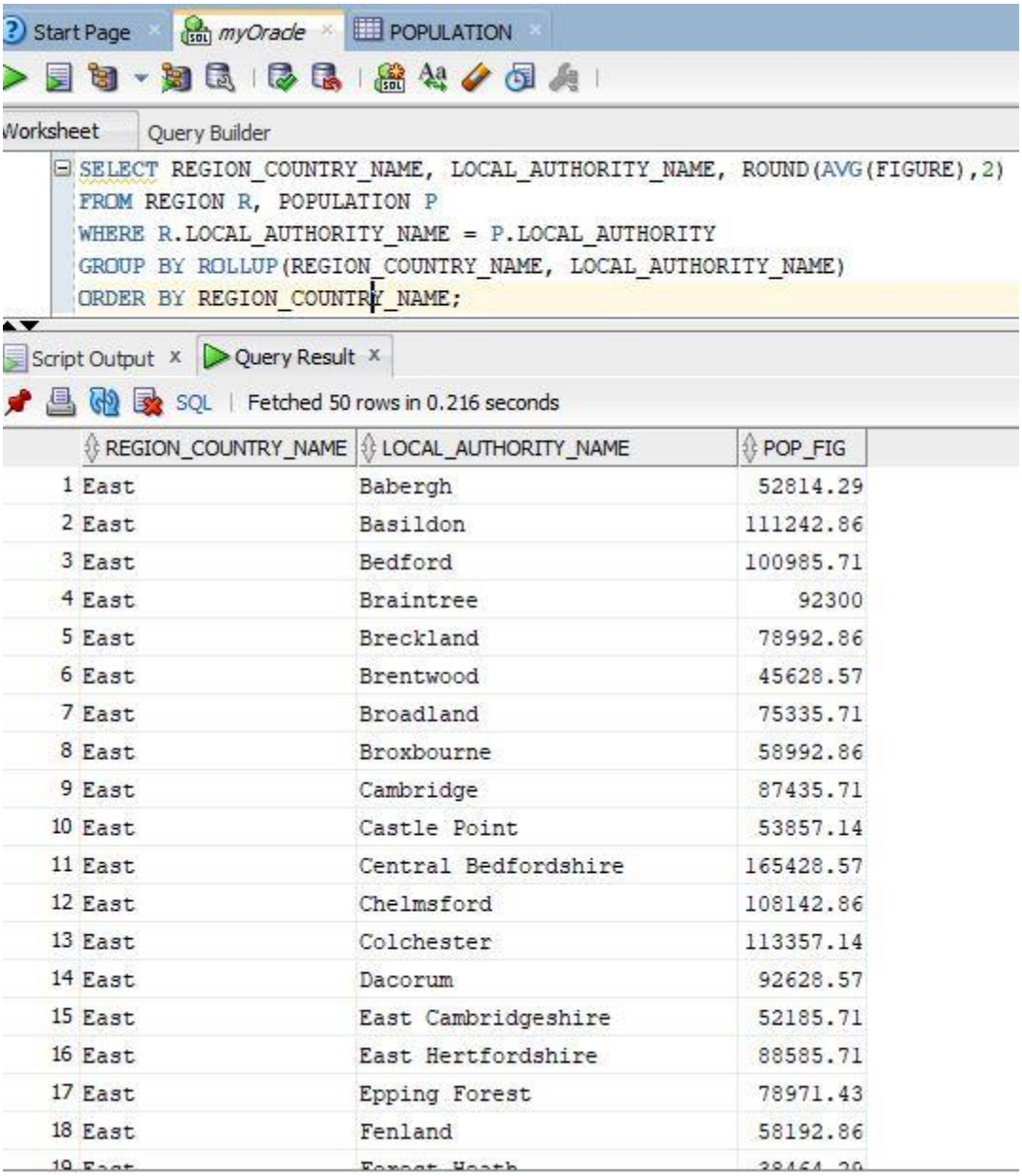
- **Retrieving the region country name, we deleted earlier.**



	REGION_COUNTRY_NAME	LOCAL_AUTHORITY_NAME	POP_YEAR	FIGURE
1	East	Babergh	2004	52900
2	East	Babergh	2005	53200
3	East	Babergh	2006	53800
4	East	Babergh	2007	53800
5	East	Babergh	2008	53800
6	East	Babergh	2009	53400
7	East	Babergh	2010	53200
8	East	Babergh	2011	53000
9	East	Babergh	2012	52300
10	East	Babergh	2013	52100
11	East	Babergh	2014	52100
12	East	Babergh	2015	51900
13	East	Babergh	2016	51900
14	East	Babergh	2017	52000
15	East	Basildon	2004	107200
16	East	Basildon	2005	108100
17	East	Basildon	2006	109000
18	East	Basildon	2007	109700

OLAP commands

- **Rollup**



	REGION_COUNTRY_NAME	LOCAL_AUTHORITY_NAME	POP_FIG
1	East	Babergh	52814.29
2	East	Basildon	111242.86
3	East	Bedford	100985.71
4	East	Braintree	92300
5	East	Breckland	78992.86
6	East	Brentwood	45628.57
7	East	Broadland	75335.71
8	East	Broxbourne	58992.86
9	East	Cambridge	87435.71
10	East	Castle Point	53857.14
11	East	Central Bedfordshire	165428.57
12	East	Chelmsford	108142.86
13	East	Colchester	113357.14
14	East	Dacorum	92628.57
15	East	East Cambridgeshire	52185.71
16	East	East Hertfordshire	88585.71
17	East	Epping Forest	78971.43
18	East	Fenland	58192.86

- **Cube**

Start Page | myOracle | POPULATION

Worksheet | Query Builder

```
SELECT REGION_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(REGION_COUNTRY_NAME, LOCAL_AUTHORITY_NAME)
ORDER BY REGION_COUNTRY_NAME;
```

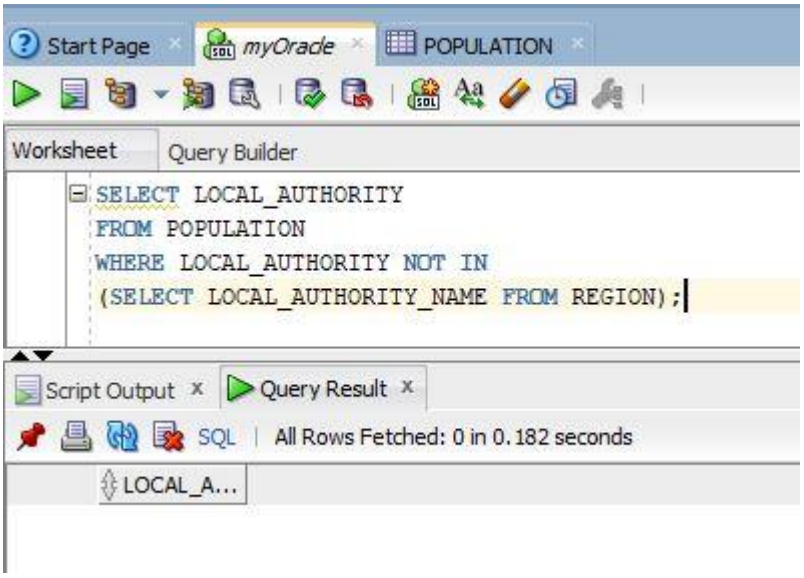
Script Output | Query Result

SQL | Fetched 50 rows in 0.184 seconds

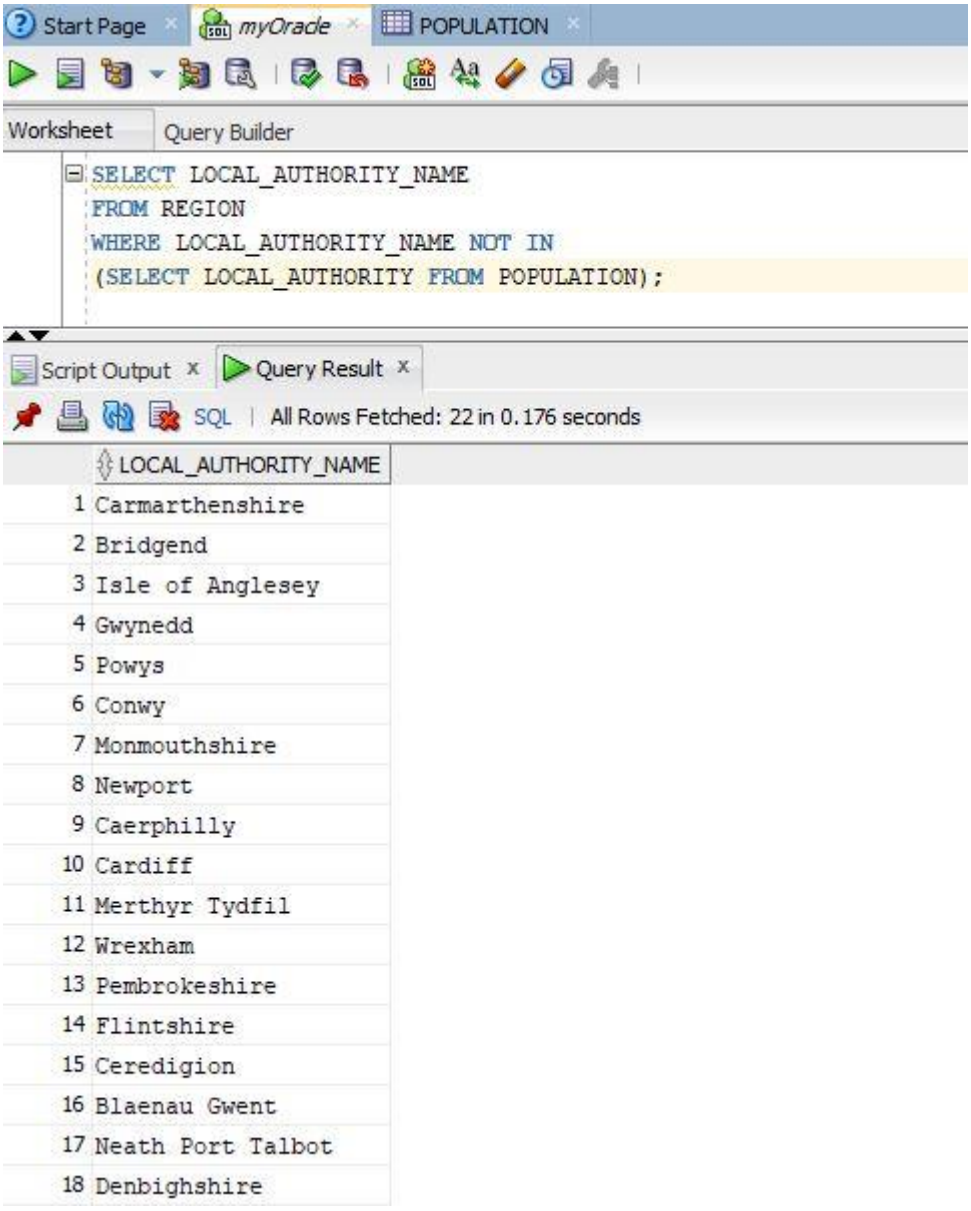
	REGION_COUNTRY_NAME	LOCAL_AUTHORITY_NAME	POP_FIG
1	East	Babergh	52814.29
2	East	Basildon	111242.86
3	East	Bedford	100985.71
4	East	Braintree	92300
5	East	Breckland	78992.86
6	East	Brentwood	45628.57
7	East	Broadland	75335.71
8	East	Broxbourne	58992.86
9	East	Cambridge	87435.71
10	East	Castle Point	53857.14
11	East	Central Bedfordshire	165428.57
12	East	Chelmsford	108142.86
13	East	Colchester	113357.14
14	East	Dacorum	92628.57
15	East	East Cambridgeshire	52185.71
16	East	East Hertfordshire	88585.71
17	East	Epping Forest	78971.43
18	East	Fenland	58192.86

Queries of missing data

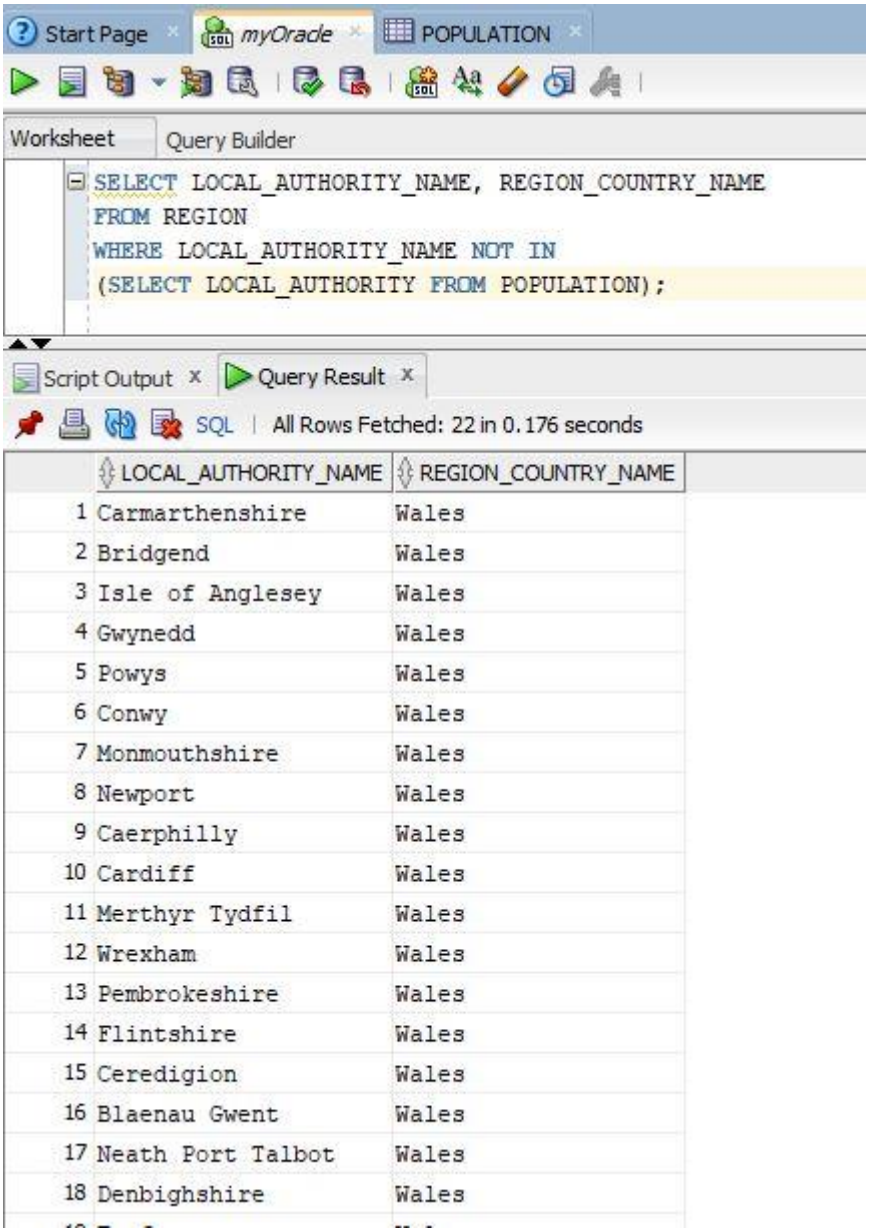
- **Checking if we have all the authorities in our population table.**



- **Checking if all authorities are covered from our Region table.**


Start Page
myOracle
POPULATION
Worksheet
Query Builder
SELECT LOCAL_AUTHORITY_NAME
FROM REGION
WHERE LOCAL_AUTHORITY_NAME NOT IN
(SELECT LOCAL_AUTHORITY FROM POPULATION);
Script Output
Query Result
SQL
All Rows Fetched: 22 in 0.176 seconds
LOCAL_AUTHORITY_NAME
1 Carmarthenshire
2 Bridgend
3 Isle of Anglesey
4 Gwynedd
5 Powys
6 Conwy
7 Monmouthshire
8 Newport
9 Caerphilly
10 Cardiff
11 Merthyr Tydfil
12 Wrexham
13 Pembrokeshire
14 Flintshire
15 Ceredigion
16 Blaenau Gwent
17 Neath Port Talbot
18 Denbighshire

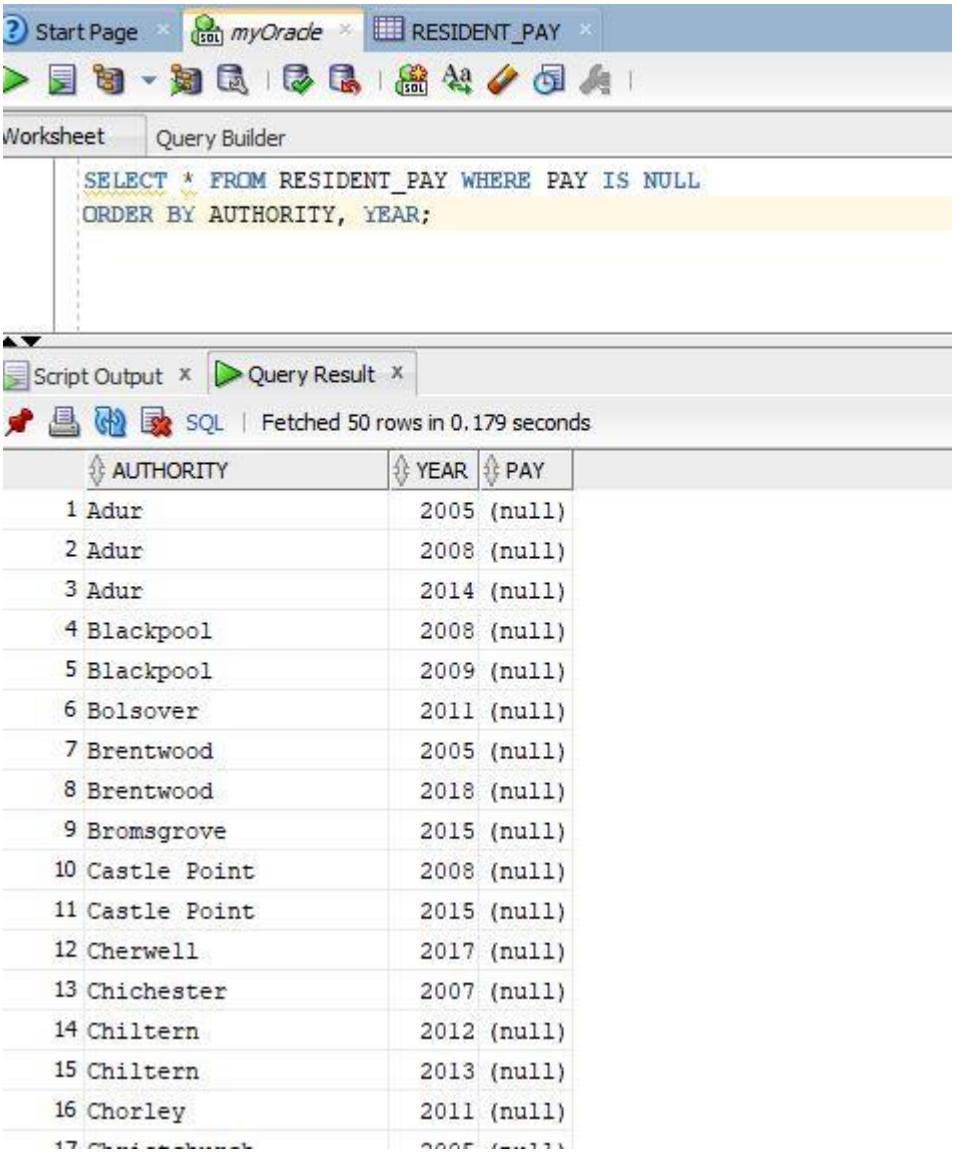
- **Checking if any data is missing from the dataset.**



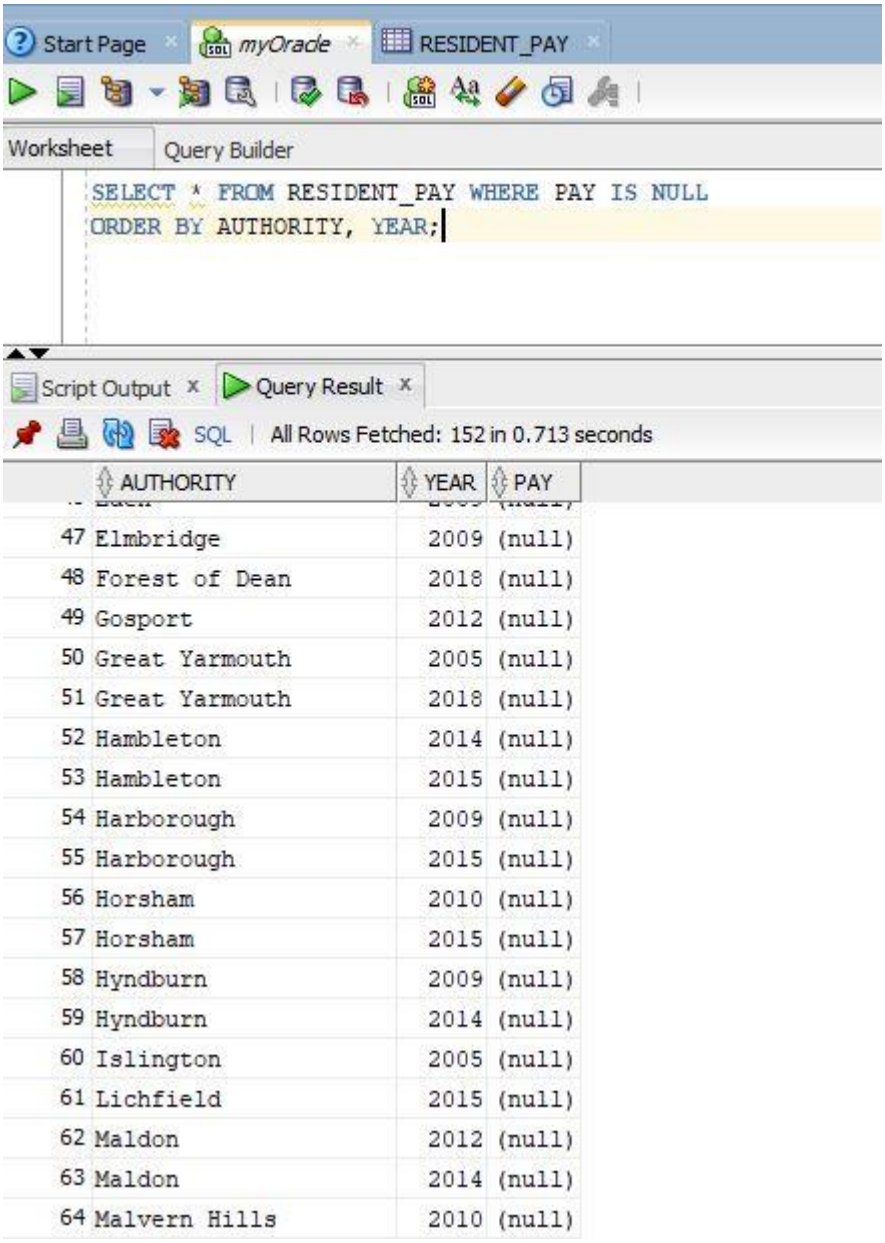
	LOCAL_AUTHORITY_NAME	REGION_COUNTRY_NAME
1	Carmarthenshire	Wales
2	Bridgend	Wales
3	Isle of Anglesey	Wales
4	Gwynedd	Wales
5	Powys	Wales
6	Conwy	Wales
7	Monmouthshire	Wales
8	Newport	Wales
9	Caerphilly	Wales
10	Cardiff	Wales
11	Merthyr Tydfil	Wales
12	Wrexham	Wales
13	Pembrokeshire	Wales
14	Flintshire	Wales
15	Ceredigion	Wales
16	Blaenau Gwent	Wales
17	Neath Port Talbot	Wales
18	Denbighshire	Wales

Queries of Resident pay table

- **Checking if the pay field contains null values.**



	AUTHORITY	YEAR	PAY
1	Adur	2005	(null)
2	Adur	2008	(null)
3	Adur	2014	(null)
4	Blackpool	2008	(null)
5	Blackpool	2009	(null)
6	Bolsover	2011	(null)
7	Brentwood	2005	(null)
8	Brentwood	2018	(null)
9	Bromsgrove	2015	(null)
10	Castle Point	2008	(null)
11	Castle Point	2015	(null)
12	Cherwell	2017	(null)
13	Chichester	2007	(null)
14	Chiltern	2012	(null)
15	Chiltern	2013	(null)
16	Chorley	2011	(null)



	AUTHORITY	YEAR	PAY
47	Elmbridge	2009	(null)
48	Forest of Dean	2018	(null)
49	Gosport	2012	(null)
50	Great Yarmouth	2005	(null)
51	Great Yarmouth	2018	(null)
52	Hambleton	2014	(null)
53	Hambleton	2015	(null)
54	Harborough	2009	(null)
55	Harborough	2015	(null)
56	Horsham	2010	(null)
57	Horsham	2015	(null)
58	Hyndburn	2009	(null)
59	Hyndburn	2014	(null)
60	Islington	2005	(null)
61	Lichfield	2015	(null)
62	Maldon	2012	(null)
63	Maldon	2014	(null)
64	Malvern Hills	2010	(null)