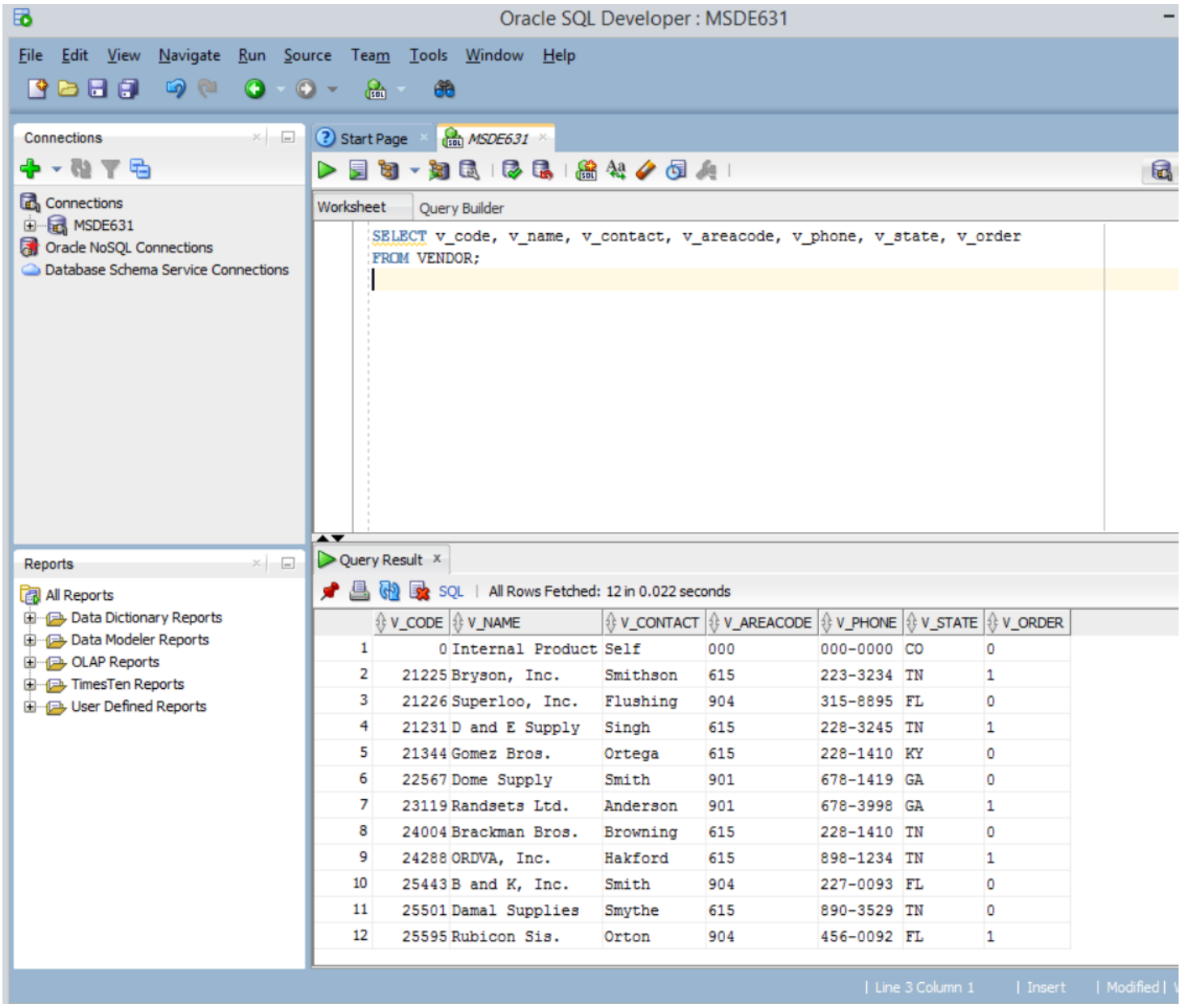
Alla Topp
MSDE 631 SQL/NoSQL
Lab 1

MSDE 631 – Week 1 – Lab

First the information was retrieved from the table VENDOR.



	V_CODE	V_NAME	V_CONTACT	V_AREACODE	V_PHONE	V_STATE	V_ORDER
1	0	Internal Product	Self	000	000-0000	CO	0
2	21225	Bryson, Inc.	Smithson	615	223-3234	TN	1
3	21226	Superloo, Inc.	Flushing	904	315-8895	FL	0
4	21231	D and E Supply	Singh	615	228-3245	TN	1
5	21344	Gomez Bros.	Ortega	615	228-1410	KY	0
6	22567	Dome Supply	Smith	901	678-1419	GA	0
7	23119	Randsets Ltd.	Anderson	901	678-3998	GA	1
8	24004	Brackman Bros.	Browning	615	228-1410	TN	0
9	24288	ORDVA, Inc.	Hakford	615	898-1234	TN	1
10	25443	B and K, Inc.	Smith	904	227-0093	FL	0
11	25501	Damal Supplies	Smythe	615	890-3529	TN	0
12	25595	Rubicon Sis.	Orton	904	456-0092	FL	1

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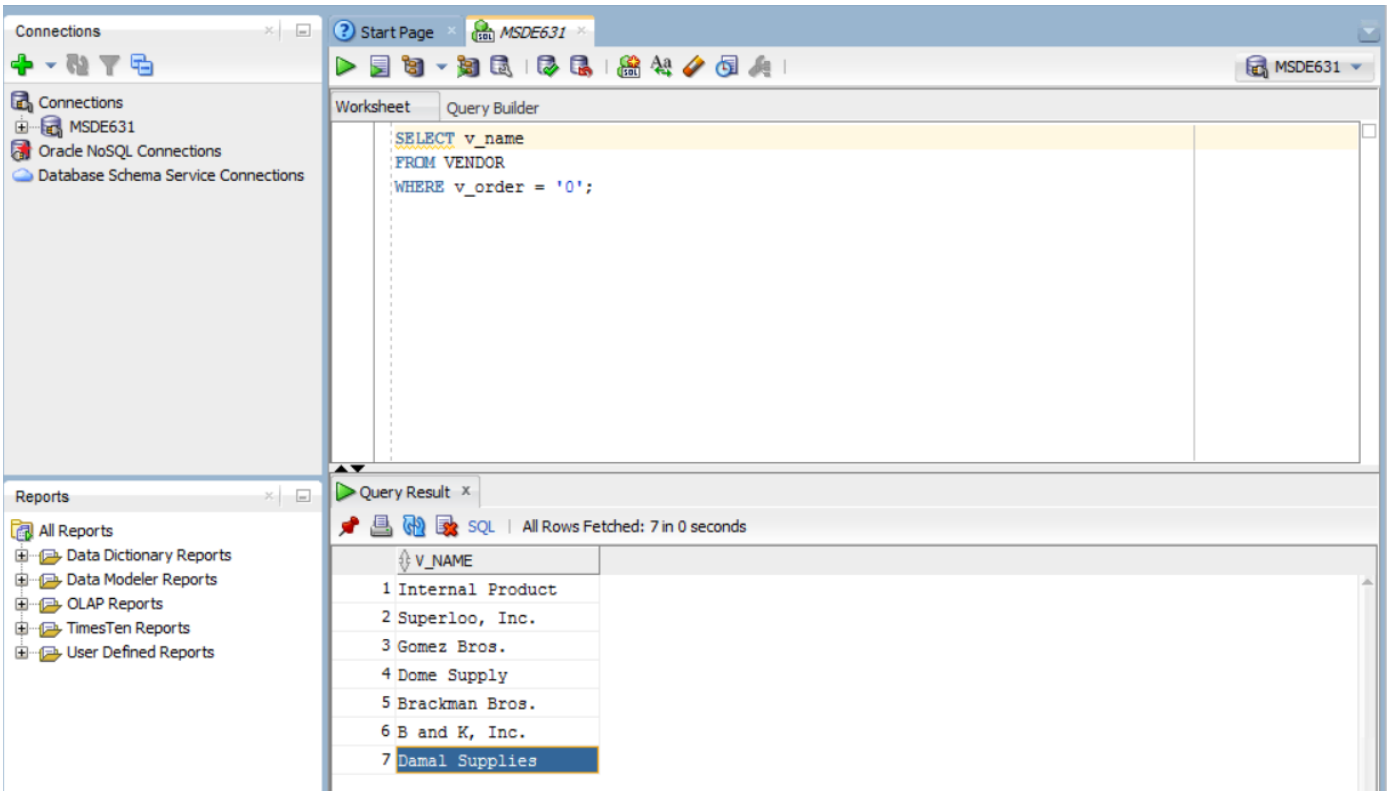
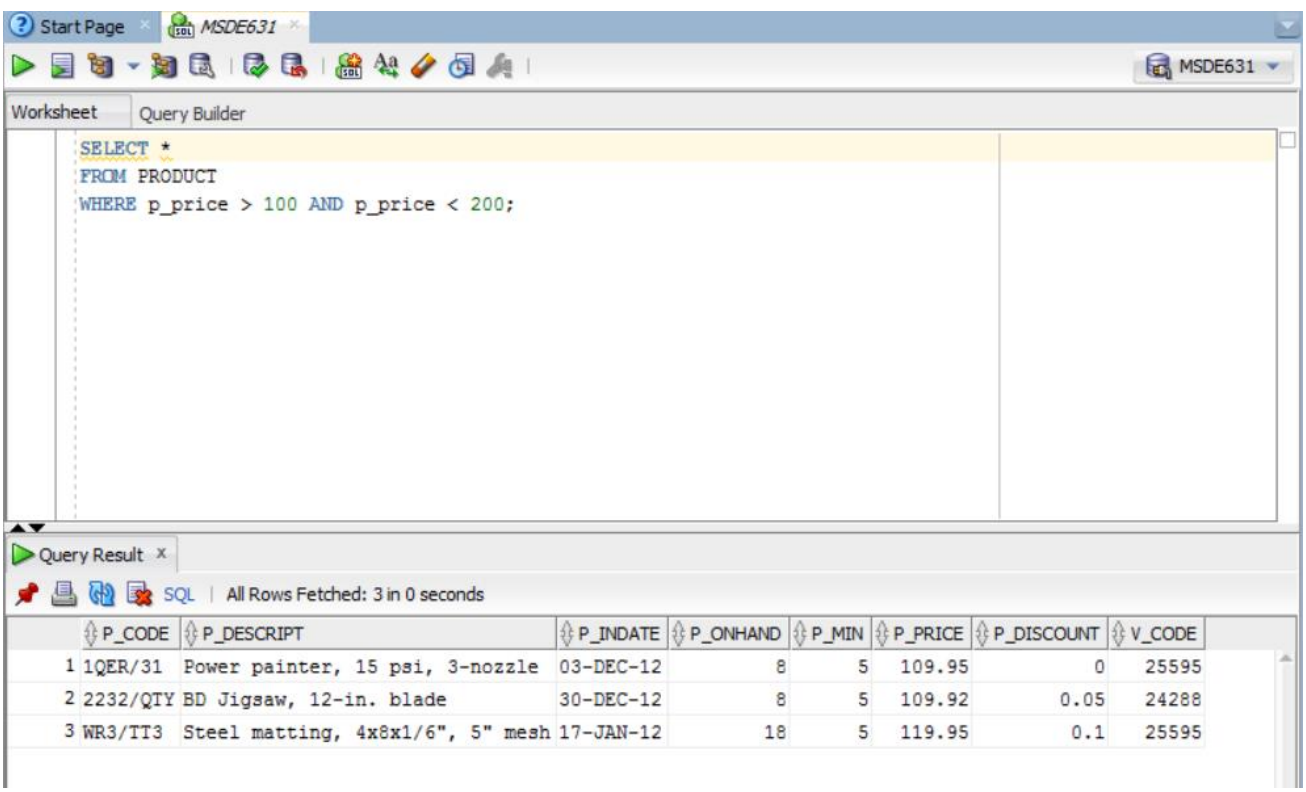


The above query returned the set of names of vendors from whom we have never ordered.

Using Logical Relationships to Restrict Selected Information:

This query will return an answer set which consists of all the parts with prices between 100 and 200.



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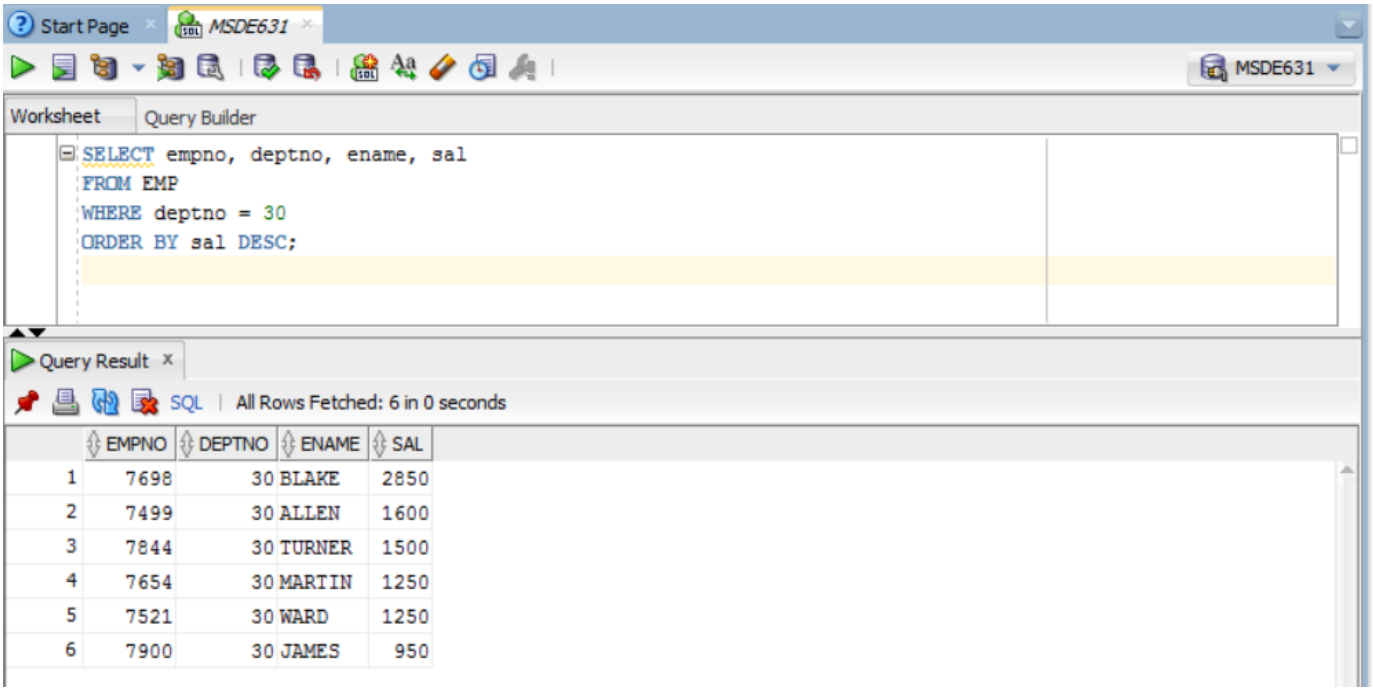
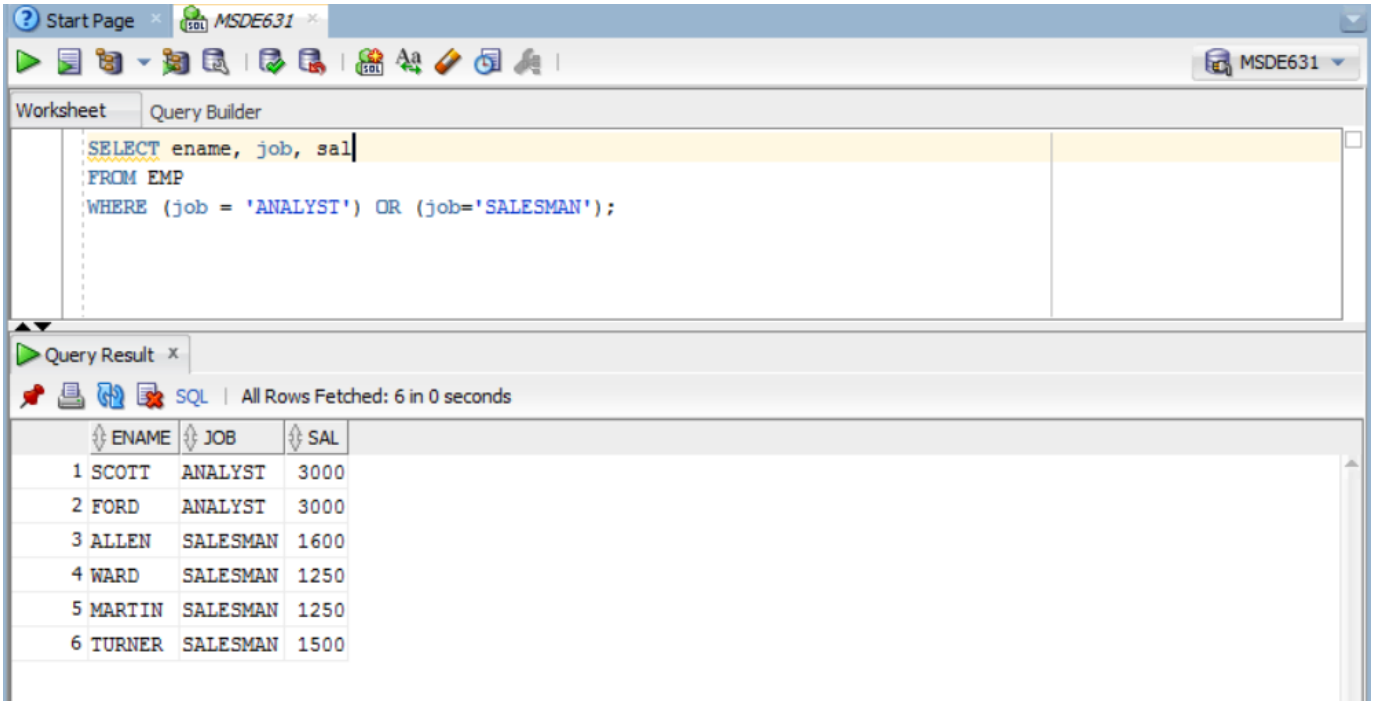
Order/Sort the result set data

The result set of below queries show the employees for department 30 and sorted by the largest monthly salary at the top of the list.



The next command would return a set of employees hired as “analysts” or “salesman”.



To query all employees whose names begin with ‘A’, you would use the “%” wildcard as in:

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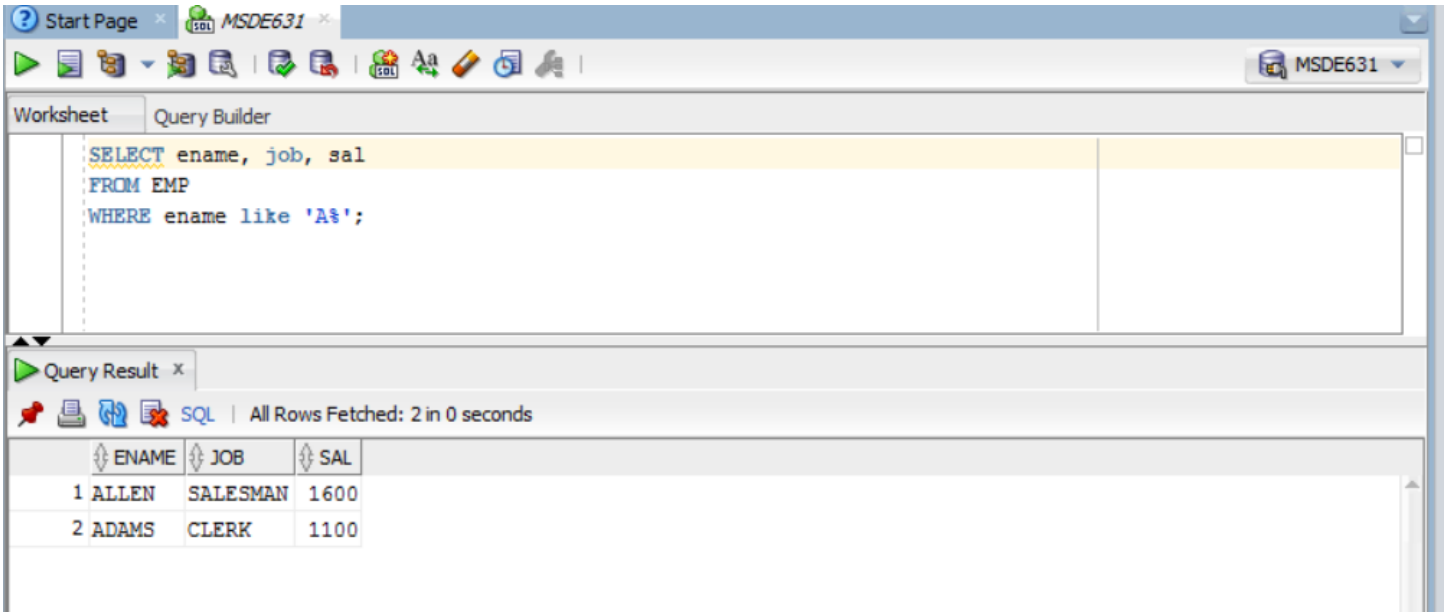
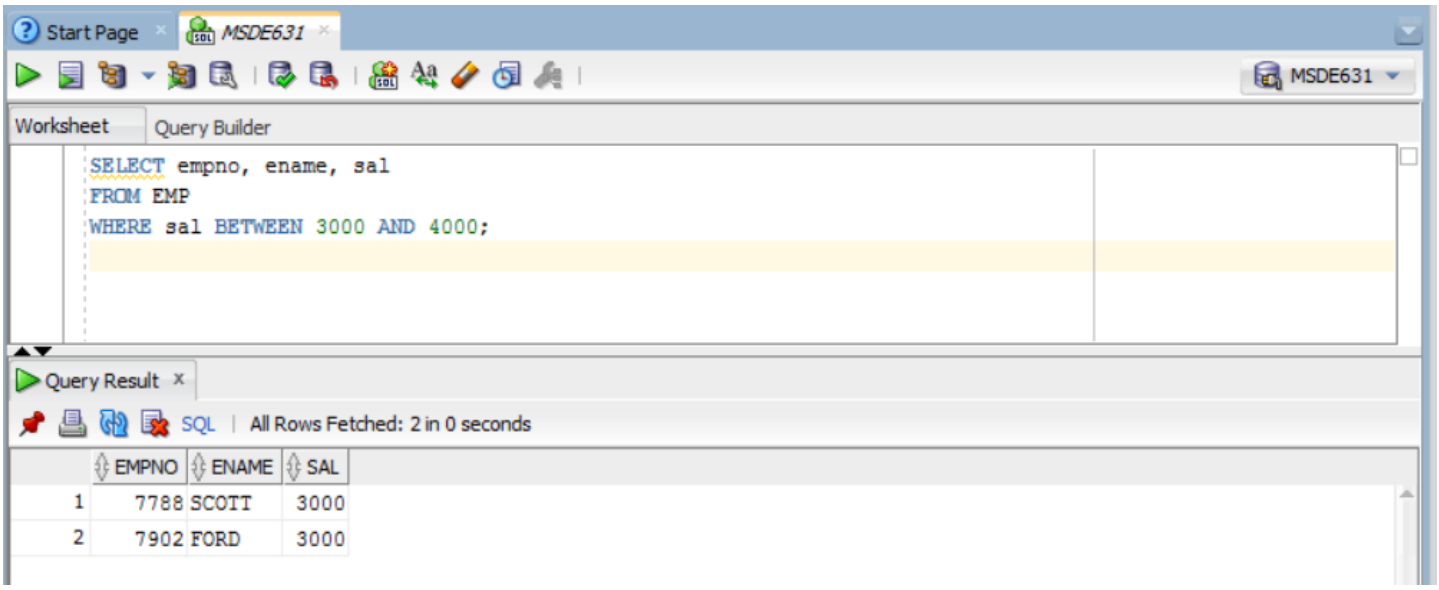


The following query returns employee information where the salary is greater than or equal to 3000 and less than or equal to 4000:



Querying Data from Multiple Tables

Here we perform joint of two tables returning employees names and departments they work for.

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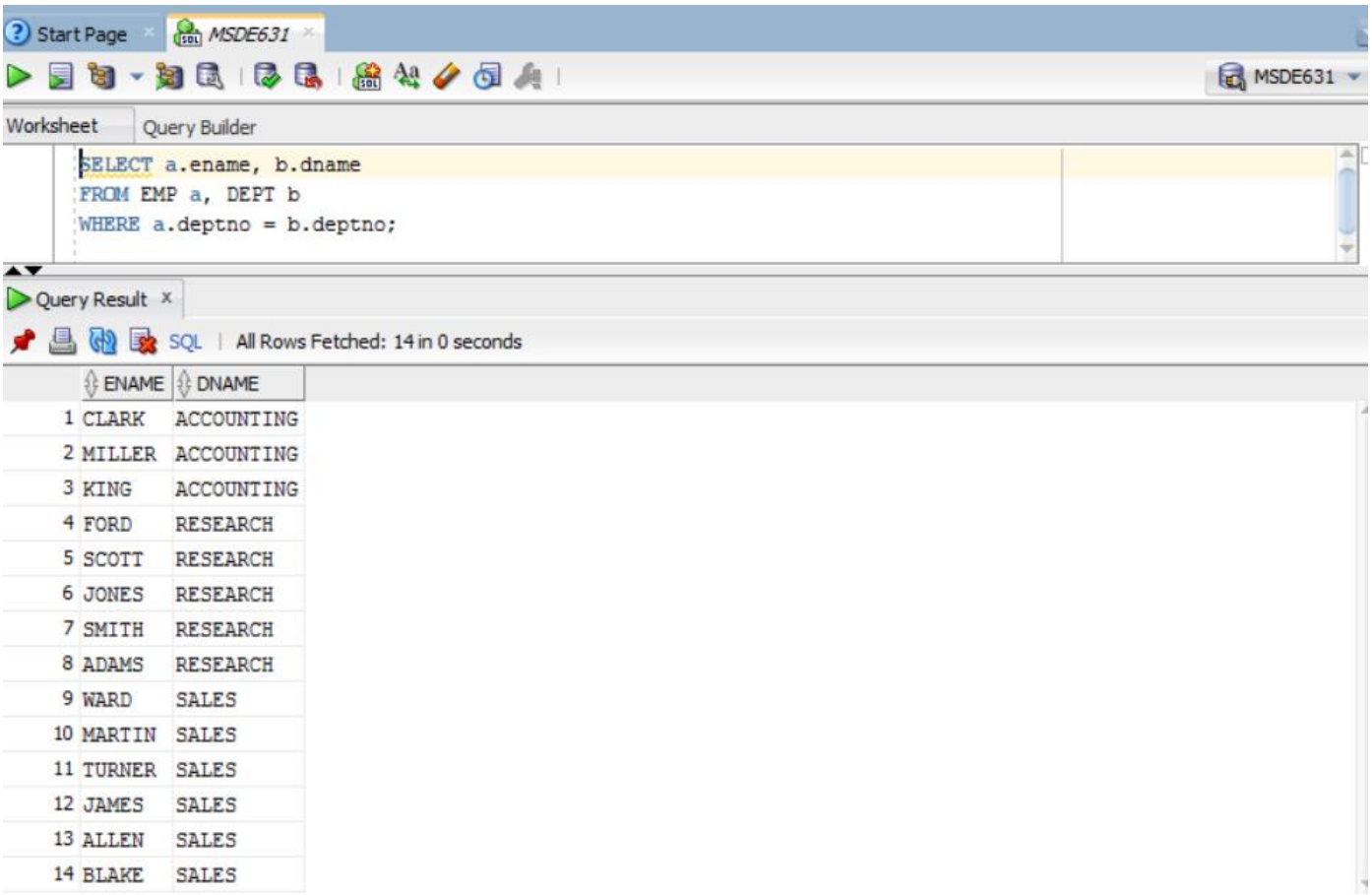
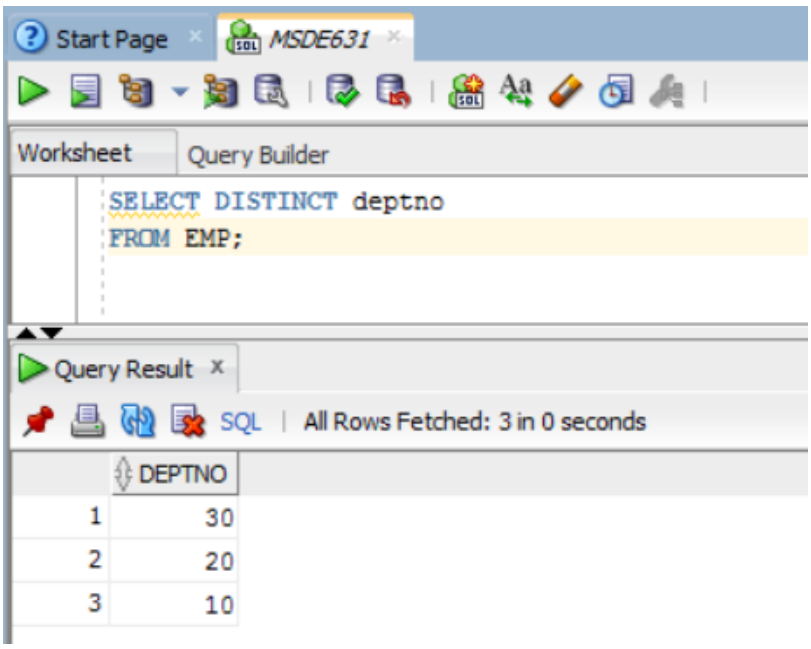


Querying Unique Data

Next query returns a distinct set of department numbers from the EMP table.



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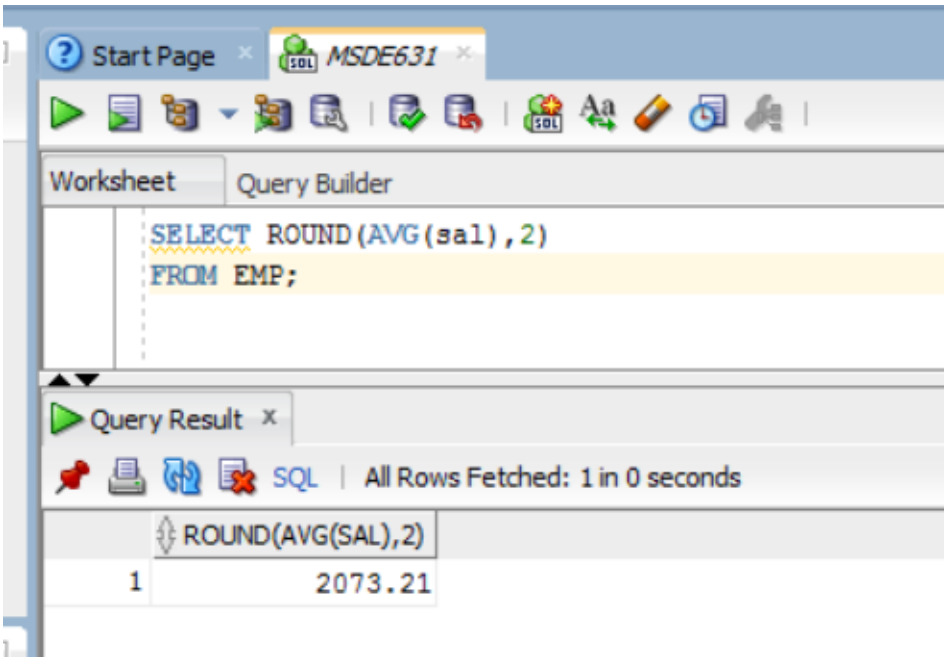
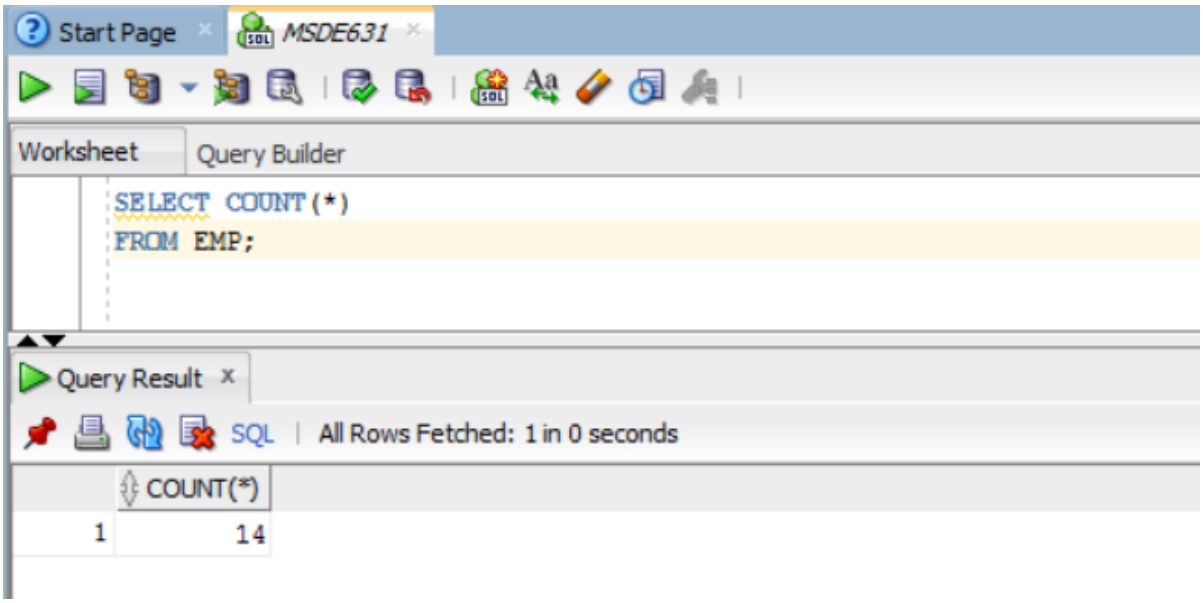
Aggregate Functions and Scalar functions

Below query would return the average salary from the EMP table.



This would return the number of records in the EMP table.



Next would return the maximum salary within (GROUP BY) each department in the EMP table.

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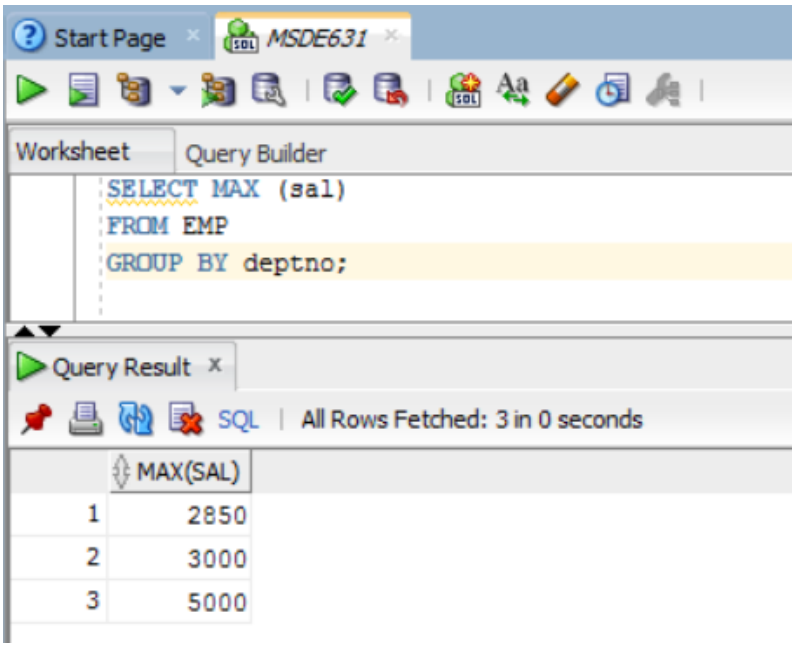
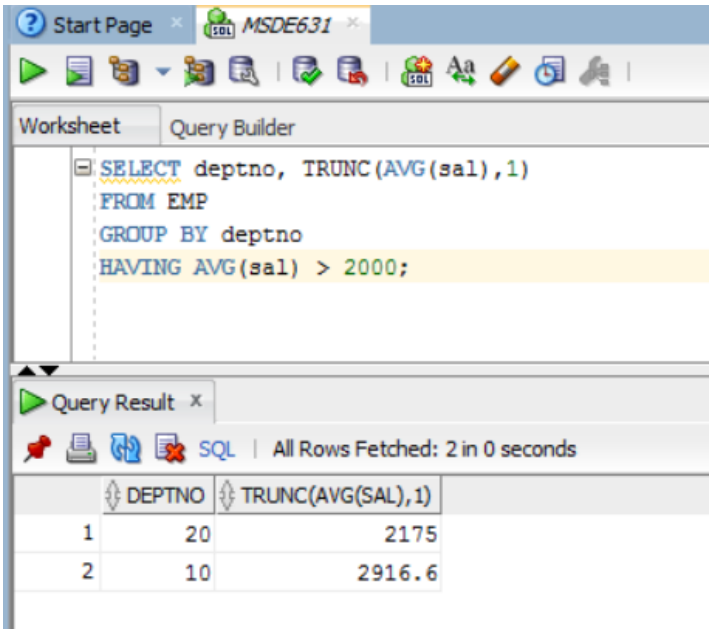


The HAVING clause further filters the data by the given criteria (here we only display records where the average department salary is more than 2,000.



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Next query returns employee names in lower case.

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Worksheet | Query Builder

```
SELECT lower(ename) FROM EMP;
```

Query Result

SQL | All Rows Fetched: 14 in 0 seconds

	LOWER(ENAME)
1	king
2	blake
3	clark
4	jones
5	scott
6	ford
7	smith
8	allen
9	ward
10	martin
11	turner
12	adams
13	james
14	miller

Below returns the salary column rounded to 2 decimal places.

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Worksheet | Query Builder

```
SELECT ROUND (sal,2) FROM EMP;
```

Query Result

SQL | All Rows Fetched: 14 in 0 seconds

	ROUND(SAL,2)
1	5000
2	2850
3	2450
4	2975
5	3000
6	3000
7	800
8	1600
9	1250
10	1250
11	1500
12	1100

Next query returns the names, job title and salary of people making more than the average salary:

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Worksheet | Query Builder

```
FROM EMP
WHERE sal >= (SELECT AVG(sal)
FROM EMP);
```

Query Result

SQL | All Rows Fetched: 6 in 0 seconds

	ENAME	JOB	SAL
1	KING	PRESIDENT	5000
2	BLAKE	MANAGER	2850
3	CLARK	MANAGER	2450
4	JONES	MANAGER	2975
5	SCOTT	ANALYST	3000
6	FORD	ANALYST	3000

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Views

Worksheet | Query Builder

```
CREATE OR REPLACE VIEW ATVIEW AS
SELECT a.ename, b.dname
FROM EMP a, DEPT b
WHERE a.deptno = b.deptno;
```

Query Result | Script Output

Task completed in 0.047 seconds

```
View RTMVIEW created.

View ATVIEW created.
```

Start Page | MSDE631

Worksheet | Query Builder

```
SELECT * FROM ATVIEW;
```

Script Output | Query Result

SQL | All Rows Fetched: 14 in 0 seconds

	ENAME	DNAME
1	CLARK	ACCOUNTING
2	MILLER	ACCOUNTING
3	KING	ACCOUNTING
4	FORD	RESEARCH
5	SCOTT	RESEARCH
6	JONES	RESEARCH
7	SMITH	RESEARCH
8	ADAMS	RESEARCH
9	WARD	SALES
10	MARTIN	SALES
11	TURNER	SALES
12	JAMES	SALES
13	ALLEN	SALES
14	BLAKE	SALES

Challenge:

Write two queries on your own using the tables found in the MSDE631 schema.

1) The first query will join the emp and dept tables together. The columns to include are shown below. Sort the results by ename. Your result set should match the results shown below exactly:

Connections

- Connections
  - MSDE631
- Oracle NoSQL Connections
- Database Schema Service Connections

Reports

- All Reports
  - Data Dictionary Reports
  - Data Modeler Reports
  - OLAP Reports
  - TimesTen Reports
  - User Defined Reports

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Worksheet | Query Builder

```
SELECT emp.ename, dept.dname, emp.job, emp.empno, emp.hiredate, dept.loc
FROM EMP, DEPT
WHERE emp.deptno = dept.deptno
ORDER BY ename;
```

Script Output | Query Result

SQL | All Rows Fetched: 14 in 0 seconds

	ENAME	DNAME	JOB	EMPNO	HIREDATE	LOC
1	ADAMS	RESEARCH	CLERK	7876	23-MAY-87	DALLAS
2	ALLEN	SALES	SALESMAN	7499	20-FEB-81	CHICAGO
3	BLAKE	SALES	MANAGER	7698	01-MAY-81	CHICAGO
4	CLARK	ACCOUNTING	MANAGER	7782	09-JUN-81	NEW YORK
5	FORD	RESEARCH	ANALYST	7902	03-DEC-81	DALLAS
6	JAMES	SALES	CLERK	7900	03-DEC-81	CHICAGO
7	JONES	RESEARCH	MANAGER	7566	02-APR-81	DALLAS
8	KING	ACCOUNTING	PRESIDENT	7839	17-NOV-81	NEW YORK
9	MARTIN	SALES	SALESMAN	7654	28-SEP-81	CHICAGO
10	MILLER	ACCOUNTING	CLERK	7934	23-JAN-82	NEW YORK
11	SCOTT	RESEARCH	ANALYST	7788	19-APR-87	DALLAS
12	SMITH	RESEARCH	CLERK	7369	17-DEC-80	DALLAS
13	TURNER	SALES	SALESMAN	7844	08-SEP-81	CHICAGO
14	WARD	SALES	SALESMAN	7521	22-FEB-81	CHICAGO

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2) For the second query, you might have to Google Oracle SQL commands to write the SQL to match the result set shown below. You will join the emp and dept tables together. The columns to include are shown below, notice that I changed the column names using column aliases. Sort the results descending order by the column named count_of_employees. Your result set should match the results shown below exactly: