/\*Prerequisites\*/

create tablespace tbs\_lab datafile 'db\_lab\_001.dat'

size 5M autoextend ON next 5M MAXSIZE 100M;

create user scott identified by 123456;

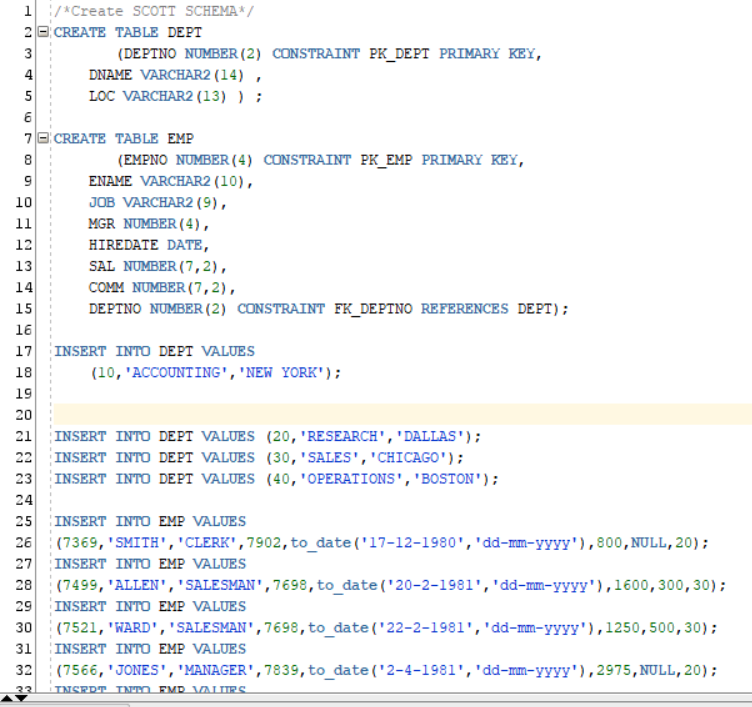
grant connect to scott;

grant resource to scott;

GRANT UNLIMITED TABLESPACE TO scott;

grant select on scott.dept to ANeveykov;

grant select on scott.emp to ANeveykov;



/\*Task\_1\*/

-- Step 1

create table t

( a int,

b varchar2(4000) default rpad('\*',4000,'\*'),

c varchar2(4000) default rpad('\*',4000,'\*')

)

/\*

RPAD вставка с дозаполнение справа.

Общий формат этой функции:

RPAD(string, length\_to\_make\_string, what\_to\_add\_to\_right\_of\_string)

SQL> SELECT RPAD( 'Буквы' , 20, '.' ) ОТ двойного;

RPAD( 'БУКВЫ' ,20,'.')

--------------------

Буквы.............

\*/

-- Step 2

insert into t (a) values ( 1);

insert into t (a) values ( 2);

insert into t (a) values ( 3);

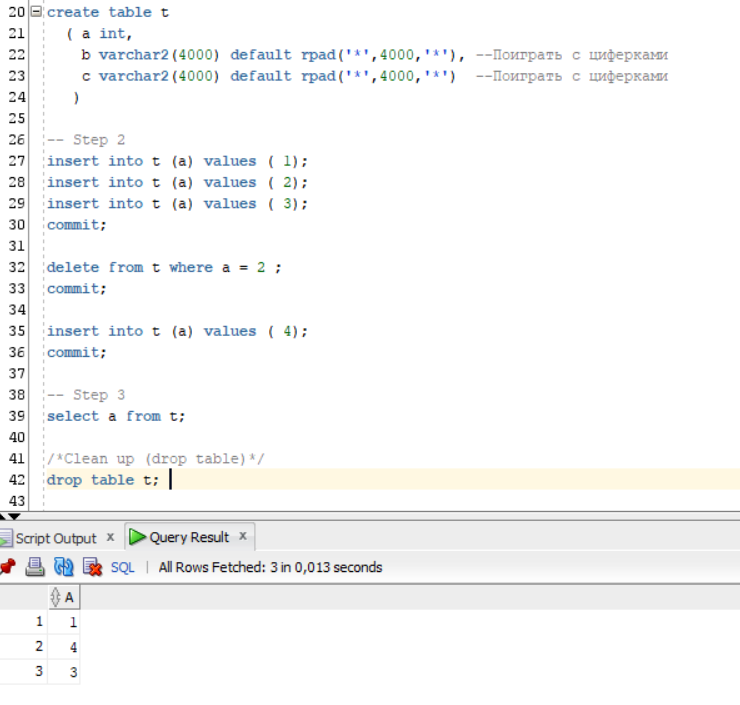
commit;

delete from t where a = 2 ;

commit;

insert into t (a) values ( 4);

commit;

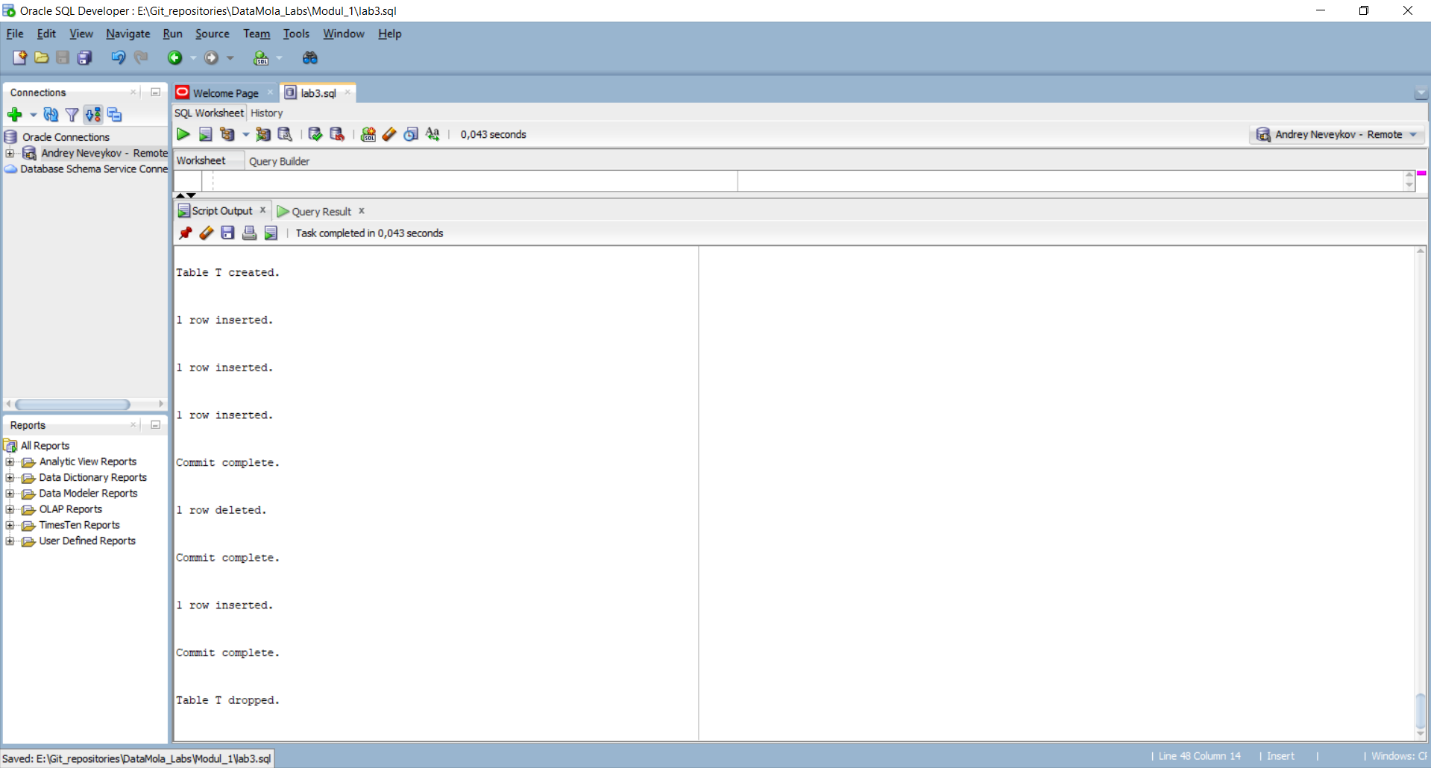


-- Step 3

select a from t;

/\*Clean up (drop table)\*/

drop table t;



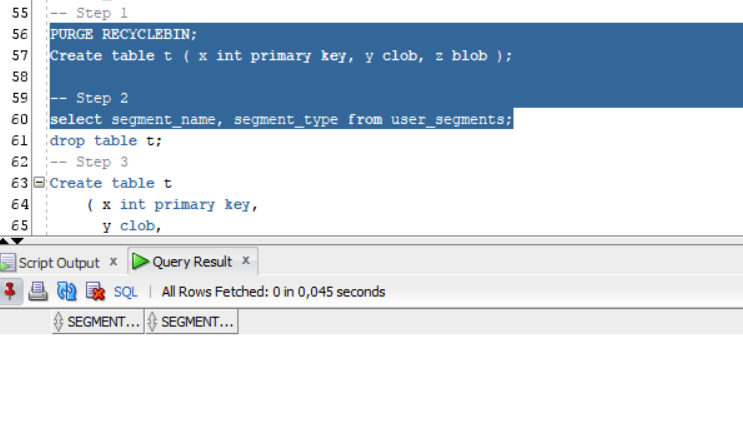
/\*Task\_2\*/

-- Step 1

Create table t ( x int primary key, y clob, z blob )

-- Step 2

select segment\_name, segment\_type from user\_segments;



drop table t;

-- Step 3

Create table t

( x int primary key,

y clob,

z blob )

SEGMENT CREATION IMMEDIATE /\*Спросить на паре\*/

-- Step 4

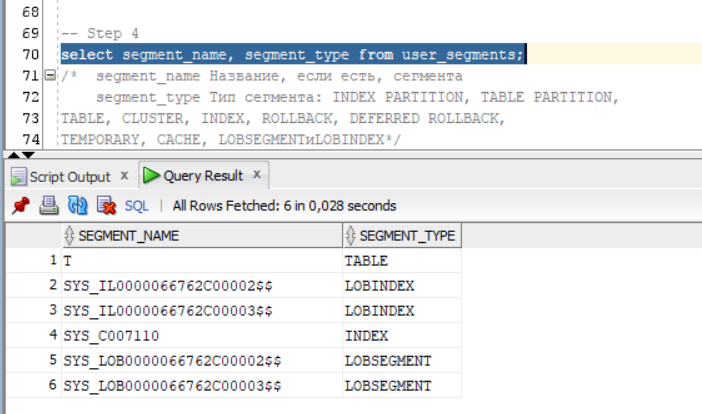
select segment\_name, segment\_type from user\_segments;

/\* segment\_name Название, если есть, сегмента

segment\_type Тип сегмента: INDEX PARTITION, TABLE PARTITION,

TABLE, CLUSTER, INDEX, ROLLBACK, DEFERRED ROLLBACK,

TEMPORARY, CACHE, LOBSEGMENTиLOBINDEX\*/



-- Step 5

SELECT DBMS\_METADATA.GET\_DDL('TABLE','T') FROM dual

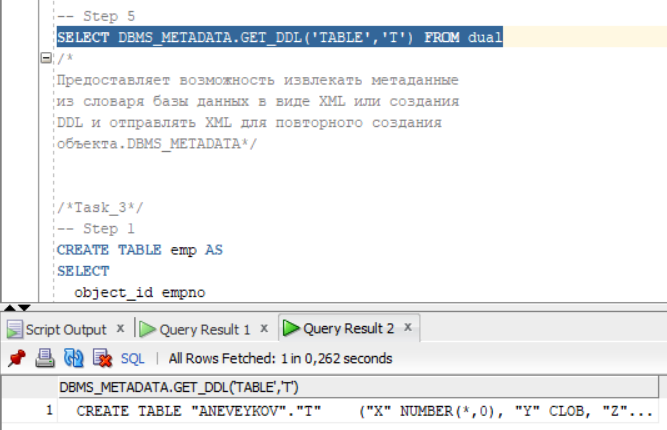
/\*

Предоставляет возможность извлекать метаданные

из словаря базы данных в виде XML или создания

DDL и отправлять XML для повторного создания

объекта.DBMS\_METADATA\*/



/\*Task\_3\*/

-- Step 1

CREATE TABLE emp AS

SELECT

object\_id empno

, object\_name ename

, created hiredate

, owner job

FROM

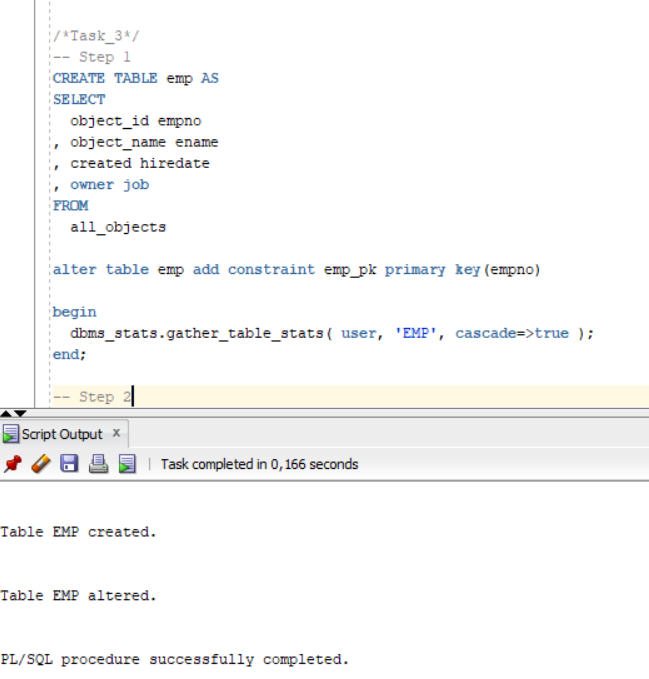
all\_objects

alter table emp add constraint emp\_pk primary key(empno)

begin

dbms\_stats.gather\_table\_stats( user, 'EMP', cascade=>true );

end;



-- Step 2

CREATE TABLE heap\_addresses

(

empno REFERENCES emp(empno) ON DELETE CASCADE

, addr\_type VARCHAR2(10)

, street VARCHAR2(20)

, city VARCHAR2(20)

, state VARCHAR2(2)

, zip NUMBER

, PRIMARY KEY (empno,addr\_type)

)

-- Step 3

CREATE TABLE iot\_addresses

(

empno REFERENCES emp(empno) ON DELETE CASCADE

, addr\_type VARCHAR2(10)

, street VARCHAR2(20)

, city VARCHAR2(20)

, state VARCHAR2(2)

, zip NUMBER

, PRIMARY KEY (empno,addr\_type)

)

ORGANIZATION INDEX

-- Step 4

INSERT INTO heap\_addresses

SELECT empno, 'WORK' , '123 main street' , 'Washington' , 'DC' , 20123 FROM emp;

INSERT INTO iot\_addresses

SELECT empno , 'WORK' , '123 main street' , 'Washington' , 'DC' , 20123 FROM emp;

--

INSERT INTO heap\_addresses

SELECT empno, 'HOME' , '123 main street' , 'Washington' , 'DC' , 20123 FROM emp;

INSERT INTO iot\_addresses

SELECT empno, 'HOME' , '123 main street' , 'Washington' , 'DC' , 20123 FROM emp;

--

INSERT INTO heap\_addresses

SELECT empno, 'PREV' , '123 main street' , 'Washington' , 'DC' , 20123 FROM emp;

INSERT INTO iot\_addresses

SELECT empno, 'PREV' , '123 main street' , 'Washington' , 'DC' , 20123 FROM emp;

--

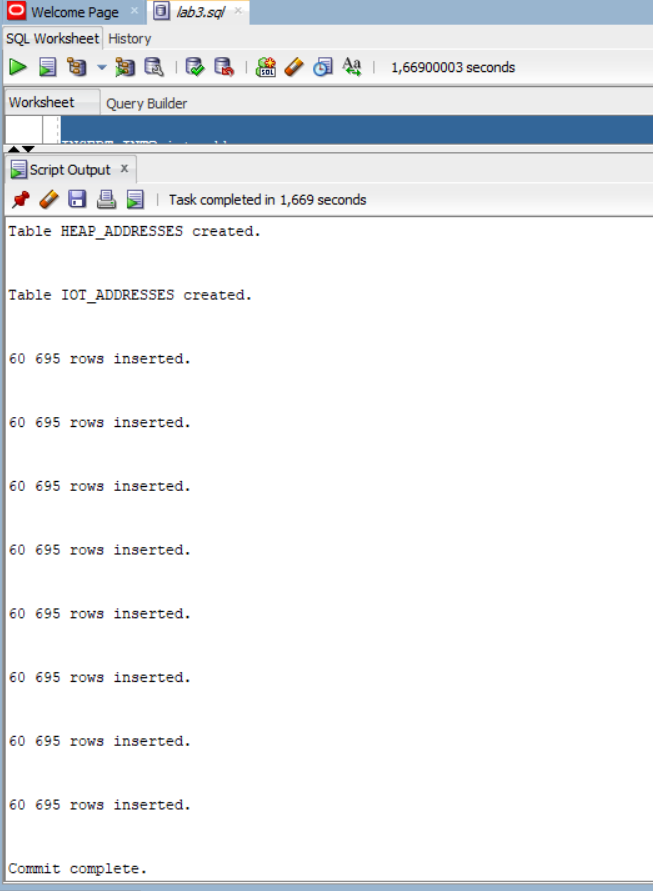
INSERT INTO heap\_addresses

SELECT empno, 'SCHOOL' , '123 main street' , 'Washington' , 'DC' , 20123 FROM emp;

INSERT INTO iot\_addresses

SELECT empno, 'SCHOOL' , '123 main street' , 'Washington' , 'DC' , 20123 FROM emp;

Commit;



-- Step 5

exec dbms\_stats.gather\_table\_stats(ANeveykov, 'HEAP\_ADDRESSES' );

exec dbms\_stats.gather\_table\_stats(ANeveykov, 'IOT\_ADDRESSES' );

-- Step 6

SELECT \*

FROM emp ,

heap\_addresses

WHERE emp.empno = heap\_addresses.empno

AND emp.empno = 42;

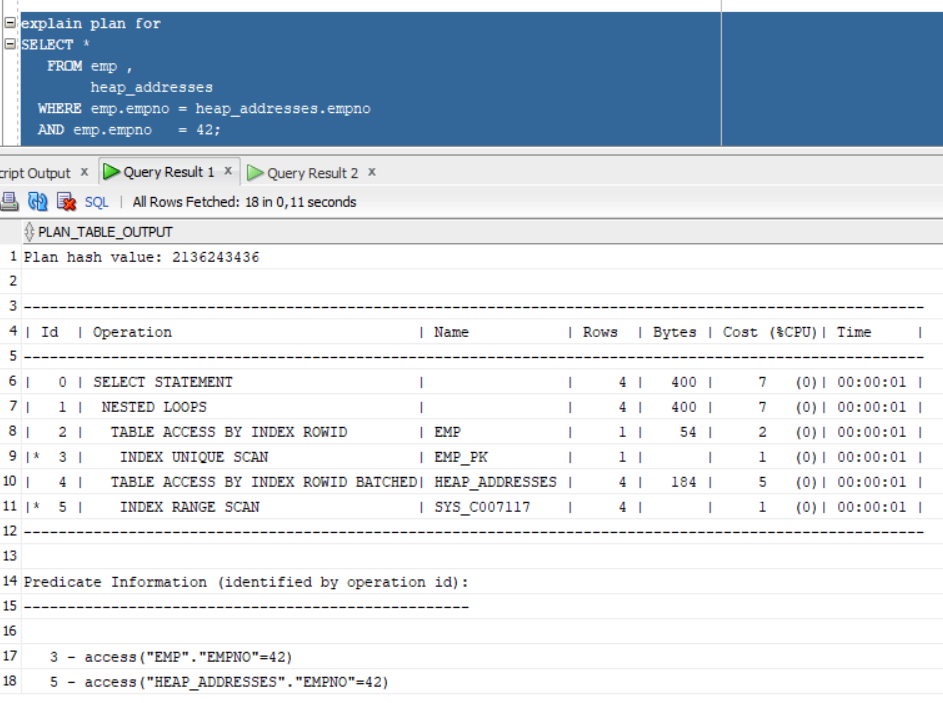
SELECT \*

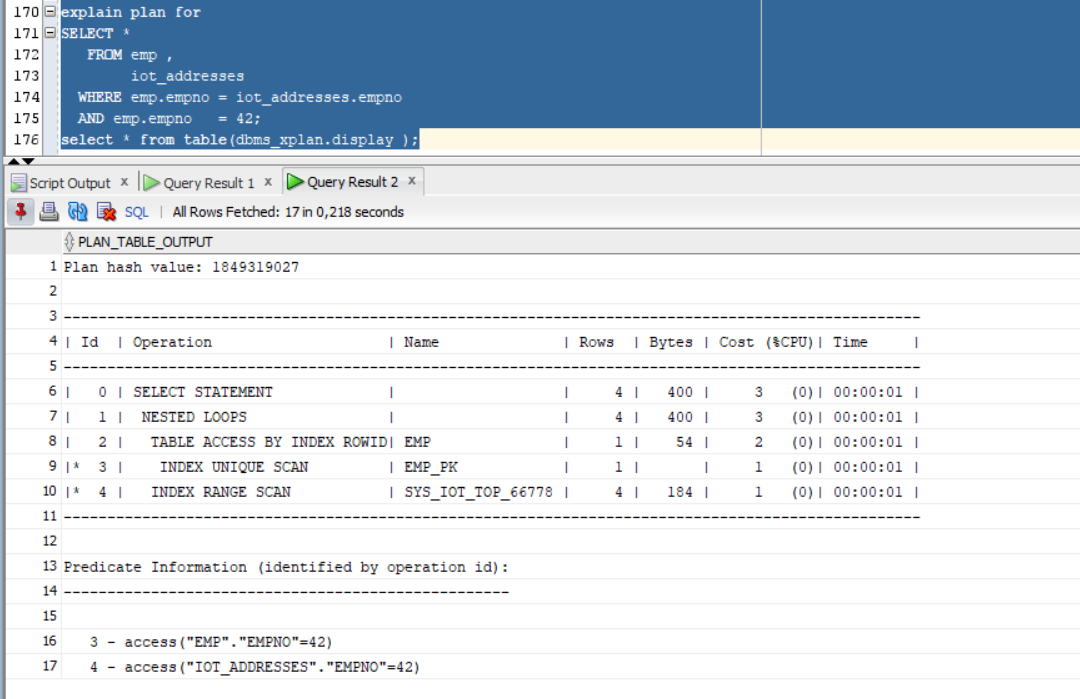
FROM emp ,

iot\_addresses

WHERE emp.empno = iot\_addresses.empno

AND emp.empno = 42;



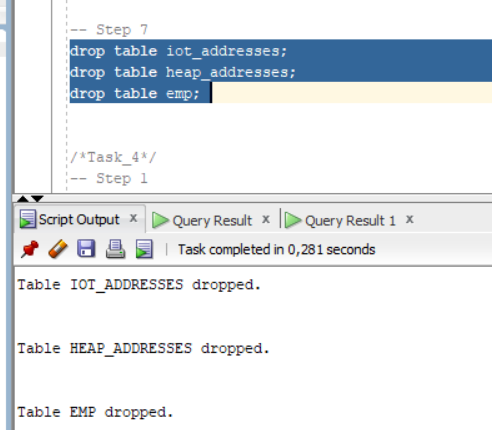


-- Step 7

drop table iot\_addresses;

drop table heap\_addresses;

drop table emp;



/\*Task\_4\*/

-- Step 1

CREATE cluster emp\_dept\_cluster( deptno NUMBER( 2 ) )

SIZE 1024

STORAGE( INITIAL 100K NEXT 50K );

-- Step 2

CREATE INDEX idxcl\_emp\_dept on cluster emp\_dept\_cluster;

-- Step 3

CREATE TABLE dept

(

deptno NUMBER( 2 ) PRIMARY KEY

, dname VARCHAR2( 14 )

, loc VARCHAR2( 13 )

)

cluster emp\_dept\_cluster ( deptno ) ;

CREATE TABLE emp

(

empno NUMBER PRIMARY KEY

, ename VARCHAR2( 10 )

, job VARCHAR2( 9 )

, mgr NUMBER

, hiredate DATE

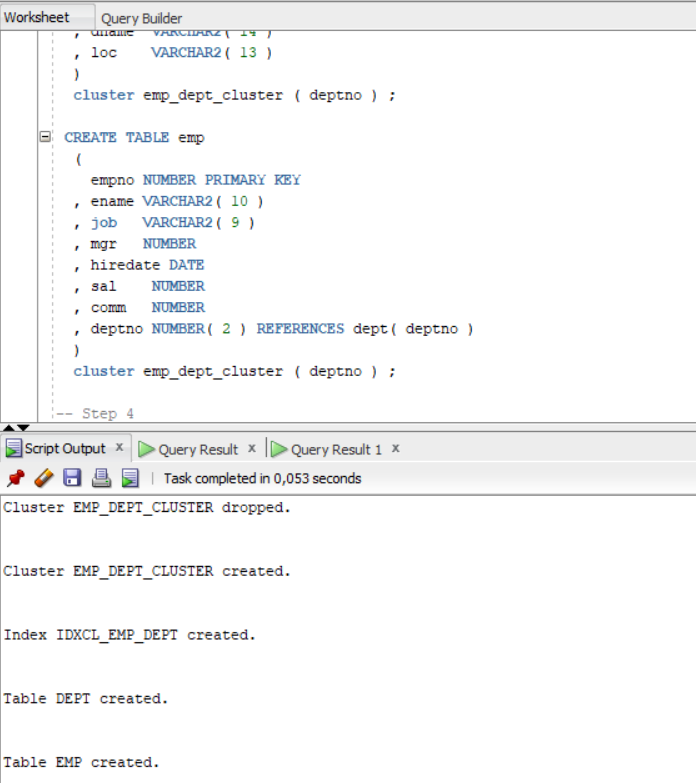
, sal NUMBER

, comm NUMBER

, deptno NUMBER( 2 ) REFERENCES dept( deptno )

)

cluster emp\_dept\_cluster ( deptno ) ;



-- Step 4

INSERT INTO dept( deptno , dname , loc)

SELECT deptno , dname , loc

FROM scott.dept;

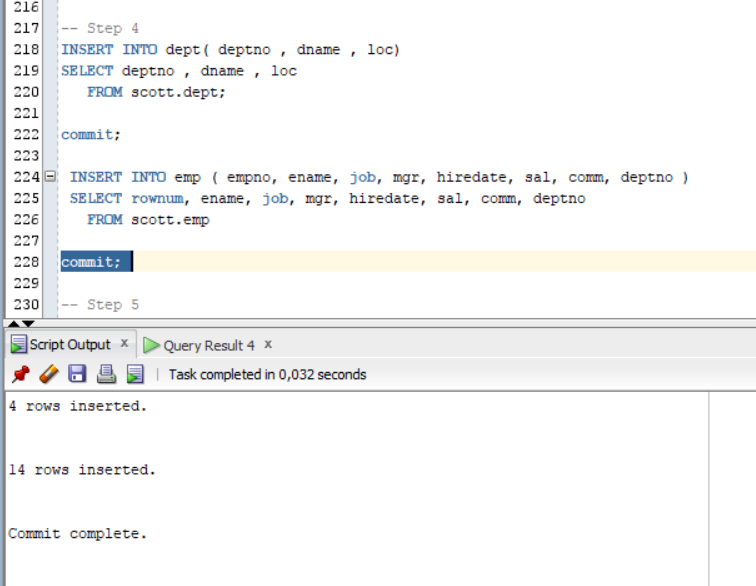
commit;

INSERT INTO emp ( empno, ename, job, mgr, hiredate, sal, comm, deptno )

SELECT rownum, ename, job, mgr, hiredate, sal, comm, deptno

FROM scott.emp

commit;



-- Step 5

SELECT \*

FROM

(

SELECT dept\_blk, emp\_blk, CASE WHEN dept\_blk <> emp\_blk THEN '\*' END flag, deptno

FROM

(

SELECT dbms\_rowid.rowid\_block\_number( dept.rowid ) dept\_blk, dbms\_rowid.rowid\_block\_number( emp.rowid ) emp\_blk, dept.deptno

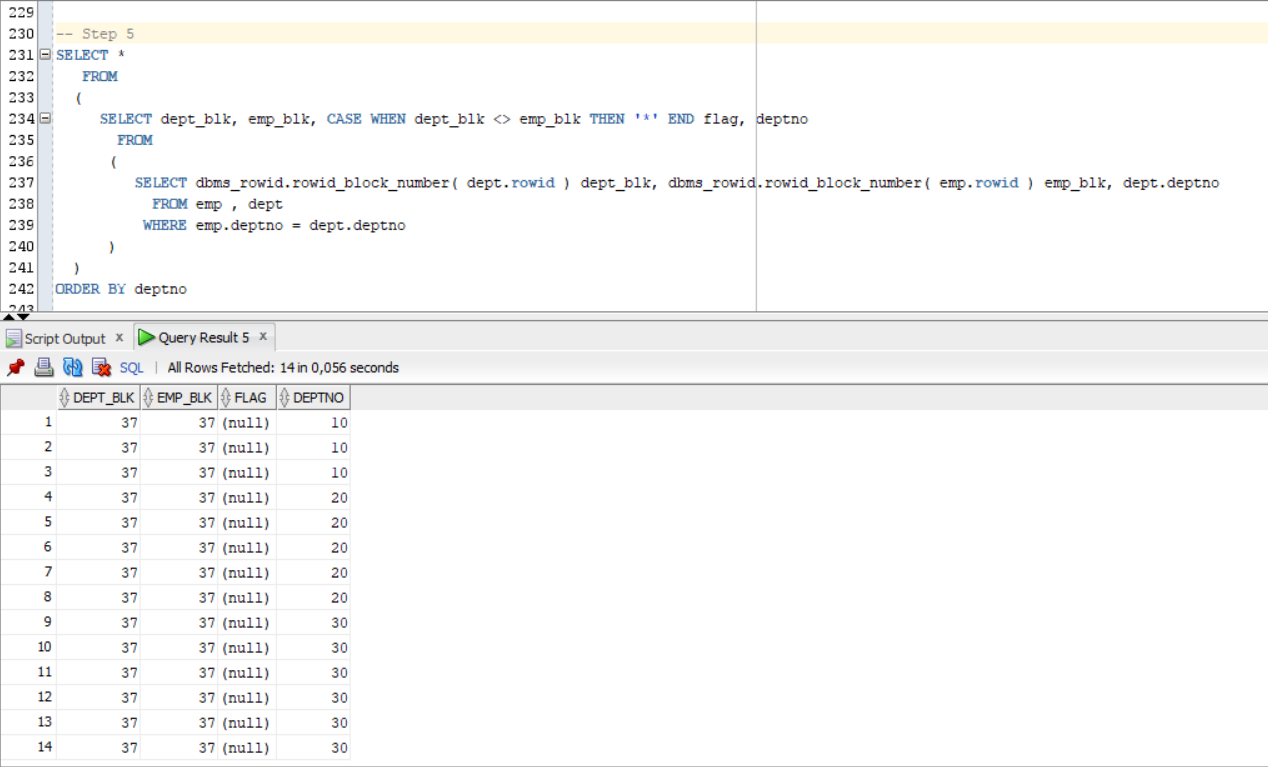
FROM emp , dept

WHERE emp.deptno = dept.deptno

)

)

ORDER BY deptno



-- Step 6

drop table emp;

drop table dept;

drop cluster emp\_dept\_cluster;

