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TASK 1

The task is to create a tablespace and a user and assign that tablespace to that user. Then create 3 tables to that tablespace.

Create another tablespace and assign T4 to that new tablespace.

Code:

create tablespace newtable

datafile ‘C:\Users\CSE.CSE-L1-PC-08\Desktop\temp\ooo\table.dbf’ size 50m

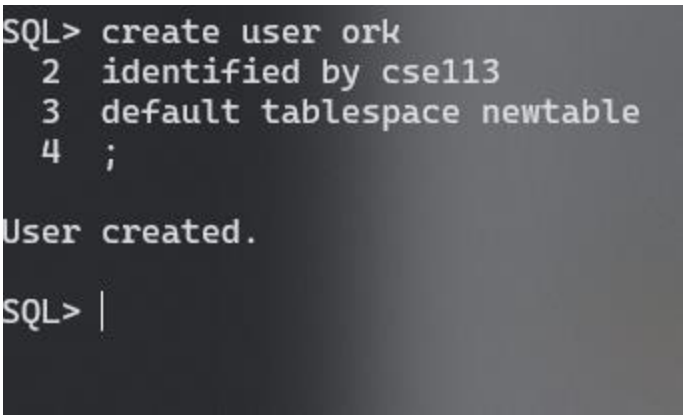
extent management local autoallocate;

```
SQL> create tablespace newtable
  2  datafile 'C:\Users\CSE.CSE-L1-PC-08\Desktop\temp\ooo\table.dbf' size 50m
  3  extent management local autoallocate;

Tablespace created.
```

create user ork

identified by cse113

default tablespace newtable;




```
create table T1(
        id1 int primary key,
         name1 varchar(20)
  ) tablespace newtable;
create table T2(
        id2 int primary key,
         name2 varchar(20)
  ) tablespace newtable;
create table T3(
        id3 int primary key,
         name3 varchar(20)
  ) tablespace newtable;
```

```
create tablespace newtable2
datafile 'C:\Users\CSE.CSE-L1-PC-08\Desktop\temp\ooo\table2.dbf' size 50m
```

extend management local autoallocate;

```
create table T4(
        id4 int primary key,
         name4 varchar(20)
  ) tablespace newtable2;
```

```
SQL> create tablespace newtable2
  2  datafile 'C:\Users\CSE.CSE-L1-PC-08\Desktop\temp\ooo\table2.dbf' size 50m
  3  extent management local autoallocate;

Tablespace created.

SQL> create table T4(
  2  id4 int primary key,
  3  name4 varchar(20)
  4  ) tablespace newtable2;

Table created.
```

```
SQL> select * from emp;

        ID NAME                 PHNNUMBER
---------- -------------------- ----------
         1 alo                  01234567893
         2 alom                 01234567990
         3 aloma                01235567990
         4 aloman               01235566990
         5 alomani              01405566990
         6 alomanik             01505566990
         7 alomanika            01605566990
         8 alomanikar           01705566990
         9 alomanikar           01805566990
        10 alomanikara          01405666990
        11 alomanikaram         01405666994

        ID NAME                 PHNNUMBER
---------- -------------------- ----------
        12 alomanikarama        01405666993
```

TASK 2

The task is to create a table of employees and populate it with their name, SSN and phone number. Then from that table I have to find those employees whose phone number end with 990.

```
create table emp(
        id int primary key,
        name varchar2(20),
        phnNumber varchar(11),
        constraint ckh_phn check( phnNumber like '01%' and length(phnNumber)=11)
 );
```

```
SQL> create table emp(
  2  id int primary key,
  3  name varchar2(20),
  4  phnNumber varchar(11),
  5  constraint ckh_phn check( phnNumber like '01%' and length(phnNumber)=11)
  6  );

Table created.
```

To query those numbers ending with 990 we use the like operator and regex % to find the numbers which satisfies the condition.

```
SQL> select * from emp where phnNUmber like '%990';

        ID NAME                      PHNNUMBER
---------- ------------------------- ----------
         2 alom                      01234567990
         3 aloma                     01235567990
         4 aloman                    01235566990
         5 alomani                   01405566990
         6 alomanik                  01505566990
         7 alomanika                 01605566990
         8 alomanikar                01705566990
         9 alomanikar                01805566990
        10 alomanikara               01405666990

9 rows selected.
```

TASK 3

The task is to show left outer join, right outer join, natural join and Cartesian join.

So I have created two tables student and department.

```
SQL> create table department(
  2  id int primary key,
  3  name varchar2(6),
  4  budget int);

Table created.
```

```
SQL> create table student(
  2  id int primary key,
  3  name varchar2(36),
  4  dept_id int,
  5  foreign key (dept_id) references department(id)
  6  );

Table created.
```

The student table has to have a foreign key referencing dept_id from the department table.

Also I have inserted appropriate values into the tables.

Left Outer Join:

select
student.id,student.name,department.name,student.dept_id

from student left outer join department

on student.dept_id = department.id;

```
SQL> select student.id,student.name,department.name,student.dept_id
  2  from student
  3  left outer join department
  4  on student.dept_id = department.id;

        ID NAME                                               NAME       DEPT_ID
---------- -------------------------------------------------- ------ ----------
         1 alo                                                CSE             1
         5 alomana                                            EEE             2
         2 alom                                               EEE             2
         4 aloman                                             MPE             3
         3 aloma                                              MPE             3
```

Right Outer Join:

select student.id,student.name,department.id,department.name,department.budget

from student right outer join department on student.dept_id = department.id;

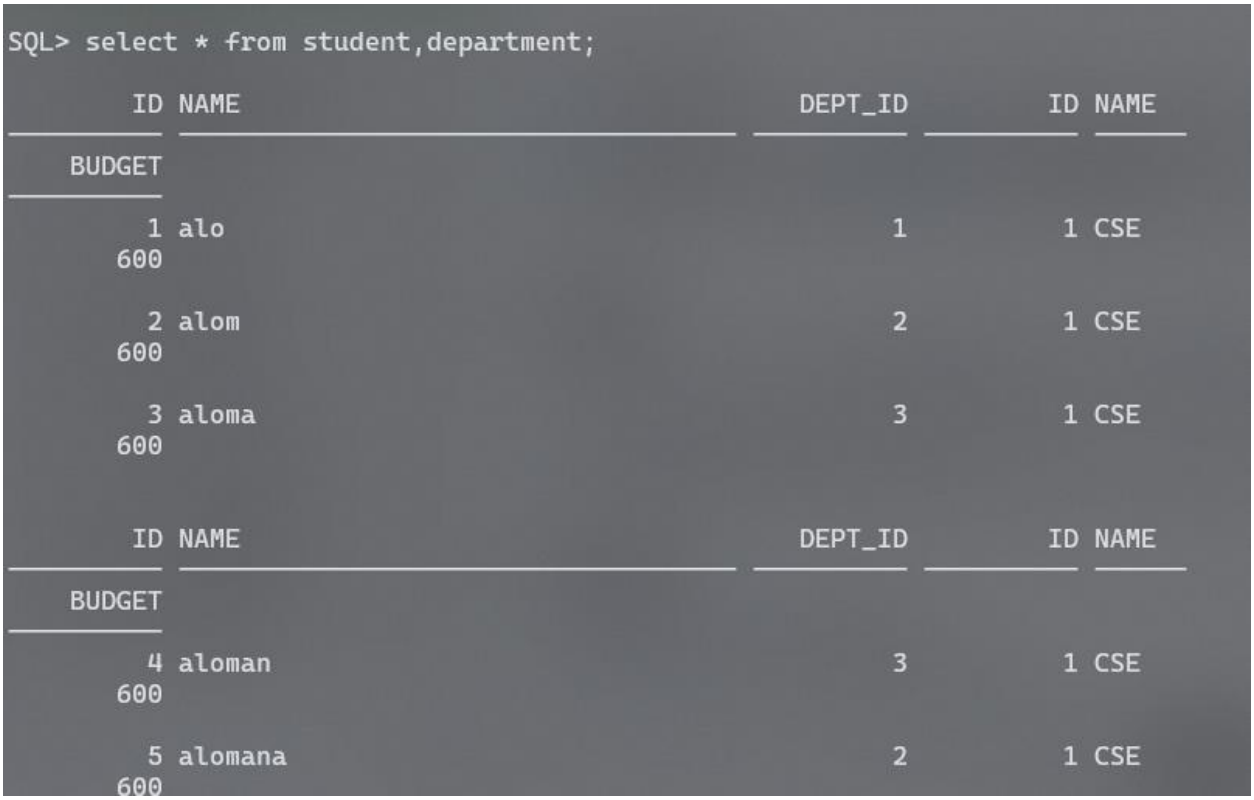
```
SQL> select student.id,student.name,department.id,department.name,department.budget
  2  from student right outer join department on student.dept_id = department.id;

        ID NAME                                                 ID NAME       BUDGET
---------- -------------------------------------------------- ---------- ------ ----------
         1 alo                                                 1 CSE           600
         2 alom                                                2 EEE           700
         3 aloma                                               3 MPE           500
         4 aloman                                              3 MPE           500
         5 alomana                                             2 EEE           700
                                                               4 CEE           200

6 rows selected.
```

Natural Join:

select * from student natural join department;

Cartesian Product:

select * from student,department;



```
SQL> select * from student,department;

        ID NAME                                          DEPT_ID         ID NAME
---------- ---------------------------------------- ---------- ---------- -----
    BUDGET
----------
         1 alo                                               1          1 CSE
       600

         2 alom                                              2          1 CSE
       600

         3 aloma                                             3          1 CSE
       600


        ID NAME                                          DEPT_ID         ID NAME
---------- ---------------------------------------- ---------- ---------- -----
    BUDGET
----------
         4 aloman                                            3          1 CSE
       600

         5 alomana                                           2          1 CSE
       600
```

ID	NAME	DEPT_ID	ID	NAME	BUDGET
4	aloman	3	1	CSE	600
5	alomana	2	1	CSE	600
1	alo	1	2	EEE	700

ID	NAME	DEPT_ID	ID	NAME	BUDGET
2	alom	2	2	EEE	700
3	aloma	3	2	EEE	700
4	aloman	3	2	EEE	700

ID	NAME	DEPT_ID	ID	NAME	BUDGET
5	alomana	2	2	EEE	700
1	alo	1	3	MPE	500
2	alom	2	3	MPE	500

ID	NAME	DEPT_ID	ID	NAME	BUDGET
3	aloma	3	3	MPE	500
4	aloman	3	3	MPE	500
5	alomana	2	3	MPE	500

ID	NAME	DEPT_ID	ID	NAME	BUDGET
1	alo	1	4	CEE	200
2	alom	2	4	CEE	200
3	aloma	3	4	CEE	200

ID	NAME	DEPT_ID	ID	NAME	BUDGET
4	aloman	3	4	CEE	200
5	alomana	2	4	CEE	200