

Database Systems Lab - 14CS2012

REGISTER NO: UR14CS228

DATE: 31-10-16

EXPERIMENT-NO 9

Video Link : <https://youtu.be/kCpEj4YB7yU>

AIM:

To create indexes and procedures for the following requirements.

DESCRIPTION:

Indexes are special lookup tables that the database search engine can use to speed up data retrieval. Simply put, an index is a pointer to data in a table. An index in a database is very similar to an index in the back of a book.

Sequence is a feature supported by some database systems to produce unique values on demand. Some DBMS like MySQL supports AUTO_INCREMENT in place of Sequence. AUTO_INCREMENT is applied on columns, it automatically increments the column value by 1 each time a new record is entered into the table. Sequence is also some what similar to AUTO_INCREMENT but its has some extra features.

Program:

1. Create Index on city column of the customer table.

```
create INDEX I1 ON customer(city);
```

2. Create index on order_id column of the order table.

```
create INDEX I2 ON order1(customer_id);
```

3. Create a composite index on product table on attributes product_id and product_description.

```
create index i3 ON product(product_id,product_description);
```

4. Create a functional index on customer table on attribute cname(upper case)

```
create index i4 ON customer(UPPER(customer_name));
```

5.Create a bit map index on the gender field of the supplier table.

```
create bitmap index i5 on supplier(gender);
```

6.Drop the last created Index.

```
Drop index i5
```

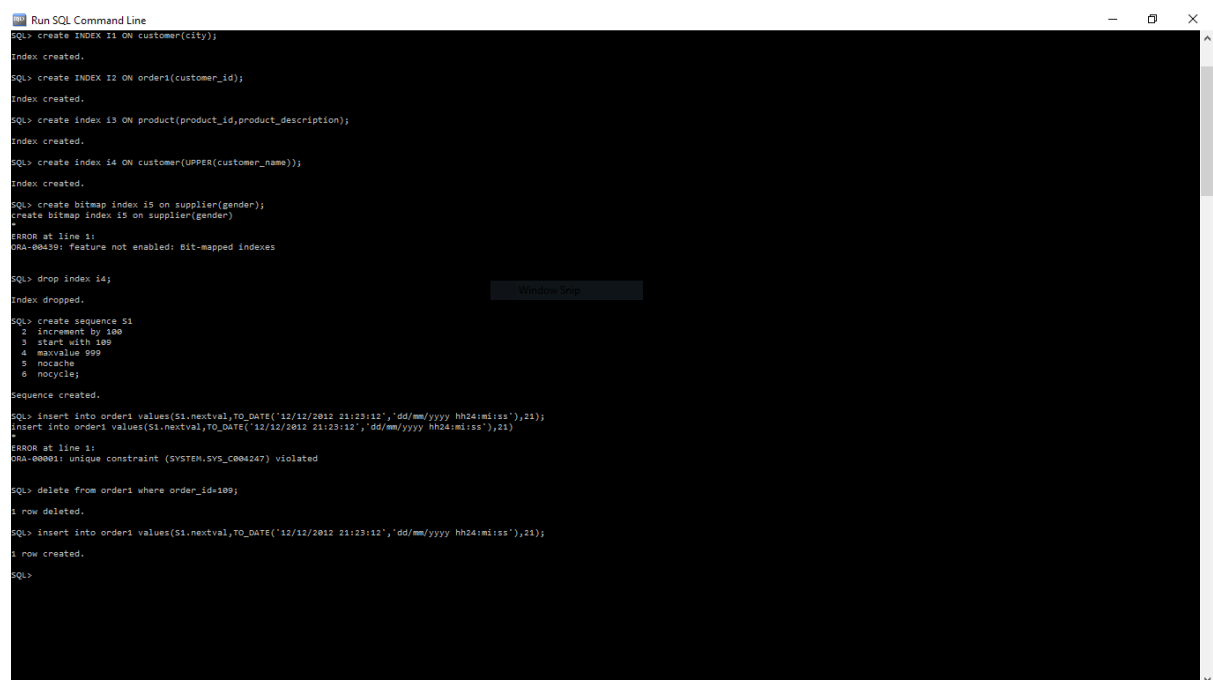
7. Create a sequence in the order-id of the order table.

```
create sequence S1  
increment by 100  
start with 109  
maxvalue 999  
nocache  
nocycle;
```

8. Insert values into the order table and for order_id use the sequence number.

```
insert into order1 values(S1.nextval,TO_DATE('12/12/2012  
21:23:12','dd/mm/yyyy hh24:mi:ss'),21);
```

Output:



```
Run SQL Command Line
SQL> create INDEX i1 ON customer(city);
Index created.
SQL> create INDEX i2 ON order1(customer_id);
Index created.
SQL> create index i3 ON product(product_id,product_description);
Index created.
SQL> create index i4 ON customer(UPPER(customer_name));
Index created.
SQL> create bitmap index i5 on supplier(gender);
create bitmap index i5 on supplier(gender)
*
ERROR at line 1:
ORA-00439: feature not enabled: Bit-mapped indexes

SQL> drop index i4;
Index dropped.

SQL> create sequence S1
  2 increment by 100
  3 start with 109
  4 maxvalue 999
  5 nocache
  6 nocycle;
Sequence created.

SQL> insert into order1 values(S1.nextval,TO_DATE('12/12/2012 21:23:12','dd/mm/yyyy hh24:mi:ss'),21);
insert into order1 values(S1.nextval,TO_DATE('12/12/2012 21:23:12','dd/mm/yyyy hh24:mi:ss'),21)
*
ERROR at line 1:
ORA-00001: unique constraint (SYSTEM.SYS_C004247) violated

SQL> delete from order1 where order_id=109;
1 row deleted.

SQL> insert into order1 values(S1.nextval,TO_DATE('12/12/2012 21:23:12','dd/mm/yyyy hh24:mi:ss'),21);
1 row created.

SQL>
```

Result:

Indexes and sequences were successfully created and tested for all the different situations