Ex.No.: 15	
Date: 18/10/24	OTHER DATABASE OBJECTS

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Objectives

After the completion of this exercise, the students will be able to do the following:
• Create, maintain, and use sequences
• Create and maintain indexes

Database Objects

Many applications require the use of unique numbers as primary key values. You can either build code into the application to handle this requirement or use a sequence to generate unique numbers.
If you want to improve the performance of some queries, you should consider creating an index. You
can also use indexes to enforce uniqueness on a column or a collection of columns.
You can provide alternative names for objects by using synonyms.

What Is a Sequence?
A sequence:
• Automatically generates unique numbers
• Is a sharable object
• Is typically used to create a primary key value
• Replaces application code
• Speeds up the efficiency of accessing sequence values when cached in memory

The CREATE SEQUENCE Statement Syntax

Define a sequence to generate sequential numbers automatically:

CREATE SEQUENCE sequence
[INCREMENT BY n]
[START WITH n]
[{MAXVALUE n | NOMAXVALUE}]
[{MINVALUE n | NOMINVALUE}]
[{CYCLE | NOCYCLE}]
[{CACHE n | NOCACHE}];
In the syntax:
sequence is the name of the sequence generator

```sql
1. CREATE  SEQUENCE DEPT-ID-SEQ
   INCREMENT BY 10
   START WITH 200
   MAX VALUE 1000
   NOCACHE
   NO CYCLE;


2. SELECT
       Sequence-name,
       max-value,
       increment-by,
       last-number
   FROM
       uses-sequences
   WHERE
       Sequence-name = 'Dept-ID-SEQ';


3. INSERT INTO DEPT (DEPT-ID, DEPT-NAME)
   VALUES (DEPT-ID-SEQ.NEXTUAL, 'Education');

   INSERT INTO DEPT (DEPT-ID, DEPT-NAME)
   VALUES (DEPT-ID-SEQ.NEXTUAL, 'Health care');


4. CREATE INDEX emp-dept-id-idx
   ON EMP (DEPT-ID);
```

```
5. SELECT
       index_name,
       uniqueness
   FROM
       uses_indexes
   WHERE
       table_name = 'EMP';
```

3. Write a script to insert two rows into the DEPT table. Name your script lab12_3.sql. Be sure to use the sequence that you created for the ID column. Add two departments named Education and

Administration. Confirm your additions. Run the commands in your script.

4. Create a nonunique index on the foreign key column (DEPT_ID) in the EMP table.

5. Display the indexes and uniqueness that exist in the data dictionary for the EMP table.

Evaluation Procedure	Marks awarded
PL/SQL Procedure(5)	5
Program/Execution (5)	5
Viva(5)	5
Total (15)	15
Faculty Signature	