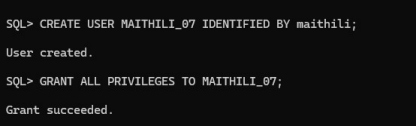
**DWBI**

Aim : Implementing cluster based tables in Oracle.

CREATING A USER:

Q1. Do as directed:

a. Create a cluster PERSONNEL containing copy\_emp and copy\_dept tables. Cluster key is deptno.

CREATE CLUSTER personnel (deptno NUMBER(4))

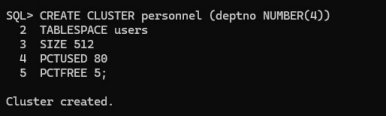
TABLESPACE users

SIZE 512

PCTUSED 80

PCTFREE 5;

1

CREATE TABLE copy\_dept (

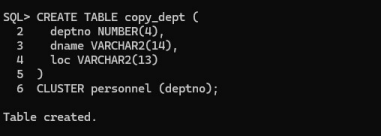
deptno NUMBER(4),

dname VARCHAR2(14),

loc VARCHAR2(13)

)

CLUSTER personnel (deptno);

CREATE TABLE copy\_emp (

empno NUMBER(4),

ename VARCHAR2(10),

job VARCHAR2(9),

mgr NUMBER(4),

hiredate DATE,

sal NUMBER(7, 2),

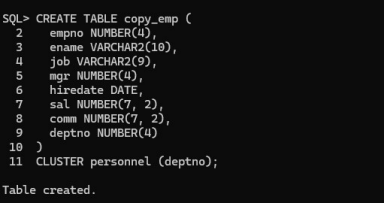
comm NUMBER(7, 2),

deptno NUMBER(4)

2

)

CLUSTER personnel (deptno);



b. create a index on cluster PERSONNEL.

CREATE INDEX idx\_personnel\_cluster ON CLUSTER personnel;



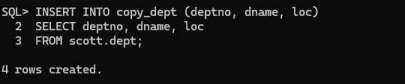
c. Populate copy\_emp and copy\_dept with data from emp and dept tables of SCOTT schema, respectively.

INSERT INTO copy\_dept (deptno, dname, loc)

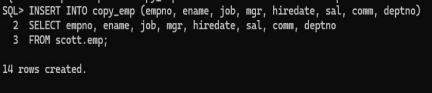
SELECT deptno, dname, loc

FROM scott.dept;

3

INSERT INTO copy\_emp (empno, ename, job, mgr, hiredate, sal, comm, deptno) SELECT empno, ename, job, mgr, hiredate, sal, comm, deptno

FROM scott.emp;



d. Create a dumkmy table &quot;dummy&quot; which references empno of copy\_emp.

ALTER TABLE copy\_emp ADD CONSTRAINT pk\_copy\_emp PRIMARY KEY (empno);

CREATE TABLE dummy (

dummy\_id NUMBER(4),

empno NUMBER(4),

CONSTRAINT fk\_dummy\_emp FOREIGN KEY (empno) REFERENCES copy\_emp (empno) );

4

e. Drop cluster PERSONNEL.

DROP CLUSTER personnel INCLUDING TABLES CASCADE CONSTRAINTS;



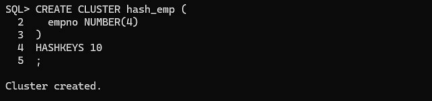
f. Create a hash cluster named hash\_emp containing table copy101\_emp. Create 10 hashkeys and use the hash function (empno mod 100).

CREATE CLUSTER hash\_emp (

empno NUMBER(4)

)

HASHKEYS 10;



CREATE TABLE copy101\_emp (

empno NUMBER(4),

ename VARCHAR2(10),

job VARCHAR2(9),

mgr NUMBER(4),

hiredate DATE,

sal NUMBER(7, 2),

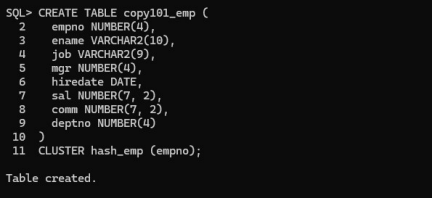
5

comm NUMBER(7, 2),

deptno NUMBER(4)

)

CLUSTER hash\_emp (empno);

Q2. Do as directed:

a. Create a hash cluster named trial\_cluster that stores a single table called trial, clustered by the trialno column (the cluster key).

CREATE TABLESPACE tsa1

DATAFILE 'tsa1\_datafile.dbf'

SIZE 50M

AUTOEXTEND ON

NEXT 10M

MAXSIZE UNLIMITED;

6

CREATE CLUSTER trial\_cluster (

trialno NUMBER(\*,0)

)

HASHKEYS 150

HASH IS (trialno)

TABLESPACE users;



b. The hash cluster must have 150 unique hash values that are be generated by a user defined hash function.

CREATE OR REPLACE FUNCTION my\_hash\_function(trialno NUMBER)

RETURN NUMBER

IS

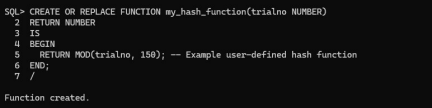
BEGIN

RETURN MOD(trialno, 150);

END;

7

/



c. Store the cluster in tablespace tsa1.

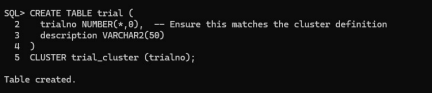
CREATE TABLE trial (

trialno NUMBER(\*,0),

description VARCHAR2(50)

)

CLUSTER trial\_cluster (trialno);



CONCLUSION:

In this practical, we successfully created and managed database clusters and users in Oracle SQL Plus, doing tasks such as creating users, granting privileges, and setting up data clusters,creating clusters, setting up indexes and hash clusters, inserting records into it from scott, altering it and dropping it as well.

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