**Advance Database Management System Lab**

**Experiment- 7**

**To understand the concepts of Index**

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**Batch- 2**

---1) Create an index of name employee\_idx on EMPLOYEES with column Last\_Name, Department\_id

CREATE DATABASE LabExperiment7;

USE LabExperiment7;

CREATE TABLE EMPLOYES( Employee\_id VARCHAR(10) NOT NULL PRIMARY KEY, First\_Name VARCHAR(30) NOT NULL, Last\_Name VARCHAR(30) NOT NULL, DOB Date, salary DECIMAL(25,0) NOT NULL, Department\_id VARCHAR(10) )

insert into EMPLOYES values(7499, 'ALLEN','Narayan', '20-FEB-81',1600,'CSE');

SELECT \* FROM EMPLOYES;

insert into EMPLOYES values(7521, 'WARD', 'S', '22-FEB-81', 125000, 'AIML');

insert into EMPLOYES values(7566, 'JONES','Wong','02-APR-81',297500,'AIML');

insert into EMPLOYES values(7654, 'MARTIN', 'SALMAN','28-SEP-81',125000,'CIVIL');

insert into EMPLOYES values(7698, 'BLAKE', 'NAGER','01-MAY-81',285000,'BIGDATA');

insert into EMPLOYES values(7782, 'CLARK', 'MAGER','09-JUN-81',245000, 'BIGDATA');

insert into EMPLOYES values(7788, 'SCOTT', 'ANAL','09-DEC-82',300000,'ME');

insert into EMPLOYES values(7839, 'KING', 'PRESIDENT','17-NOV-81',500000,'AIML');

CREATE INDEX employee\_idx on EMPLOYES(Last\_Name, Department\_id)

Output:



--2) Find the ROWID for the above table and create a unique index on employee\_id column of the EMPLOYEES.

CREATE UNIQUE INDEX EMP\_UNI ON EMPLOYES(Employee\_id)

---3) Create a reverse index on employee\_id column of the EMPLOYEES.

CREATE INDEX EMP\_REVERSE ON EMPLOYES(First\_name) REVERSE;

---4) Create a unique and composite index on employee\_id and check whether there is duplicity of tuples or not.

CREATE INDEX employee\_comp on EMPLOYES(First\_Name,Last\_Name, DOB,salary);

CREATE UNIQUE INDEX emp\_comp on EMPLOYES(First\_Name,Last\_Name, DOB,salary);

--5) Create Function-based indexes defined on the SQL functions UPPER(column\_name) or LOWER(column\_name) to facilitate case-insensitive searches(on column Last\_Name).

CREATE TABLE EMPLOYEE( Employee\_id VARCHAR(10) NOT NULL PRIMARY KEY, First\_Name VARCHAR(30) NOT NULL, Last\_Name VARCHAR(30) NOT NULL, Last\_Name\_upper as UPPER(Last\_Name), First\_name\_lower as LOWER(First\_Name), DOB Date, salary DECIMAL(25,0) NOT NULL, Department\_id VARCHAR(10) )

insert into EMPLOYEE values(7566, 'jones','wong','02-APR-81',297500,'AIML');

insert into EMPLOYEE values(7788, 'scott', 'anal','09-DEC-82',300000,'ME');

insert into EMPLOYEE values(7654, 'MARTIN', 'fox','28-SEP-81',125000,'CIVIL');

SELECT \* FROM EMPLOYEE;

CREATE UNIQUE INDEX emp\_fun\_index ON EMPLOYEE(Last\_Name\_upper);

SELECT Employee\_id, First\_Name, DOB,salary from EMPLOYEE where UPPER(Last\_Name)= 'WONG';

Output:



--6) Drop the function based index on column Last\_Name.

DROP INDEX emp\_fun\_index ON EMPLOYEE;

CREATE CLUSTERED INDEX emp\_clust on employes(First\_Name);

CREATE TABLE DEPARTMENT ( Dname VARCHAR(15) NOT NULL, Dnumber INT NOT NULL, Mgr\_ssn CHAR(9) NOT NULL, Mgr\_start\_date DATE );

CREATE CLUSTERED INDEX DEPT\_clust on DEPARTMENT(Dname);