Delhi Technological University
(Formerly Delhi College of Engineering)
Shahbad Daulatpur, Bawana Road, Delhi 110042

Department Of Applied Mathematics

MC-302: DATABASE MANAGEMENT SYSTEMS
Lab File

Submitted To: **Submitted By:**
Dr. Goonjan Jain   **Ishan Bhateja**
Ms. Annie Kaushik   **Roll No:2K20 / MC / 61**
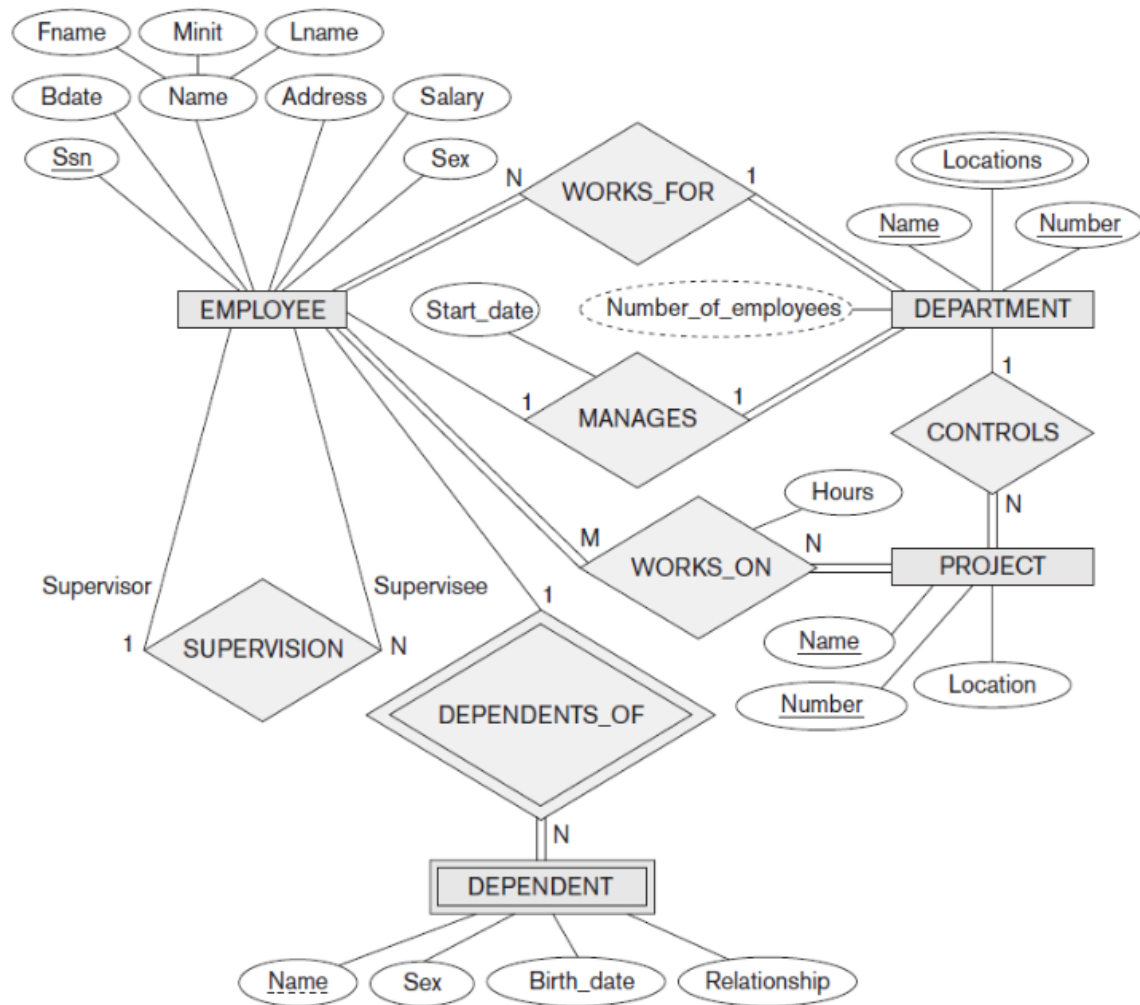
PRACTICAL 5

AIM:
Lab 1 – ER Diagram and Schema Design
Lab 2 – Create the tables designed in ER diagram and schema and insert the valid values in the table.
Lab 3 - Selection and projection-based queries

CODE:
Lab 1

EMPLOYEE

Fname	Minit	Lname	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno

DEPARTMENT

Dname	Dnumber	Mgr_ssn	Mgr_start_date

DEPT_LOCATIONS

Dnumber	Dlocation

PROJECT

Pname	Pnumber	Plocation	Dnum

WORKS_ON

Essn	Pno	Hours

DEPENDENT

Essn	Dependent_name	Sex	Bdate	Relationship

Figure 5.5
Schema diagram for the
COMPANY relational
database schema.

Lab 2
CREATE TABLE EMPLOYEE(FNAME VARCHAR(15) NOT NULL, MINIT CHAR, LNAME VARCHAR (15) NOT NULL, SSN CHAR(9) NOT NULL,BDATE DATE, ADDRESS VARCHAR(30), SEX CHAR, SALARY DECIMAL(10,2), SUPER_SSN CHAR(9), DNO INT, PRIMARY KEY(SSN));

CREATE TABLE DEPARTMENT(DNAME VARCHAR(15) NOT NULL, DNUMBER INT NOT NULL, MGR_SSN CHAR(9) NOT NULL, MGR_START_DATE DATE, PRIMARY KEY(DNUMBER),UNIQUE(DNAME),   FOREIGN   KEY(MGR_SSN)REFERENCES EMPLOYEE(SSN));

CREATE TABLE DEPT_LOCATIONS(DNUMBER INT NOT NULL, DLOCATION VARCHAR(15) NOT NULL, PRIMARY KEY(DNUMBER,DLOCATION), FOREIGN KEY(DNUMBER) REFERENCES DEPARTMENT(DNUMBER));
CREATE TABLE PROJECT(PNAME VARCHAR(15) NOT NULL, PNUMBER INT NOT NULL, PLOCATION VARCHAR(15), DNUM INT NOT NULL, PRIMARY KEY(PNUMBER),   UNIQUE(PNAME),   FOREIGN   KEY(DNUM)REFERENCES DEPARTMENT(DNUMBER));

CREATE TABLE WORKS_ON(ESSN CHAR(9) NOT NULL, PNO INT NOT NULL, HOURS DECIMAL(3,1)   NOT   NULL,   PRIMARY   KEY(ESSN,PNO),   FOREIGN KEY(ESSN)REFERENCES   EMPLOYEE(SSN),   FOREIGN   KEY(PNO)REFERENCES PROJECT(PNUMBER));

2K20/MC/61

CREATE TABLE DEPENDENT(ESSN CHAR(9) NOT NULL, DEPARTMENT_NAME VARCHAR(15) NOT NULL, SEX CHAR, BDATE DATE, RELATIONSHIP VARCHAR(8), PRIMARY KEY(ESSN,DEPARTMENT_NAME),FOREIGN KEY(ESSN)REFERENCES EMPLOYEE(SSN));

Lab 3
desc table EMPLOYEE;
desc table DEPARTMENT;
desc table DEPT_LOCATIONS;
desc table PROJECT;
desc table WORKS_ON;
desc table DEPENDENT;