TASK 1

1. create employee(emp\_id,employee\_name,department\_id,location\_id,salary),

department(dept\_id,department\_name),

locations (location\_id, location\_name) tables with relevant attributes.

2. create primary key on each table and foreign keys (location->department, department->employee)

ex: emp\_id is PK in emp table, dept\_id is PK in dept table, loc\_id is PK in location table.

Solution:

create table employee(emp\_id int, employee\_name varchar(50), department\_id int, location\_id int, salary int);

create table department(department\_id int, department\_name varchar(50));

create table locations(location\_id int, location\_name varchar(50));

alter table employee add constraint emp\_id primary key(emp\_id)

alter table department add constraint department\_id primary key(department\_id)

alter table locations add constraint location\_id primary key(location\_id)

alter table employee add foreign key(department\_id) references department(department\_id)

alter table employee add foreign key(location\_id) references locations(location\_id)

3. insert 20 employees data, 4 departments data, 2 locations data.

Solution:

Multiple rows can be inserted into a table by separting the tuple of values with a comma, where order of values must be same as the order of attributes/columns in the table.

insert into employee values (1, “Raj”, 101, 301, 100000), (2, “aakash”, 304, 203, 15000);

insert into department values (101, “Operations”), (102, “Engineering”), (103, “HR”), (104, “Design”);

insert into locations values (201, “Noida”), (202, “Bangalore”);

4. write below queries:

a) display all employees names and their department names

SELECT employee\_name, department\_name FROM employee, department WHERE employee.department\_id = department.department\_id;

b) display all location\_name, department\_name, employee\_name, where salary for atleast 3 employee should be same

a) select maximum salary earned from each department

SELECT max(salary) FROM employee GROUP BY department\_id;

b) select 2nd highest salary from each department.

SELECT \* FROM employee where salary = (SELECT salary FROM employee GROUP BY salary ORDER BY salary LIMIT 1,1);

c) select location\_name, department\_name, average\_salary(of each location)

SELECT location\_name, department\_name, avg(salary) FROM employee, department, locations WHERE employee.department\_id = department.department\_id AND employee.location\_id = locations.location\_id GROUP BY location\_id;

additional queries:

>> Show departments with no of employees

SELECT COUNT(\*) FROM employee GROUP BY department\_id;

>> Show locations with no of department where no of department is 2

SELECT COUNT(\*) FROM employee WHERE department\_id =2 GROUP BY location\_id;