WEEK 5 tasks: -

1. Create the above tables by properly specifying the primary keys and the foreign keys.
2. Enter at least five tuples for each relation.
3. Retrieve the employee numbers of all employees who work on project located in Bengaluru, Hyderabad, or Mysuru.
4. Get Employee ID's of those employees who didn't receive incentives
5. Write a SQL query to find the employees name, number, dept, job_role, department location and project location who are working for a project location same as his/her department location.

ANS)

```sql
create database emp;
use emp;

CREATE TABLE dept (
deptno decimal(2,0) primary key,
dname varchar(14) default NULL,
loc varchar(13) default NULL
);
CREATE TABLE emp (
empno decimal(4,0) primary key,
ename varchar(10) default NULL,
mgr_no decimal(4,0) default NULL,
hiredate date default NULL,
sal decimal(7,2) default NULL,
deptno decimal(2,0) references dept(deptno) on delete cascade on update cascade
);
create table incentives (
empno decimal(4,0) references emp(empno) on delete cascade on update cascade,
incentive_date date,
incentive_amount decimal(10,2),
primary key(empno,incentive_date)
);
Create table project (
pno int primary key,
pname varchar(30) not null,
ploc varchar(30)
);
Create table assigned_to (
empno decimal(4,0) references emp(empno) on delete cascade on update cascade,
pno int references project(pno) on delete cascade on update cascade,
job_role varchar(30),
primary key(empno,pno)
);
show tables;
```

Result Grid | Filte

Tables_in_emp
assigned_to
dept
emp
incentives
project

```sql
INSERT INTO dept VALUES (10,'ACCOUNTING','MUMBAI');
INSERT INTO dept VALUES (20,'RESEARCH','BENGALURU');
INSERT INTO dept VALUES (30,'SALES','DELHI');
INSERT INTO dept VALUES (40,'OPERATIONS','CHENNAI');

INSERT INTO emp VALUES (7369,'Adarsh',7902,'2012-12-17','80000.00','20');
INSERT INTO emp VALUES (7499,'Shruthi',7698,'2013-02-20','16000.00','30');
INSERT INTO emp VALUES (7521,'Anvitha',7698,'2015-02-22','12500.00','30');
INSERT INTO emp VALUES (7566,'Tanvir',7839,'2008-04-02','29750.00','20');
INSERT INTO emp VALUES (7654,'Ramesh',7698,'2014-09-28','12500.00','30');
INSERT INTO emp VALUES (7698,'Kumar',7839,'2015-05-01','28500.00','30');
INSERT INTO emp VALUES (7782,'CLARK',7839,'2017-06-09','24500.00','10');
INSERT INTO emp VALUES (7788,'SCOTT',7566,'2010-12-09','30000.00','20');
INSERT INTO emp VALUES (7839,'KING',NULL,'2009-11-17','50000.00','10');
INSERT INTO emp VALUES (7844,'TURNER',7698,'2010-09-08','15000.00','30');
INSERT INTO emp VALUES (7876,'ADAMS',7788,'2013-01-12','11000.00','20');
INSERT INTO emp VALUES (7900,'JAMES',7698,'2017-12-03','9500.00','30');
INSERT INTO emp VALUES (7902,'FORD',';566','2010-12-03','30000.00','20');

INSERT INTO incentives VALUES(7499,'2019-02-01',5000.00);
INSERT INTO incentives VALUES(7521,'2019-03-02',2500.00);
INSERT INTO incentives VALUES(7566,'2022-02-03',5070.00);
INSERT INTO incentives VALUES(7654,'2020-02-04',2000.00);
INSERT INTO incentives VALUES(7654,'2022-04-05',879.00);
INSERT INTO incentives VALUES(7521,'2019-02-06',8000.00);
INSERT INTO incentives VALUES(7698,'2019-03-07',500.00);
INSERT INTO incentives VALUES(7698,'2020-03-08',9000.00);
INSERT INTO incentives VALUES(7698,'2022-04-09',4500.00);
```

```
INSERT INTO project VALUES(101,'AI Project','BENGALURU');
INSERT INTO project VALUES(102,'IOT','HYDERABAD');
INSERT INTO project VALUES(103,'BLOCKCHAIN','BENGALURU');
INSERT INTO project VALUES(104,'DATA SCIENCE','MYSURU');
INSERT INTO project VALUES(105,'AUTONOMUS SYSTEMS','PUNE');

INSERT INTO assigned_to VALUES(7499,101,'Software Engineer');
INSERT INTO assigned_to VALUES(7521,101,'Software Architect');
INSERT INTO assigned_to VALUES(7566,101,'Project Manager');
INSERT INTO assigned_to VALUES(7654,102,'Sales');
INSERT INTO assigned_to VALUES(7521,102,'Software Engineer');
INSERT INTO assigned_to VALUES(7499,102,'Software Engineer');
INSERT INTO assigned_to VALUES(7654,103,'Cyber Security');
INSERT INTO assigned_to VALUES(7698,104,'Software Engineer');
INSERT INTO assigned_to VALUES(7900,105,'Software Engineer');
INSERT INTO assigned_to VALUES(7839,104,'General Manager');
Select * from dept;
```

Result Grid | Filter Rows:

deptno	dname	loc
10	ACCOUNTING	MUMBAI
20	RESEARCH	BENGALURU
30	SALES	DELHI
40	OPERATIONS	CHENNAI
NULL	NULL	NULL

```
select * from emp;
```

Result Grid | Filter Rows: | Edit:

empno	ename	mgr_no	hiredate	sal	deptno
7369	Adarsh	7902	2012-12-17	80000.00	20
7499	Shruthi	7698	2013-02-20	16000.00	30
7521	Anvitha	7698	2015-02-22	12500.00	30
7566	Tanvir	7839	2008-04-02	29750.00	20
7654	Ramesh	7698	2014-09-28	12500.00	30
7698	Kumar	7839	2015-05-01	28500.00	30
7782	CLARK	7839	2017-06-09	24500.00	10
7788	SCOTT	7566	2010-12-09	30000.00	20
7839	KING	NULL	2009-11-17	50000.00	10
7844	TURNER	7698	2010-09-08	15000.00	30
7876	ADAMS	7788	2013-01-12	11000.00	20
7900	JAMES	7698	2017-12-03	9500.00	30
7902	FORD	566	2010-12-03	30000.00	20
NULL	NULL	NULL	NULL	NULL	NULL

```
85 •  select * from incentives;
86
```

Result Grid | Filter Rows:

empno	incentive_date	incentive_amount
7499	2019-02-01	5000.00
7521	2019-02-06	8000.00
7521	2019-03-02	2500.00
7566	2022-02-03	5070.00
7654	2020-02-04	2000.00
7654	2022-04-05	879.00
7698	2019-03-07	500.00
7698	2020-03-08	9000.00
7698	2022-04-09	4500.00
NULL	NULL	NULL

```
87 •  select * from project;
```

Result Grid | Filter Rows:

pno	pname	ploc
101	AI Project	BENGALURU
102	IOT	HYDERABAD
103	BLOCKCHAIN	BENGALURU
104	DATA SCIENCE	MYSURU
105	AUTONOMUS SYSTEMS	PUNE
NULL	NULL	NULL

```
89 •  select * from assigned_to;
```

Result Grid | Filter Rows:

empno	pno	job_role
7499	101	Software Engineer
7499	102	Software Engineer
7521	101	Software Architect
7521	102	Software Engineer
7566	101	Project Manager
7654	102	Sales
7654	103	Cyber Security
NULL	NULL	NULL

3)

```
SELECT empno
FROM emp
WHERE empno NOT IN (SELECT empno FROM incentives);
```

Result Grid | Filter Rows: | Edit: | Expo

empno
7369
7782
7788
7839
7844
7876
7900
7902
NULL

```
SELECT m.ename, count(*)
FROM emp e,emp m
WHERE e.mgr_no = m.empno
GROUP BY m.ename
HAVING count(*) =(SELECT MAX(mycount)
from (SELECT COUNT(*) mycount
FROM emp
GROUP BY mgr_no) a);
```

Result Grid | Filter Rows: | Export:

ename	count(*)
Kumar	5

4)

```
SELECT *
FROM emp m
WHERE m.empno IN
(SELECT mgr_no
FROM emp)
AND m.sal;
(SELECT avg(e.sal)
FROM emp e
WHERE e.mgr_no = m.empno );
```

Result Grid | Filter Rows: | Edit:

empno	ename	mgr_no	hiredate	sal	deptno
7566	Tanvir	7839	2008-04-02	29750.00	20
7698	Kumar	7839	2015-05-01	28500.00	30
7788	SCOTT	7566	2010-12-09	30000.00	20
7839	KING	NULL	2009-11-17	50000.00	10
7902	FORD	566	2010-12-03	30000.00	20
NULL	NULL	NULL	NULL	NULL	NULL

5)

```
select e.empno,e.ename,d.dname, d.loc, a.job_role, p.ploc
from emp e, dept d, assigned_to a, project p
where e.deptno=d.deptno and e.empno=a.empno and a.pno=p.pno and d.loc=p.ploc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

empno	ename	dname	loc	job_role	ploc
7566	Tanvir	RESEARCH	BENGALURU	Project Manager	BENGALURU