U19CS076 DBMS ASSIGNMENT 6

1. Create the following tables

Employee

Empno	Identifies the Employee's
Emp_name	Employee name. Cannot be blank
Emp_Join_Date	Date of Join of employee. Default is the system date
Emp_Status	Employee status . Can be either P, C or R

Project

Project_Code	Identifies the projects
Project_Description	Name of the project. Cannot be blank and have to be unique
Project_Start_Date	Start date of the project. Cannot be blank
Project_End_Date	End date of the project

Project_Allocation

Project Code	Project Code
Empno	Employee number
Emp_Proj_Alloc_Date	Employee project allocation date
Emp_Proj_Release_Date	Employee project release date

CREATE TABLE EMPLOYEE (

Empno INT(6) PRIMARY KEY,

Emp_name VARCHAR(15) NOT NULL,

Emp_Join_Date date DEFAULT (current_date),

Emp_Status CHAR(1) CHECK (Emp_Status IN ('P','C','R'))

);

CREATE TABLE PROJECT (

Project_code VARCHAR(6) PRIMARY KEY,

project_Description varchar(25) UNIQUE not NULL,

project_start_date DATE NOT NULL,

project_end_date DATE

);

CREATE TABLE PROJECT_ALLOCATION (

Project_code VARCHAR(6),

Empno INT(6),

Emp_projrct_allo_date DATE,

Emp_projrct_release_date DATE,

PRIMARY KEY (Project_code,Empno),

FOREIGN KEY (Project_code) REFERENCES PROJECT(Project_code) ON DELETE CASCADE

,

FOREIGN KEY (Empno) REFERENCES EMPLOYEE(Empno) ON DELETE CASCADE

);

```
mysql> desc employee;
+---------------+-------------+------+-----+-----------+-------------------+
| Field         | Type        | Null | Key | Default   | Extra             |
+---------------+-------------+------+-----+-----------+-------------------+
| Empno         | int         | NO   | PRI | NULL      |                   |
| Emp_name      | varchar(15) | NO   |     | NULL      |                   |
| Emp_Join_Date | date        | YES  |     | curdate() | DEFAULT_GENERATED |
| Emp_Status    | char(1)     | YES  |     | NULL      |                   |
+---------------+-------------+------+-----+-----------+-------------------+
4 rows in set (0.02 sec)
```

```
mysql> desc project;
+---------------------+-------------+------+-----+---------+-------+
| Field               | Type        | Null | Key | Default | Extra |
+---------------------+-------------+------+-----+---------+-------+
| Project_code        | varchar(6)  | NO   | PRI | NULL    |       |
| project_Description | varchar(25) | NO   | UNI | NULL    |       |
| project_start_date  | date        | NO   |     | NULL    |       |
| project_end_date    | date        | YES  |     | NULL    |       |
+---------------------+-------------+------+-----+---------+-------+
4 rows in set (0.01 sec)
```

```
mysql> desc project_allocation;
+-------------------------+------------+------+-----+---------+-------+
| Field                   | Type       | Null | Key | Default | Extra |
+-------------------------+------------+------+-----+---------+-------+
| Project_code            | varchar(6) | NO   | PRI | NULL    |       |
| Empno                   | int        | NO   | PRI | NULL    |       |
| Emp_projrct_allo_date   | date       | YES  |     | NULL    |       |
| Emp_projrct_release_date| date       | YES  |     | NULL    |       |
+-------------------------+------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

2. Insert the following data in Employee table

Empno	Emp_name	Emp_Join_Date	Emp_Status
101	Jhonny	01-Jul-2005	C
116	Nayak	16-Aug-2005	C
202	Meera	30-Jan-2006	C
205	Ravi	11-Feb-2006	C
304	Hari	25-Nov-2006	P
307	Nancy	15-Jan-2007	P
403	Nick	21-Jan-2007	P

3. Insert the following data in Project table

Project_Code	Project_Name	Project_Start_Date	Project_End_Date
P001	Environment Pollution	02-Aug-2005	11-Dec-2006
P002	Learning Curve	01-Feb-2006	15-Mar-2006
P003	Effects of IT	03-Jan-2007	

4. Insert the following data in Project_Allocation table

Project_Code	Empno	Emp_Proj_Alloc_Date	Emp_Proj_Release_Date
P001	101	01-Aug-2005	11-Dec-2006
P001	116	16-Aug-2005	11-Dec-2006
P002	202	01-Feb-2006	14-Jan-2007
P002	307	15-Jan-2007	

P002	205	11-Feb-2006	
P003	403	21-Jan-2007	
P003	304	03-Jan-2007	
P003	101	03-Jan-2007	
P003	116	03-Jan-2007	
P003	202	15-Jan-2007	

```sql
INSERT INTO EMPLOYEE VALUES (101,'JHONNY','2005-01-01','C');

INSERT INTO EMPLOYEE VALUES (116,'NAYAK','2005-08-16','C');

INSERT INTO EMPLOYEE VALUES (202,'MEERA','2006-01-30','C');

INSERT INTO EMPLOYEE VALUES (205,'RAVI','2006-02-11','C');

INSERT INTO EMPLOYEE VALUES (304,'HARI','2006-11-25','P');

INSERT INTO EMPLOYEE VALUES (307,'NANCY','2007-01-15','P');

INSERT INTO EMPLOYEE VALUES (403,'NICK','2007-01-21','P');


INSERT INTO PROJECT VALUES ('P001','ENVIRONMNT POLLUTION','2005-08-02','2006-12-11');

INSERT INTO PROJECT VALUES ('P002','LEARNING CURVE','2006-02-01','2006-03-15');

INSERT INTO PROJECT VALUES ('P003','EFFECTS OF IT','2007-01-03',NULL);


INSERT INTO PROJECT_ALLOCATION VALUES ('P001',101,'2005-08-01','2006-12-11');

INSERT INTO PROJECT_ALLOCATION VALUES ('P001',116,'2005-08-16','2006-12-11');

INSERT INTO PROJECT_ALLOCATION VALUES ('P002',202,'2006-02-01','2007-01-14');

INSERT INTO PROJECT_ALLOCATION VALUES ('P002',307,'2007-01-15',NULL);

INSERT INTO PROJECT_ALLOCATION VALUES ('P002',205,'2006-02-11',NULL);

INSERT INTO PROJECT_ALLOCATION VALUES ('P003',403,'2007-01-21',NULL);

INSERT INTO PROJECT_ALLOCATION VALUES ('P003',304,'2007-01-03',NULL);

INSERT INTO PROJECT_ALLOCATION VALUES ('P003',101,'2007-01-03',NULL);

INSERT INTO PROJECT_ALLOCATION VALUES ('P003',116,'2007-01-03',NULL);

INSERT INTO PROJECT_ALLOCATION VALUES ('P003',202,'2007-01-15',NULL);
```

MySQL 8.0 Command Line Client

```
mysql> select * from employee;
+-------+----------+---------------+------------+
| Empno | Emp_name | Emp_Join_Date | Emp_Status |
+-------+----------+---------------+------------+
|   101 | JHONMY   | 2005-01-01    | C          |
|   116 | NAYAK    | 2005-08-16    | C          |
|   202 | MEERA    | 2006-01-30    | C          |
|   205 | RAVI     | 2006-02-11    | C          |
|   304 | HARI     | 2006-11-25    | P          |
|   307 | NANCY    | 2007-01-15    | P          |
|   403 | NICK     | 2007-01-21    | P          |
+-------+----------+---------------+------------+
7 rows in set (0.00 sec)

mysql> select * from project;
+--------------+---------------------+--------------------+------------------+
| Project_code | project_Description | project_start_date | project_end_date |
+--------------+---------------------+--------------------+------------------+
| P001         | ENVIRONMNT POLLUTION | 2005-08-02        | 2006-12-11       |
| P002         | LEARNING CURVE       | 2006-02-01        | 2006-03-15       |
| P003         | EFFECTS OF IT        | 2007-01-03        | NULL             |
+--------------+---------------------+--------------------+------------------+
3 rows in set (0.01 sec)

mysql> select * from project_allocation;
+--------------+-------+---------------------+-----------------------+
| Project_code | Empno | Emp_projrct_allo_date | Emp_projrct_release_date |
+--------------+-------+---------------------+-----------------------+
| P001         |   101 | 2005-08-01          | 2006-12-11            |
| P001         |   116 | 2005-08-16          | 2006-12-11            |
| P002         |   202 | 2006-02-01          | 2007-01-14            |
| P002         |   205 | 2006-02-11          | NULL                  |
| P002         |   307 | 2007-01-15          | NULL                  |
| P003         |   101 | 2007-01-03          | NULL                  |
| P003         |   116 | 2007-01-03          | NULL                  |
| P003         |   202 | 2007-01-15          | NULL                  |
| P003         |   304 | 2007-01-03          | NULL                  |
| P003         |   403 | 2007-01-21          | NULL                  |
+--------------+-------+---------------------+-----------------------+
10 rows in set (0.00 sec)
```

Write queries for the following :

1. List all the project names along with the employee names to whom the project is assigned.

SELECT P.project_Description,E.Emp_name from PROJECT P,EMPLOYEE E,PROJECT_ALLOCATION PA

WHERE P.Project_code=pa.Project_code AND E.Empno=pa.Empno ;

```
+-----------------------------+------------+
| project_Description         | Emp_name   |
+-----------------------------+------------+
| EFFECTS OF IT               | JHONNY     |
| EFFECTS OF IT               | NAYAK      |
| EFFECTS OF IT               | MEERA      |
| EFFECTS OF IT               | HARI       |
| EFFECTS OF IT               | NICK       |
| ENVIRONMNT POLLUTION        | JHONNY     |
| ENVIRONMNT POLLUTION        | NAYAK      |
| LEARNING CURVE              | MEERA      |
| LEARNING CURVE              | RAVI       |
| LEARNING CURVE              | NANCY      |
+-----------------------------+------------+
10 rows in set (0.00 sec)
```

2. Display the name of employees whose status is confirmed.

SELECT Emp_name FROM employee WHERE Emp_Status='C';

```
mysql> SELECT Emp_name FROM employee WHERE Emp_Status='C';
+------------+
| Emp_name   |
+------------+
| JHONNY     |
| NAYAK      |
| MEERA      |
| RAVI       |
+------------+
4 rows in set (0.00 sec)
```

3. List the employees who have joined in the month of November.

Select Emp_Name from EMPLOYEE where month(Emp_Join_Date)= 11;

```
+-----------+
| Emp_Name  |
+-----------+
| HARI      |
+-----------+
1 row in set (0.01 sec)
```

4. List the projects which have started after 1st Jan 2006.

Select Project_description from project where project_start_date>'2006-01-01';

```
mysql> Select Project_description from project where proje
+---------------------+
| Project_description |
+---------------------+
| LEARNING CURVE      |
| EFFECTS OF IT       |
+---------------------+
2 rows in set (0.03 sec)
```

5. List all the employees who are working for the project entitled 'Effects of IT'.

Select * from employee where empno in (Select Empno from Project_Allocation

where Project_code= (Select Project_code from project where project_Description=

'Effects of IT'));

```
+-------+----------+---------------+------------+
| Empno | Emp_name | Emp_Join_Date | Emp_Status |
+-------+----------+---------------+------------+
|   101 | JHONNY   | 2005-01-01    | C          |
|   116 | NAYAK    | 2005-08-16    | C          |
|   202 | MEERA    | 2006-01-30    | C          |
|   304 | HARI     | 2006-11-25    | P          |
|   403 | NICK     | 2007-01-21    | P          |
+-------+----------+---------------+------------+
5 rows in set (0.00 sec)
```

6. List all the projects that are not yet completed.

select * from project where project_end_Date>CURRENT_DATE() or project_end_date

is NULL;

```
mysql> select * from project where project_end_Date>CURRENT_DATE() or project_end_date is NULL;
+--------------+---------------------+------------------+----------------+
| Project_code | project_Description | project_start_date | project_end_date |
+--------------+---------------------+------------------+----------------+
| P003         | EFFECTS OF IT       | 2007-01-03       | NULL           |
+--------------+---------------------+------------------+----------------+
1 row in set (0.00 sec)
```

7. Display the Employees who are released from project having code P002.

Select empno,emp_Name from employee where empno in (select empno from

project_Allocation where emp_Projrct_release_date is not NULL and

project_Code='P002');

```
mysql> select empno,emp_Name from
_date is not NULL and project_Cod
+-------+----------+
| empno | emp_Name |
+-------+----------+
|   202 | MEERA    |
+-------+----------+
1 row in set (0.00 sec)
```

8. Count and display the number of days it took for the completion of project P002.

SELECT DATEDIFF(project_end_date,project_start_date) as datediff from project where
project_code='P002';

```
mysql> SELECT DATEDIFF(project_end_date,project_start_d
+----------+
| datediff |
+----------+
|       42 |
+----------+
1 row in set (0.00 sec)
```

9. List the name of employees along with the number of days they have worked for projects allocated to them.

select e.emp_name,DATEDIFF(ifnull(pa.emp_projrct_release_date, CURRENT_DATE), pa.emp_projrct_allo_date) as no_of_Days from project_allocation pa join employee e where e.empno=pa.empno;

```
+------------+------------+
| emp_name   | no_of_Days |
+------------+------------+
| JHONNY     |        497 |
| NAYAK      |        482 |
| MEERA      |        347 |
| RAVI       |       5491 |
| NANCY      |       5153 |
| JHONNY     |       5165 |
| NAYAK      |       5165 |
| MEERA      |       5153 |
| HARI       |       5165 |
| NICK       |       5147 |
+------------+------------+
10 rows in set (0.00 sec)
```

10. Add a column Manager_id in the Projects table
ALTER TABLE PROJECT ADD Manager_id INT(6);

```
mysql> desc project;
+---------------------+-------------+------+-----+---------+-------+
| Field               | Type        | Null | Key | Default | Extra |
+---------------------+-------------+------+-----+---------+-------+
| Project_code        | varchar(6)  | NO   | PRI | NULL    |       |
| project_Description | varchar(25) | NO   | UNI | NULL    |       |
| project_start_date  | date        | NO   |     | NULL    |       |
| project_end_date    | date        | YES  |     | NULL    |       |
| Manager_id          | int         | YES  |     | NULL    |       |
+---------------------+-------------+------+-----+---------+-------+
5 rows in set (0.01 sec)
```

11. Update the Projects table with the following data :

Project_Code	Manager_id
P001	101
P002	202
P003	116

Update project set Manager_id=101 where Project_code='P001';

Update project set Manager_id=202 where Project_code='P002';

Update project set Manager_id=116 where Project_code='P003';

```
mysql> select * from project;
+--------------+---------------------+-------------------+-----------------+------------+
| Project_code | project_Description | project_start_date | project_end_date | Manager_id |
+--------------+---------------------+-------------------+-----------------+------------+
| P001         | ENVIRONMNT POLLUTION | 2005-08-02        | 2006-12-11       |        101 |
| P002         | LEARNING CURVE      | 2006-02-01        | 2006-03-15       |        202 |
| P003         | EFFECTS OF IT       | 2007-01-03        | NULL             |        116 |
+--------------+---------------------+-------------------+-----------------+------------+
3 rows in set (0.00 sec)
```

12. A new project entitled "Election Rage" which will be starting on 1ˢᵗ March 2007 has been received. Add these details in Projects table.

Insert into Project values('P004','Election Rage','2007-03-01',NULL,NULL);

```
mysql> INSERT INTO PROJECT VALUES('P004','ELECTION RAGE','2007-03-01',NULL,NULL);
Query OK, 1 row affected (0.01 sec)
```

13. Project named "Effects of IT" is cancelled. Remove its details from the Projects table.

Delete from project where Project_Description='Effects of IT' ;

```
mysql> select * from project;
+--------------+--------------------+------------------+----------------+------------+
| Project_code | project_Description | project_start_date | project_end_date | Manager_id |
+--------------+--------------------+------------------+----------------+------------+
| P001         | ENVIRONMNT POLLUTION | 2005-08-02     | 2006-12-11     |        101 |
| P002         | LEARNING CURVE     | 2006-02-01       | 2006-03-15     |        202 |
| P004         | ELECTION RAGE      | 2007-03-01       | NULL           |       NULL |
+--------------+--------------------+------------------+----------------+------------+
3 rows in set (0.00 sec)
```

14. List the projects with a time duration of more than 13 months.

SELECT project_Description FROM PROJECT WHERE (TIMESTAMPDIFF(MONTH, project_start_date, IFNULL(project_end_date,CURRENT_DATE)))>13;

```
mysql> SELECT project_Descri
RENT_DATE)))>13;
+----------------------+
| project_Description  |
+----------------------+
| ENVIRONMNT POLLUTION |
| ELECTION RAGE        |
+----------------------+
2 rows in set (0.00 sec)
```

15. List the number of employees, project wise who have worked on the project in Feb – 2007.

Select count(Empno) from Project_allocation where Emp_projrct_allo_date<('2007-02-01') and IFNULL(Emp_projrct_release_date,now())>('2007-02-01') group by Project_code;

```
+---------------+
| COUNT(Empno)  |
+---------------+
|            2  |
+---------------+
1 row in set (0.00 sec)
```