

## SQL PRIMARY AND FOREIGN KEY:

1. create product table with a field (pid,pname,price) and second table order with a fields(oid, pid, odate)  
apply necessary constraints

OUTPUT:

```
mysql> use task22dec;
Database changed
mysql> create table product
-> (
-> p_id int primary key,
-> p_name varchar(50),
-> price decimal(10,2)
-> );
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> create table orders
-> (
-> o_id int primary key,
-> p_id int,
-> o_Date Date,
-> foreign key (p_id) references product(p_id)
-> );
Query OK, 0 rows affected (0.10 sec)
```

```
mysql> desc product;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+
| p_id  | int   | NO   | PRI  | NULL    |       |
| p_name | varchar(50) | YES  |       | NULL    |       |
| price  | decimal(10,2) | YES  |       | NULL    |       |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> desc orders;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+
| o_id  | int  | NO   | PRI  | NULL    |       |
| p_id  | int  | YES  | MUL  | NULL    |       |
| o_Date | date | YES  |       | NULL    |       |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```

mysql> insert into product (p_id,p_name,price) values
-> (101,"Ramesh",234.50),
-> (102,"Raj",300.56),
-> (103,"Harsh",789.08),
-> (104,"Umesh",500.00),
-> (105,"Ayush",700.89);
Query OK, 5 rows affected (0.04 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from product;
+----+----+----+
| p_id | p_name | price |
+----+----+----+
| 101 | Ramesh | 234.50 |
| 102 | Raj    | 300.56 |
| 103 | Harsh  | 789.08 |
| 104 | Umesh  | 500.00 |
| 105 | Ayush  | 700.89 |
+----+----+----+
5 rows in set (0.00 sec)

```

```

mysql> insert into orders (o_id,p_id,o_date) values
-> (1,101,'2025-09-10'),
-> (2,102,'2024-09-12'),
-> (3,103,'2025-05-14'),
-> (4,104,'2025-01-31'),
-> (5,105,'2025-08-30');
Query OK, 5 rows affected (0.04 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from orders;
+----+----+----+
| o_id | p_id | o_date   |
+----+----+----+
| 1   | 101 | 2025-09-10 |
| 2   | 102 | 2024-09-12 |
| 3   | 103 | 2025-05-14 |
| 4   | 104 | 2025-01-31 |
| 5   | 105 | 2025-08-30 |
+----+----+----+
5 rows in set (0.00 sec)

```

```

mysql> insert into orders values (6,106,'2025-09-10');
ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails ('task22dec'.`orders`, CONSTRAINT `orders_ibfk_1` FOREIGN KEY (`p_id`) REFERENCES `product`(`p_id`))
mysql>

```

2. create table employee (eid,ename,departid) and second table as departments (departid,dept\_name) insert minimum 5 records  
list all employees with their department name  
display employees who are not assigned to any department

OUTPUT:

```
mysql> create table emp
-> (
-> eid int,
-> ename varchar(50),
-> deptid int
-> );
Query OK, 0 rows affected (0.07 sec)
```

```
mysql> create table depart
-> (
-> deptid int,
-> deptname varchar(50)
-> );
Query OK, 0 rows affected (0.07 sec)
```

```
mysql> desc emp;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| eid   | int    | YES  |     | NULL    |      |
| ename | varchar(50) | YES  |     | NULL    |      |
| deptid | int    | YES  |     | NULL    |      |
+-----+-----+-----+-----+-----+
3 rows in set (0.04 sec)
```

```
mysql> desc depart;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| deptid | int    | YES  |     | NULL    |      |
| deptname | varchar(50) | YES  |     | NULL    |      |
+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)
```

```
mysql> insert into emp (eid,ename,deptid) values
-- (101,"Harsh",1),
-- (102,null,1),
-- (103,"Ramesh",null);
Query OK, 3 rows affected (0.04 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

```
mysql> insert into emp (eid,ename,deptid) values
-- (104,"Sahil",null),
-- (105,null,2),
-- (106,"Yash",3),
-- (107,"Yogesh",4);
Query OK, 4 rows affected (0.04 sec)
Records: 4  Duplicates: 0  Warnings: 0
```

```
mysql> select * from emp;
+----+-----+-----+
| eid | ename | deptid |
+----+-----+-----+
| 101 | Harsh | 1      |
| 102 | NULL  | 1      |
| 103 | Ramesh | NULL   |
| 104 | Sahil  | NULL   |
| 105 | NULL  | 2      |
| 106 | Yash  | 3      |
| 107 | Yogesh | 4      |
+----+-----+-----+
7 rows in set (0.03 sec)
```

```
mysql> insert into depart (deptid,deptname) values
-> (1,"HR"),
-> (2,"Analyst"),
-> (3,"Developer"),
-> (4,"Testing");
Query OK, 4 rows affected (0.04 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> select * from depart;
+-----+-----+
| deptid | deptname |
+-----+-----+
|      1 |    HR   |
|      2 | Analyst |
|      3 | Developer |
|      4 | Testing  |
+-----+-----+
4 rows in set (0.00 sec)
```

```
mysql> select emp.ename,depart.deptname
-> from emp
-> inner join depart
-> on emp.deptid = depart.deptid;
+-----+-----+
| ename  | deptname |
+-----+-----+
| Harsh  |    HR   |
| NULL   |    HR   |
| NULL   | Analyst |
| Yash   | Developer |
| Yogesh | Testing  |
+-----+-----+
5 rows in set (0.00 sec)
```

```
mysql> select emp.ename,depart.deptname
-> from emp
-> left join depart
-> on emp.deptid = depart.deptid;
+-----+-----+
| ename | deptname |
+-----+-----+
| Harsh | HR
| NULL  | HR
| Ramesh | NULL
| Sahil  | NULL
| NULL   | Analyst
| Yash   | Developer
| Yogesh | Testing
+-----+-----+
7 rows in set (0.00 sec)
```

```
mysql> select emp.ename,depart.deptname
-> from emp
-> right join depart
-> on emp.deptid = depart.deptid;
+-----+-----+
| ename | deptname |
+-----+-----+
| NULL  | HR
| Harsh | HR
| NULL  | Analyst
| Yash  | Developer
| Yogesh | Testing
+-----+-----+
5 rows in set (0.03 sec)
```

```
mysql> select ename from emp where deptid is null;
+-----+
| ename |
+-----+
| Ramesh |
| Sahil  |
+-----+
2 rows in set (0.00 sec)
```