

## 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,deptid) and second table as departments (deptid,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)
```