

Exists:

1. Write a query to find the parts that have been shipped

```
SELECT *
FROM Part p
WHERE EXISTS (SELECT *
               FROM Shipment sh
               WHERE sh.PNo=p.PNo)
```

2. Write a query to find the parts that have been shipped by supplier S2.

```
SELECT *
FROM Part p
WHERE EXISTS (SELECT *
               FROM Shipment sh
               WHERE SNo='S2' AND
                  sh.PNo=p.PNo)
```

Division

3. Write a query to find the suppliers that ship all the parts.

We can say: Find a supplier on condition that not exists /any part this supplier did not ship.

See supplier Sno='ABC' . Part this supplier did not ship.

```
SELECT *
FROM Part
WHERE PNo NOT IN (SELECT PNo
                   FROM Shipment sh
                   WHERE sh.Sno='ABC')
```

Find **supplier Sno='ABC'** on condition that not exists any part this supplier did not ship.

```
SELECT *
FROM Supplier s
WHERE Sno='ABC'
      AND NOT EXISTS
      (SELECT *
       FROM Part
       WHERE PNo NOT IN (SELECT PNo
                             FROM Shipment sh
                             WHERE sh.Sno='ABC'))
```

```
---
SELECT *
FROM Supplier s
WHERE Sno='ABC'
      AND NOT EXISTS
```

```
(SELECT *
 FROM Part
 WHERE PNo NOT IN (SELECT PNo
                       FROM Shipment sh
                       WHERE sh.Sno=s.Sno))
```

Final:

```
SELECT *
FROM Supplier s
WHERE NOT EXISTS
      (SELECT *
       FROM Part
       WHERE PNo NOT IN (SELECT PNo
                             FROM Shipment sh
                             WHERE sh.SNo=s.SNo))
```