

CS 313: Assignment 3

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1

```
create user 'lab3'@'localhost' identified by 'iitdh';  
create database lab3;  
grant all privileges on lab3.* to 'lab3'@'localhost';
```

```
Query OK, 0 rows affected (0.01 sec)  
  
Query OK, 1 row affected (0.00 sec)  
  
Query OK, 0 rows affected (0.00 sec)
```

2

```
use lab3;  
  
create table part (  
    part_no int,  
    part_name varchar(25),  
    color varchar(15),  
    weight int,  
    primary key (part_no)  
);  
  
create table supplier (  
    supplier_no int,  
    sup_name varchar(25),  
    city varchar(25),  
    bank varchar(25),  
    primary key (supplier_no)  
);  
  
create table shipment (  
    -- part_no int,  
    -- sup_name varchar(25),  
    -- city varchar(25),  
    -- bank varchar(25),  
    -- primary key (supplier_no)
```

```

shipment_no int,
part_no int,
supplier_no int,
date date,
quantity int,
price int,
primary key (shipment_no),
foreign key (part_no) references part(part_no),
foreign key (supplier_no) references supplier(supplier_no)
);

```

```

Database changed
Query OK, 0 rows affected (0.02 sec)

Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.02 sec)

```

3

```

insert into part values (1, 'screw', 'silver', 12);
insert into supplier values (1, 'Singh_Screw_Co.', 'Delhi', 'SBI');
insert into shipment values (1, 1, 1, '2022-05-15', 100, 10);

```

```

Database changed
Query OK, 1 row affected (0.01 sec)

Query OK, 1 row affected (0.01 sec)

Query OK, 1 row affected (0.00 sec)

```

4

— *Parts*

```

insert into part values (2, 'nut', 'black', 16);
insert into part values (3, 'bolt', 'red', 17);

```

— *Suppliers*

```

insert into supplier values (2, 'Baburao_&_Sons', 'Mumbai', 'ICICI');
insert into supplier values (3, 'Rajesh_Hardware', 'Chennai', 'HDFC');

```

— *Shipments*

```

insert into shipment values (2, 1, 2, '2022-05-21', 200, 20);
insert into shipment values (3, 1, 1, '2021-06-13', 300, 30);

```

```

insert into shipment values (4, 1, 1, '2018-11-04', 400, 25);
insert into shipment values (5, 2, 1, '2003-02-26', 250, 15);
insert into shipment values (6, 2, 2, '2020-05-18', 650, 10);
insert into shipment values (7, 2, 2, '2019-12-05', 100, 20);
insert into shipment values (8, 2, 2, '2020-03-14', 200, 17);
insert into shipment values (9, 3, 1, '2012-12-30', 130, 20);
insert into shipment values (10, 3, 1, '2019-01-01', 150, 25);
insert into shipment values (11, 3, 1, '2014-11-26', 455, 12);
insert into shipment values (12, 3, 1, '2021-02-22', 120, 20);

```

```

— Display Part table
select * from part;

```

```

— Display Supplier table
select * from supplier;

```

```

— Display Shipment table
select * from shipment;

```

```

Database changed
Query OK, 1 row affected (0.01 sec)

Query OK, 1 row affected (0.00 sec)

Query OK, 1 row affected (0.01 sec)

Query OK, 1 row affected (0.00 sec)

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Query OK, 1 row affected (0.00 sec)

Query OK, 1 row affected (0.00 sec)

Query OK, 1 row affected (0.00 sec)

```

```

+-----+-----+-----+-----+
| part_no | part_name | color | weight |
+-----+-----+-----+-----+
|      1 | screw    | silver |      12 |
|      2 | nut      | black  |      16 |
|      3 | bolt     | red    |      17 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

+-----+-----+-----+-----+
| supplier_no | sup_name | city | bank |
+-----+-----+-----+-----+
|          1 | Singh Screw Co. | Delhi | SBI |
|          2 | Baburao & Sons | Mumbai | ICICI |
|          3 | Rajesh Hardware | Chennai | HDFC |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

+-----+-----+-----+-----+-----+-----+
| shipment_no | part_no | supplier_no | date | quantity | price |
+-----+-----+-----+-----+-----+-----+
|          1 |      1 |          1 | 2022-05-15 |      100 |      10 |
|          2 |      1 |          2 | 2022-05-21 |      200 |      20 |
|          3 |      1 |          1 | 2021-06-13 |      300 |      30 |
|          4 |      1 |          1 | 2018-11-04 |      400 |      25 |
|          5 |      2 |          1 | 2003-02-26 |      250 |      15 |
|          6 |      2 |          2 | 2020-05-18 |      650 |      10 |
|          7 |      2 |          2 | 2019-12-05 |      100 |      20 |
|          8 |      2 |          2 | 2020-03-14 |      200 |      17 |
|          9 |      3 |          1 | 2012-12-30 |      130 |      20 |
|         10 |      3 |          1 | 2019-01-01 |      150 |      25 |
|         11 |      3 |          1 | 2014-11-26 |      455 |      12 |
|         12 |      3 |          1 | 2021-02-22 |      120 |      20 |
+-----+-----+-----+-----+-----+-----+
12 rows in set (0.00 sec)

```

5

— *a*

```

select distinct sup_name
from supplier
natural join shipment
natural join part
where color = 'red';

```

```

+-----+
| sup_name |
+-----+
| Singh Screw Co. |
+-----+
1 row in set (0.01 sec)

```

— *b*

```
select sup_name, sum(quantity * price) as total
from shipment
natural join supplier
group by sup_name;
```

```
+-----+-----+
| sup_name | total |
+-----+-----+
| Singh Screw Co. | 37960 |
| Baburao & Sons | 15900 |
+-----+-----+
2 rows in set (0.00 sec)
```

— *c*

```
select distinct sup_name
from shipment
natural join supplier;
```

```
+-----+
| sup_name |
+-----+
| Singh Screw Co. |
| Baburao & Sons |
+-----+
2 rows in set (0.00 sec)
```