

Part A) What PC models have a speed of at least 3.00?

```
homework2=# select model from pc where speed >= 3.00;
 model
-----
 1005
 1006
 1013
(3 rows)
```

Part B) Which manufacturers make laptops with a hard disk of at least 100GB?

```
homework2=# select maker from product join laptop on product.model = laptop.model where hd >= 100;
 maker
-----
 E
 A
 B
 F
 G
(5 rows)
```

Part C) Find the model number and price of all products (of any type) made by manufacturer B.

```
homework2=# select p.model, price from product as p join pc as pc on p.model = pc.model where maker = 'B' union select p.model, price from product as p join laptop as l on p.model = l.model where maker = 'B' union select p.model, price from product as p join printer as pr on p.model = pr.model where maker = 'B';
 model | price
-----+-----
 2007  | 1429
 1004  | 649
 1005  | 630
 1006  | 1049
(4 rows)
```

Part D) Find the model numbers of all color laser printers

```
homework2=# select model from printer where color = true;
 model
-----
 3001
 3003
 3004
 3006
 3007
(5 rows)
```

Part E) Find those manufacturers that sell Laptops, but not PC's.

```
homework2=# select maker from product where type = ' laptop' and maker not in ( select maker from product where type = ' pc');
maker
-----
F
F
G
(3 rows)
```

Part F) Find those hard-disk sizes that occur in two or more PC's.

```
homework2=# select hd, count (*) from pc group by hd having count (*) > 1;
hd | count
---+-----
 80 |      2
160 |      2
250 |      6
(3 rows)
```

Part G) Find those pairs of PC models that have both the same speed and RAM. A pair should be listed only once; e.g., list (i; j) but not (j; i).

```
homework2=# select speed, ram, count (*) from pc group by speed, ram having count (*) > 1;
speed | ram | count
-----+-----+-----
    2.8 | 1024 |      2
(1 row)
```

Part H) Find those manufacturers of at least two different computers (PC's or laptops) with speeds of at least 2.80.

```
homework2=# select maker, speed from product as p join pc as pc on p.model = pc.model where speed >= 2.80 union select maker, speed from product as p join laptop as l on p.model = l.model where speed >= 2.80;
maker | speed
-----+-----
D      | 2.8
B      | 2.8
E      | 2.8
E      | 3.06
B      | 3.2
(5 rows)
```

Part I) Find the manufacturer(s) of the computer (PC or laptop) with the highest available speed.

```
homework2=# select maker, max(speed) as max_speed from ( select maker, speed from product as p join pc as pc on p.model = pc.model union select maker, speed from product as p join laptop as l on p.model = l.model ) as a group by maker;
maker | max_speed
-----+-----
B      | 3.2
C      | 2.2
D      | 2.8
E      | 3.06
F      | 1.6
G      | 2
A      | 2.66
(7 rows)
```

Part J) Find the manufacturers of PC's with at least three different speeds.

```
homework2=# select maker, count (distinct speed) as speed_total from product as p join pc as pc on p.model = pc.model group by p.maker having count (distinct speed) >= 3;
```

maker	speed_total
A	3
D	3
E	3

(3 rows)

Part K) Find the manufacturers who sell exactly three different models of PC.

```
homework2=# select maker from product as p join pc as pc on p.model = pc.model group by p.maker having count (distinct pc.model) = 3;
```

maker
A
B
D
E

(4 rows)