

## Homework 1

**2.4.1****b**

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

Query:

```
select maker from Product
  where model in
  (
    select distinct model from Laptop
      where hd >= 100
  );
```

Response:

E  
A  
B  
F  
G

**e**

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

Query:

```
select distinct maker FROM Product
  where maker in
  (
    select maker from Product
      where model in (select model from Laptop)
  )
and
maker not in
  (
    select maker from Product
      where model in (select model from PC)
  );
```

Response:

F  
G

**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).

Query:

```
select distinct pc1.model, pc2.model
  from PC pc1, PC pc2
 where pc1.speed = pc2.speed
       and pc1.ram = pc2.ram
       and pc1.model != pc2.model
       and pc1.model < pc2.model;
```

Response:

1004,1012

**i**

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

Query:

```
select maker
  from Product
 WHERE model =
    (
      select top 1 model
        from
          (
            select model, speed from PC
            UNION
            select model, speed from Laptop
          ) as all_models
      order by speed desc
    );
```

Response:

A