Daniel Santos
Database I
Homework 6
10/31/2018

a)
```
Insert into Product (maker, model, type)
Values ('c', 1100, 'pc');
  Insert into Pc (model, speed, ram, hd, price)
  Values (1100, 3.2, 1024, 180, 2499);
```

b) Insert

c)
```
Delete from PC, Product where Pc.model = Product.model
       and Pc.hd < 1000;
```
d)
```
Delete from Laptop, printer, Product
  where Printer.model <> Product.model;
```

e)
```
update Product set maker = "A"
    where maker = "B";
```

f)
```
update Pc set ram = ram*2, hd = hd+60;
```

g)
```
update Laptop set screen = screen +1, price = price - 100
  where model in (select model from Product where maker = 'B');
```

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Database I
Homework 5
10/31/2018

a) Select AVG(speed) from PC;

b) Select AVG(speed) from Laptop where price > 1000;

c) Select AVG(Price)
   from Product, PC
   where Product.maker = "A" and
         PC.model = Product.model;

d) Select AVG(Price)
   from Product, PC, Laptop
   Where Product.maker = "D" and
       (Product.model = PC.model or Product.model = Laptop.model);

e) Select speed, AVG(Price)
   from PC
   Group by speed;

f) Select maker, AVG(screen)
   from Product, Laptop
   where Product.model = Laptop.model
   Group by maker;

```sql
g) Select maker
   from Products
   Having count (distinct model) > 3;

h) select maker, Max(price)
   from Product, PC
   where Product.model = PC.model
   Group by maker;

i) select speed, AVG(Price)
   From PC
   Where speed > 2.0
   Group by speed;

j) select AVG(hd), maker
   from PC, Product, Printer
   Where Product.model = Printer.model
   Group by maker;
```

2.2.1)

a)

Accounts → {acctNo, type, balance}

Customers → {firstName, lastName, idNo, account}

b)

Accounts → {

(12345, savings, 1200), (23456, checking, 1000),

(34567, savings, 25)

}

Customers → {

(Robbie, Banks, 901-222, 12345)

(Lena, Hand, 805-333, 12345)

(Lena, Hand, 805-333, 23456)

}

c)

From Accounts: 12345, savings, 1200

From Customers: ~~firstName~~

Robbie, Banks, 901-222, 12345

d) Accounts(acctNo, type, balance)

Customers(firstName, lastName, idNo, account)

e) Accounts(Customers(
   acctNo,   firstName,
   type,   lastName,
   balance   idNo,
)   account
)

f)

Accounts(acctNo: string, type: string, balance: integer)

Customers(firstName: string, lastName: string, idNo: string, account: string)

g)

Accounts(acctNo, type, balance, createdOn)

Customers(firstName, lastName, email, idNo, account)

a)
```
CREATE TABLE Product(
    maker   CHAR(50),
    model   INT,
    type    CHAR(7),
    PRIMARY KEY(model)
);
```

b)
```
CREATE TABLE PC(
    model   INT,
    speed   INT,
    Ram     INT,
    hd      INT,
    price   FLOAT,
    PRIMARY KEY(model)
);
```

c)
```
CREATE TABLE Laptop(
    model   INT,
    speed   INT,
    ram     INT,
    hd      INT,
    screen  INT,
    price   FLOAT,
    PRIMARY KEY(model)
);
```

d)
```
CREATE TABLE Printer(
    model   INT,
    color   BOOLEAN,
    type    CHAR(50),
    price   FLOAT,
    PRIMARY KEY(model));
```

e) ALTER TABLE Printer DROP color;

f) ALTER TABLE Laptop ADD od CHAR(10) DEFAULT 'none';