Homework #9

7.1.3

```
CREATE TABLE Product (
    maker char(20),
    model int PRIMARY KEY,
    type char(20),
);

CREATE TABLE PC (
    model int,
    speed real,
    ram int,
    hd int,
    price int,
    FOREIGN KEY (model) REFERENCES Product (mode)
);

CREATE TABLE Laptop (
    model int,
    speed real,
    ram int,
    hd int,
    screen real,
    price int,
    FOREIGN KEY (model) REFERENCES Product (model)
);
```

```
CREATE TABLE Printer (
    model int,
    color boolean,
    type char (20),
    price int,
    FOREIGN KEY (model) REFERENCES Product (model)
);
```

7.2.2

a/
```
CREATE TABLE Laptop (
    model int PRIMARY KEY,
    speed real CHECK (speed >= 2.0),
    ram int,
    hd int,
    screen real,
    price int,
);
```

b/
```
CREATE TABLE Printer (
    model int PRIMARY KEY,
    color boolean,
    type char (20) CHECK (type IN ('laser', 'ink-jet', 'bubble-jet')),
    price int,
    FOREIGN KEY (model) REFERENCES Product (model)
);
```

c/
```
CREATE TABLE Product (
    maker char (20),
    model int PRIMARY KEY,
    type char (20) CHECK (type IN ('pc', 'laptop', 'printer'))
);
```

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d/   CREATE TABLE Product (
        maker char (20),
        model int CHECK (model IN (select model from IC)
                            UNION (select model from Laptop)
                            UNION (select model from Printer)),
        type char (20),
     );

7.4.1

a/ CREATE ASSERTION CHECK
    (NOT EXISTS
        ((select maker from Product JOIN IC
            INTERSECT
            (select maker from Product JOIN Laptop))
    );

7.5.2

b/ CREATE TRIGGER New Printer Trigger
    AFTER INSERT ON Printer
    REFERENCES NEW ROW AS NewRow,
                NEW TABLE AS New Stuff,
    FOR EACH ROW
    WHEN NOT EXIST (select * from Product where Product.model = NewRow.model))
    DELETE FROM Printer
    WHERE (model, color, type, price) IN New Stuff;