Question 5. [8 MARKS]

Suppose I have a file called `nonsense.ddl` containing this:

```
DROP SCHEMA IF EXISTS rp CASCADE;
CREATE SCHEMA rp;
SET SEARCH_PATH TO rp;

CREATE TABLE Things (
   A INT PRIMARY KEY,
   B INT,
   C INT UNIQUE
);

CREATE TABLE Junk (
   G INT PRIMARY KEY,
   H INT,
   I INT,
   FOREIGN KEY (I) REFERENCES Things(A) ON UPDATE CASCADE ON DELETE CASCADE
);

CREATE TABLE Stuff (
   D INT,
   E INT,
   F INT PRIMARY KEY,
   FOREIGN KEY (E) REFERENCES Things(C) ON UPDATE RESTRICT ON DELETE SET NULL,
   FOREIGN KEY (E) REFERENCES Junk(G) ON UPDATE SET NULL ON DELETE CASCADE
);
```

Part (a) [2 MARKS]

Suppose I imported this file into postgreSQL using the command `\i nonsense.ddl` and then a few weeks later the following happened when I tried to access table `Junk`.

```
dbsrv1% psql csc343h-dianeh
psql (9.1.15, server 9.1.14)
Type "help" for help.


csc343h-dianeh=> SELECT * FROM Junk;
ERROR:  relation "junk" does not exist
LINE 1: SELECT * FROM Junk;
                      ^
```

Modify my interaction above so that the `SELECT` statement works.

Part (b) [2 MARKS]

What is the most important thing that is the same about `PRIMARY KEY` and `UNIQUE`?

What is one important difference between `PRIMARY KEY` and `UNIQUE`?

Part (c) [2 MARKS]

Suppose the tables have been populated as shown below. Modify the data to show the contents of the three tables after this command is executed:

```
UPDATE Things SET C = 20 WHERE A = 8;
```

```
Things:
 a | b | c
---+---+---
 3 | 2 | 3
 4 | 2 | 5
 8 | 2 | 6
 1 | 5 | 4
 9 | 8 | 7
 2 | 2 | 9
```

```
Stuff:
 d | e | f
---+---+---
 3 | 4 | 1
 1 | 6 | 3
 2 | 9 | 5
 2 | 3 | 4
```

```
Junk:
 g | h | i
---+---+---
 9 | 0 | 3
 3 | 2 | 9
 6 | 2 | 8
 8 | 5 | 9
 4 | 1 | 1
```

Part (d) [2 MARKS]

Suppose we began with the same original tables, shown below, but ran a different command. Modify the data to show the contents of the three tables after this command is executed:

```
DELETE FROM Things WHERE C = 3;
```

```
Things:
 a | b | c
---+---+---
 3 | 2 | 3
 4 | 2 | 5
 8 | 2 | 6
 1 | 5 | 4
 9 | 8 | 7
 2 | 2 | 9
```

```
Stuff:
 d | e | f
---+---+---
 3 | 4 | 1
 1 | 6 | 3
 2 | 9 | 5
 2 | 3 | 4
```

```
Junk:
 g | h | i
---+---+---
 9 | 0 | 3
 3 | 2 | 9
 6 | 2 | 8
 8 | 5 | 9
 4 | 1 | 1
```