1 The Tables

1.1 Student

This is the table for our students. We keep which degree and major they're on, and how many credit hours they have.

```
CREATE TABLE Student (
  Id CHAR(3) PRIMARY KEY,
  Name VARCHAR(20) NOT NULL,
  Age INT DEFAULT 20 CHECK(Age>0 AND AGE<100),
  Gender CHAR NOT NULL,
  Deg_code CHAR(2) NOT NULL, -- REFERENCES Degree(code),
  Major CHAR(3)
  credits  INTEGER
);
```

Id	Name	Age	Gender	Deg_code	Major	Credits
111	Lina Colli	22	F	BS	CS	20
222	Juan Perez	21	M	BA		30
333	John Perez	18	M	BS		40
444	Jane Perez	21	F	BA	CS	50
555	John Doe	20	M	MS	IT	60
666	Jane Doe	22	F	MS	SWE	27
777	David Perez	22	M	BS	IT	35
888	David Smith	18	M	BS	SWE	45
999	Eva Smith	18	F	MS	CS	95

1.2 Tasks

- Write SQL to create a table called Major, that contains two fields, a code (up to 3 characters), and a name (up to 20 characters)

- If you were to add a constraing to the Major column of the student table, so every student can only have a major that is also on the Major table, that would you add on the corresponding line ?

- If you were to add the above constraint, but written at the end of the table, how would you write it ?

2 Insert, delete, update

2.1 Insert

```
INSERT INTO STUDENT (Id, Name) values ('123','Orlando Karam');
```

2.1.1 Tasks

- Write a SQL statement to insert a new student, with all its values (invent values)

2.2 Delete

```
DELETE FROM STUDENT
WHERE Id='111'
```

2.2.1 Tasks

- Write a SQL statement to delete all students in the 'CS' major

- Write a SQL statement to delete all students older than 55

2.3 Update

```
UPDATE STUDENT
SET Age=25
WHERE Id='111'
```

2.3.1 Tasks

- Write a SQL statement to increase the age of all students in the 'CS' major by 1

3 Basic Queries

3.1 Basic Selects

A query to list the names of all students majoring in CS would be like this:

```
SELECT name
FROM student
WHERE major='CS'
```

3.1.1 List the id and name of all female students that are majoring in CS

```
SELECT

FROM
```

3.1.2 List the name of all male students that are majoring in CS or IT

```
SELECT

FROM
```

3.1.3 List the id, name and age all students whose name starts with 'B'

```
SELECT

FROM
```

3.1.4 List the id, name and age students will have in five years (for all students)

```
SELECT

FROM
```

3.2 Counting and Averaging

The following query would give you the number of students and the average credit hours.

```
SELECT Count(*), avg(creds)
FROM Student;
```

And this one would give you the number of students and the average credit hours per degree code.

```
SELECT deg_code,Count(*), avg(creds)
FROM Student
GROUP BY deg_code
```

3.3 List the major and the number of students per major

```
SELECT

FROM
```

3.4 List the major and the number of FEMALE students per major

```
SELECT

FROM
```

3.5 List the major and the number of students per major, but just for those majors having more than 2 students

```
SELECT

FROM
```