HOW DO WE CREATE TABLES?

THAT GETS US TO THE SQL CREATE TABLE STATEMENT FOR A TABLE LIKE THIS..

StudentID	FirstName	LastName	Gender	Email

```
CREATE TABLE Students
(
StudentID INT NOT NULL AUTO_INCREMENT,
FirstName VARCHAR(30) NOT NULL,
LastName VARCHAR(30) NOT NULL,
Gender CHAR(1),
Email VARCHAR(30) NOT NULL,
PRIMARY KEY (StudentID)
)
```

COLUMNS OF TABLES HAVE DATA TYPES

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```

NULL VALUES ARE OK OR NOT?

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StudentID	DormitoryName	AptNumber
1	Gandhi House	110
2	Akbar Hall	231
3	Gandhi House	345
4	NULL	NULL

NULL IMPLIES THAT A VALUE DOES NOT EXIST

NULL VALUES ARE OK OR NOT?

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A BLANK STRING OR ZERO IS A VALUE THAT EXISTS, NULL SIMPLY DOES NOT EXIST

NULL VALUES ARE OK OR NOT?

ANY COLUMN CAN CONTAIN A VALUE OF NULL..

..PROVIDED THE TABLE HAS BEEN DEFINED IN A WAY THAT ALLOWS NULL VALUES IN THAT COLUMN

NULL IS NEITHER TRUE NOR FALSE, ITS JUST NULL

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NULL VALUES ARE OK OR NOT?

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OUR TABLE SPECIFICATION IS SAYING THAT NULL VALUES ARE NOT OK IN ANY COLUMN EXCEPT GENDER

```sql
CREATE TABLE Students
(
                          NULL NOT OK IN STUDENTID
StudentID INT NOT NULL AUTO_INCREMENT,
FirstName VARCHAR(30) NOT NULL,
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NULL NOT OK IN FIRSTNAME

NULL VALUES ARE OK OR NOT?

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```
CREATE TABLE Students
(
```

NULL NOT OK IN LASTNAME

```
StudentID INT NOT NULL AUTO_INCREMENT,
FirstName VARCHAR(30) NOT NULL,
LastName VARCHAR(30) NOT NULL,
Gender CHAR(1),
Email VARCHAR(30) NOT NULL,
PRIMARY KEY (StudentID)
```

NULL VALUES ARE OK OR NOT?

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```
CREATE TABLE Students
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FirstName VARCHAR(30) NOT NULL,
LastName VARCHAR(30) NOT NULL,
Gender CHAR(1) ,
Email VARCHAR(30) NOT NULL,
```

NULL IS OK IN GENDER

NULL VALUES ARE OK OR NOT?

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NULL IS NOT OK IN EMAIL

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HOW IS A PRIMARY KEY DIFFERENT FROM ANY OTHER KEY?

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DBMS WILL OFTEN CONSTRUCT AN INDEX ON THE PRIMARY KEY EVEN WITHOUT BEING TOLD TO.

THIS GETS ASKED ON INTERVIEWS, SO REMEMBER THIS :-)

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WHAT WOULD HAPPEN IF WE TRIED TO INSERT TWO ROWS WITH THE SAME VALUES OF STUDENTID?

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CONSTRAINTS - SUCH AS THE PRIMARY KEY CONSTRAINT - ARE A KEY REASON DATABASES AND DBMS ROCK.

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AUTO_INCREMENT?

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BTW, IN MS-SQL SERVER, THE KEYWORD INDEX IS USED INSTEAD OF AUTO_INCREMENT