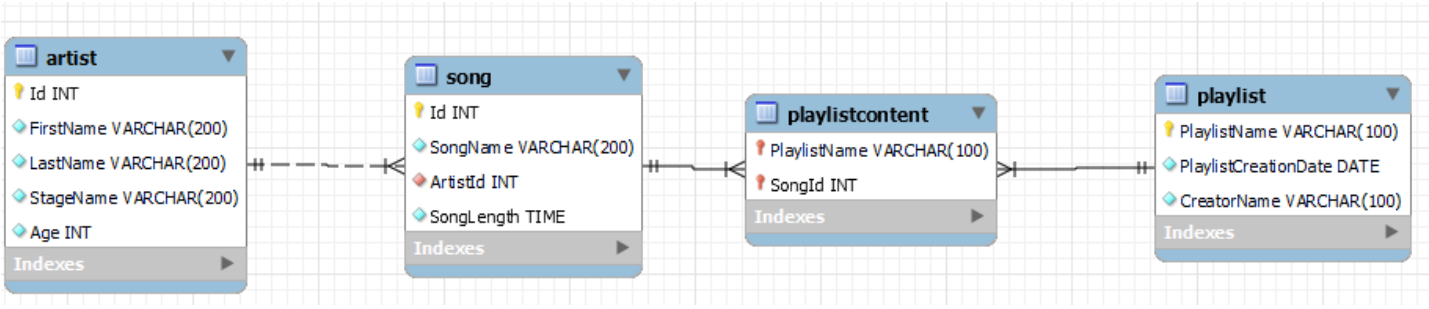
Quiz Two

Name: _____

1. (5 Points) What is the difference between an inner join and a full outer join? A Venn Diagram is a good visual aid for showing how different joins work.

2. (5 Points) When writing a function or stored procedure in MySQL, we need to change the delimiter. Why?

3. (10 Points) Write a query that returns the names of all the playlists, and all the songs assigned to that playlist. Order your results in *alphabetical order* by *playlist name*, and then by *song name*.



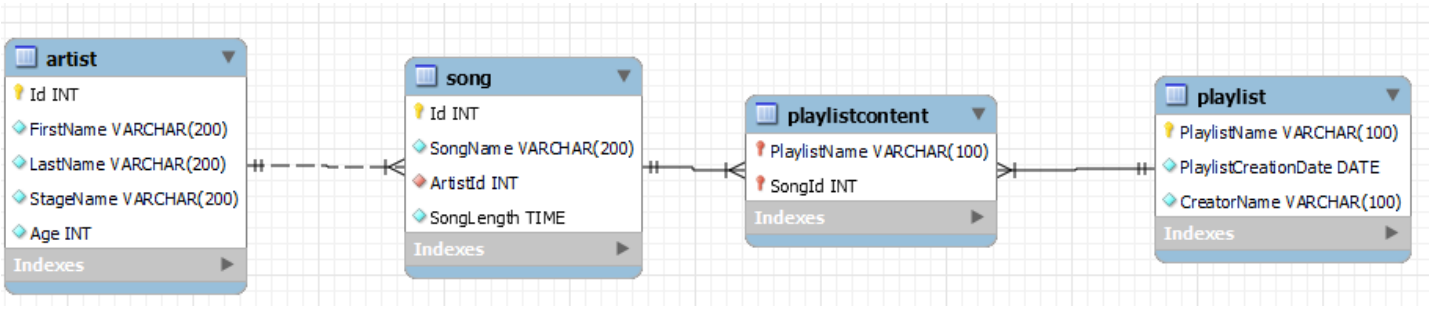
4. (5 Points) In the create table statement below, what is the *purpose* of line 13?

```
1  DROP DATABASE IF EXISTS MusicCollection;
2  CREATE DATABASE MusicCollection;
3
4  USE MusicCollection;
5
6  CREATE TABLE IF NOT EXISTS Artist(
7  Id int not null auto_increment,
8  FirstName varchar(200) not null,
9  LastName varchar(200) not null,
10 StageName varchar(200) not null,
11 Age int not null,
12 Primary Key (Id),
13 check (Age > 13)
14 );
```

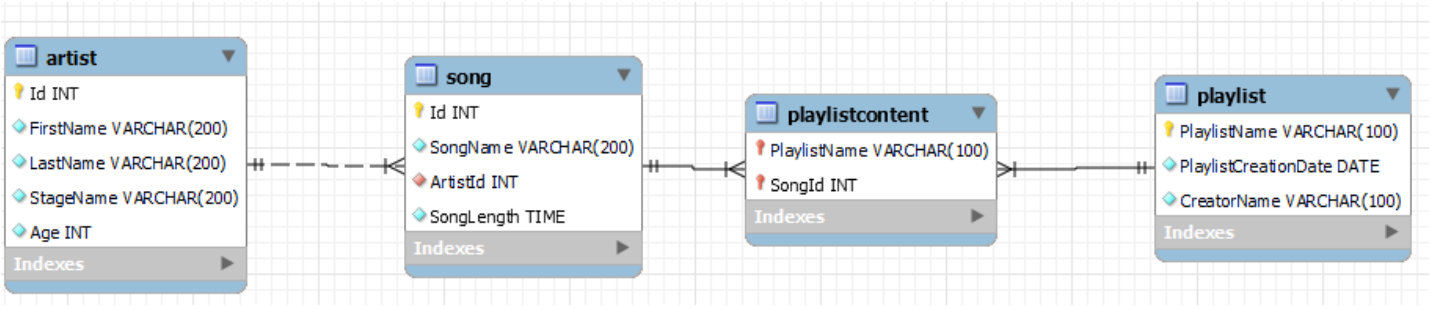
5. (5 Points) When the database engine executes a SQL statement, it executes the clauses in the order shown in the table below. Knowing this, explain why a join is more efficient than a Cartesian product.

Order	Clause
1	FROM
2	WHERE
3	GROUP BY
4	HAVING
5	SELECT
6	ORDER BY

6. (10 Points) The **playlistcontent** table has two foreign keys. Write the create table statement for the **playlistcontent** table, ensuring that you include the *primary* and *foreign key* definitions.



7. (15 Points) Write a function that tells me *how many songs* are contained in a particular playlist. You should take as input a *playlist name*, and return an *integer*.



8. (5 Points) MySQL's built-in function `UPPER` takes an input string, and converts that string to all uppercase letters. Use this function to write a query that converts all the song names to uppercase.

9. (6 Points) Stored procedures are an ideal way for an application to interact with a database. Give *two* reasons why.

10. Variables can be created with global, session, or local scope. In the function below, variable `numSongs` and variable `desiredLength` are used.

```
DROP FUNCTION IF EXISTS GetLongSongCount;
delimiter $$
CREATE FUNCTION GetLongSongCount (desiredLength Time)
RETURNS INT deterministic
BEGIN
     declare numSongs int;
     select count(Id) into numSongs
     from Song
     where SongLength > desiredLength;
     return numSongs;
END$$
delimiter ;
```

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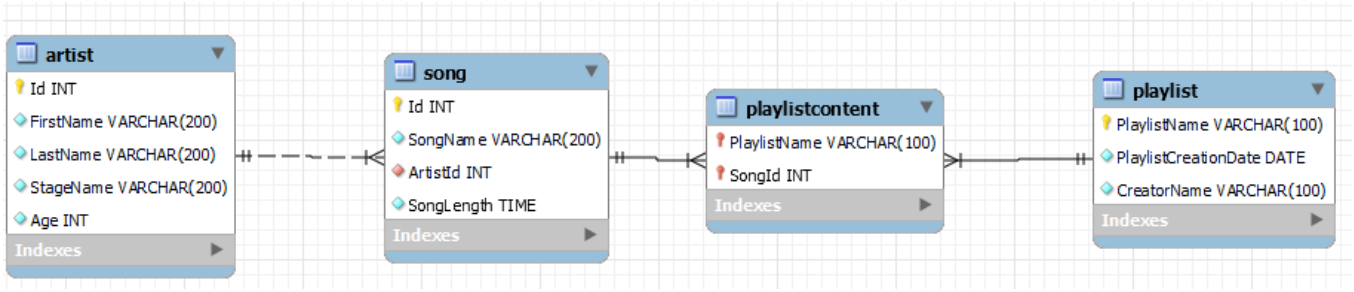
a. (2 Points) What is the *scope* of `numSongs`?

b. (2 Points) What is the *scope* of `desiredLength`?

11. Use the following database schema to create and call a stored procedure:



a. (15 Points) *Write* a stored procedure that inserts a new artist into the **Artist** table.

b. (5 Points) *Call* your stored procedure, inserting a new artist into the **Artist** table.

12. (10 Points) Write a query that finds all the songs that *are not* currently assigned to a playlist.