```
SHOW DATABASES;

USE [iSchool account];
```

Creating Tables

```
CREATE TABLE Recipe (
recipe_id INT UNSIGNED NOT NULL AUTO_INCREMENT,
name VARCHAR(200),
description TINYTEXT,
directions TEXT,
PRIMARY KEY (recipe_id),
INDEX (recipe_id),
INDEX (name),
);

DESCRIBE Recipe;

ALTER TABLE Recipe ADD COLUMN author TINYTEXT;

CREATE TABLE Ingredient (
ingredient_id INT UNSIGNED NOT NULL AUTO_INCREMENT,
name VARCHAR(100),
PRIMARY KEY (ingredient_id),
INDEX (name)
);

CREATE TABLE Recipe_ingredient (
ri_id INT UNSIGNED NOT NULL AUTO_INCREMENT,
recipe_id INT UNSIGNED,
ingredient_id INT UNSIGNED,
amount TINYTEXT,
PRIMARY KEY (ri_id)
);
```

Inserting into columns

```
INSERT INTO Ingredient (name) VALUES ("eggs");

INSERT INTO Ingredient (name) VALUES ("salt"), ("butter"), ("milk"), ("cheese"), ("pepper");

SELECT * FROM Ingredient;
```

Inserting into multiple columns

```
INSERT INTO Recipe (name, directions) VALUES ("Scrambled Eggs", "Crack eggs into bowl, whisk
until smooth, pour into pan, stir.");

SELECT * FROM Recipe;
```

```
INSERT INTO Recipe_ingredient (recipe_id, ingredient_id, amount) VALUES
(1, 1, "2"),
(1, 2, "a pinch"),
(1, 4, "a dollop"),
(1, 2, "1 Tablespoon");

SELECT * FROM Recipe_ingredient;

USE library;

SHOW TABLES;
DESCRIBE Books;
DESCRIBE Authors;
DESCRIBE Format;
SELECT * FROM Books;
SELECT * FROM Format;
SELECT * FROM Books WHERE book_id = 34;
SELECT * FROM Books WHERE book_id < 11;
SELECT * FROM Books WHERE book_id BETWEEN 30 AND 40;
SELECT COUNT(*) FROM Authors;

SELECT last_name, first_name FROM Authors
WHERE last_name LIKE 'Grisham';

SELECT last_name, first_name FROM Authors
WHERE last_name LIKE 'G%';

SELECT last_name, first_name FROM Authors
ORDER BY last_name;

SELECT last_name, first_name FROM Authors
ORDER BY last_name DESC;

SELECT last_name, first_name FROM Authors
ORDER BY last_name DESC LIMIT 10;
```

Our first join

```
SELECT Books.title, Format.format
FROM Books, Format
WHERE Books.format = Format.format_id;

SELECT Books.title, Format. Format
FROM Books, Format
WHERE Books.format = Format.format_id
ORDER BY title;
```

```
SELECT Format.format, COUNT(Format.format)
FROM Books, Format
WHERE Format.format_id = Book.format
GROUP BY Format.format;
```

Lastly a 3-way join with a junction table

```
SELECT Books.title, Authors.first_name, Authors.last_name
FROM Books, Authors, Book_Author
WHERE Books.book_id = Book_Author.book_id
AND Author.id = Book_Author.author_id
ORDER BY Author.last_name;
```