ITC 220
Create a database on the server.

```
mysql> create database [databasename];
```

List all databases on the sql server.

```
mysql> show databases;
```

Switch to a database.

```
mysql> use [db name];
```

To see all the tables in the db.

```
mysql> show tables;
```

To see database's field formats.

```
mysql> describe [table name];
```

To delete a db.

```
mysql> drop database [database name];
```

To Create a table.

```
mysql> create table [table name](
    Column Name   data type   optional column constraint,
    Column Name   data type   optional column constraint,
    Optional table constraints);
```

Optional column constraints include: PRIMARY KEY, NOT NULL, NULL, AUTO INCREMENT and more.
Optional table constraints include: Primary Key especially with composite keys and Foreign Key

For example:

```
CREATE TABLE tbl_customer(
    customer_key      MEDIUMINT  UNSIGNED NOT NULL AUTO_INCREMENT,
    customer_lastname  VARCHAR(40) NOT NULL,
    customer_firstname Char(30)  NOT NULL,
    cust_phone  Char(12)  NOT NULL,
    cust_email  VarChar(40)  NULL,
    CONSTRAINT   CUSTOMER_PK   PRIMARY KEY(customer_key)
);
```

```
CREATE TABLE tbl_course(
    course_number  MEDIUMINT  UNSIGNED NOT NULL AUTO_INCREMENT,
    course_name  Char(50)   NOT NULL,
    course_date  DateTime   NOT NULL,
    course_fee  Float(8,2)  NOT NULL,
    CONSTRAINT   COURSE_PK   PRIMARY KEY(course_number)
);
```

```
CREATE TABLE tbl_enrollment(
    customer_key  MEDIUMINT  UNSIGNED NOT NULL,
    course_number  MEDIUMINT  UNSIGNED NOT NULL,
    crs_amount_paid  Float(8,2)  NULL,
    CONSTRAINT   ENROLLMENT_PK   PRIMARY KEY(customer_key, course_number),
    CONSTRAINT   ENROLL_CUST_FK  FOREIGN KEY(customer_key)
        REFERENCES tbl_customer(customer_key)
        ON UPDATE NO ACTION
        ON DELETE NO ACTION,
    CONSTRAINT  ENROLL_COURSE_FK   FOREIGN KEY(course_number)
        REFERENCES tbl_course(course_number)
        ON UPDATE NO ACTION
        ON DELETE NO ACTION
);
```

To delete a table.

```
mysql> drop table [table name];
```
Delete a column.
```
mysql> alter table [table name] drop column [column name];
```

Add a new column to db.
```
mysql> alter table [table name] add column [new column name] varchar (20);
```

Change column name.
```
mysql> alter table [table name] change [old column name] [new column name] varchar (50);
```

Make a unique column so you get no dupes.
```
mysql> alter table [table name] add unique ([column name]);
```

Make a column bigger.
```
mysql> alter table [table name] modify [column name] VARCHAR(3);
```

Show all data in a table.
```
mysql> SELECT * FROM [table name];
```

Returns the columns and column information pertaining to the designated table.
```
mysql> show columns from [table name];
```

Show certain selected rows with the value "whatever".
```
mysql> SELECT * FROM [table name] WHERE [field name] = "whatever";
```

Show all records containing the name "Bob" AND the phone number '3444444'.
```
mysql> SELECT * FROM [table name] WHERE name = "Bob" AND phone_number = '3444444';
```

Show all records not containing the name "Bob" AND the phone number '3444444' order by the phone_number field.
```
mysql> SELECT * FROM [table name] WHERE name != "Bob" AND phone_number = '3444444' order by phone_number;
```

Show all records starting with the letters 'bob' AND the phone number '3444444'.
```
mysql> SELECT * FROM [table name] WHERE name like "Bob%" AND phone_number = '3444444';
```

Show all records starting with the letters 'bob' AND the phone number '3444444' limit to records 1 through 5.
```
mysql> SELECT * FROM [table name] WHERE name like "Bob%" AND phone_number = '3444444' limit 1,5;
```

Use a regular expression to find records. Use "REGEXP BINARY" to force case-sensitivity. This finds any record beginning with a.
```
mysql> SELECT * FROM [table name] WHERE rec RLIKE "^a";
```

Show unique records.
```
mysql> SELECT DISTINCT [column name] FROM [table name];
```

Show selected records sorted in an ascending (asc) or descending (desc).
```
```

Return number of rows.
```
mysql> SELECT COUNT(*) FROM [table name];
```

Sum column.
```
mysql> SELECT SUM(*) FROM [table name];
```
To update info already in a table.

```sql
mysql> UPDATE [table name] SET Select_priv = 'Y', Insert_priv = 'Y', Update_priv = 'Y' where [field name] = 'user';
```

Delete a row(s) from a table.

```sql
mysql> DELETE from [table name] where [field name] = 'whatever';
```