SQL REFERENCE

SELECT STATEMENTS

`SELECT * FROM tbl`
Select all records, all columns from table named tbl
Example: **`SELECT * FROM Students`**

`SELECT col1, col2 FROM tbl`
Select col1 and col2 only from all records from table named tbl
Example: **`SELECT FirstName, LastName, ID FROM Students`**

`SELECT * FROM tbl WHERE condition`
Select all columns from records in table named tbl which meet condition
Example: **`SELECT * FROM Students WHERE ID > 2000`**

`ORDER BY colname ASC, DESC`
Add these qualifiers to the end of a SQL query to sort it.
Examples: **`SELECT * FROM Students ORDER BY LastName ASC`**
`SELECT * FROM Students ORDER BY LastName ASC, ID DESC`

`SELECT DISTINCT colname FROM tbl`
Retrieve unique values for column colname in table tbl.
Examples: **`SELECT DISTINCT FirstName FROM Students`**

Note that these building blocks can be combined.

Example:
```
SELECT DISTINCT LastName FROM Students WHERE ID >
    2000 ORDER BY ID ASC
```

`SELECT * FROM tbl1 INNER JOIN tbl2 ON join-condition`
Pull information from table 1 and table 2, matching records based on condition.
Example:
```
SELECT * FROM Students INNER JOIN Bootcamps WHERE
    Students.CampID = Bootcamps.ID
```


TABLE STATEMENTS

```
CREATE TABLE tbl (
      col1 datatype (length) ,
      col2 datatype (length),  …
      PRIMARY KEY col1
)
```

Create a table named tbl with the columns indicated. Set the primary key to the first column.

Example:
```
CREATE TABLE Students (
      FirstName VARCHAR(55),
      LastName VARCHAR(55),
      ID INT(11) NOT NULL AUTO_INCREMENT,
      PRIMARY KEY ID
)
```

DROP TABLE tbl

Delete the table tbl from the database.

Example: **DROP TABLE Students**

INSERT INTO tbl (col1, col2) VALUES (val1, val2)

Add a new record into table tbl, putting val1 into col1, val2 into col2, etc.

Example: **INSERT INTO Students (FirstName, LastName) VALUES ("Jane", "Smith")**

(Note that because ID is autoincremented, we don't provide a value.)

DELETE FROM tbl WHERE condition

Remove records where condition is met.

Example: **DELETE FROM Students WHERE ID=102**

UPDATE tbl SET col1=val1 WHERE condition

Change the value stored in col1 for records where condition is met.

Example: **UPDATE Students SET LastName="Williams" WHERE ID=101**

ALTER TABLE tbl ADD COLUMN col1 datatype (length)

Add a column of datatype (and length) named col1 to table tbl.

Example: **ALTER TABLE Students ADD COLUMN Email VARCHAR(60)**

ALTER TABLE tbl DROP COLUMN col1

Remove the column col1 from table tbl. All values are lost.

Example: **ALTER TABLE Students DROP COLUMN Email**

Syntax Notes:

- On most SQL servers, SQL keywords like SELECT, FROM, ORDER BY, DISTINCT, ASC, DESC, etc. are not case sensitive. Many reference materials follow the convention of capitalizing them for clarity, but many developers don't do this in actual practice.
- Closing semicolon is optional unless the query includes more statements.