SQL Commands: Modifying		
What	**How**	**Example(s)**
Create table	CREATE TABLE *table* (*column1 type* [[NOT] NULL] [AUTO_INCREMENT], *column2 type* [[NOT] NULL] [AUTO_INCREMENT], ... *other options*, PRIMARY KEY (*column(s)*));	CREATE TABLE Students (LastName varchar(30) NOT NULL, FirstName varchar(30) NOT NULL, StudentID int NOT NULL, Major varchar(20), Dorm varchar(20), PRIMARY KEY (StudentID));
Insert data	INSERT INTO *table* VALUES (*list of values*); INSERT INTO *table* SET *column1=value1*, *column2=value2*, ... *columnk=valuek*; INSERT INTO *table* (*column1*,*column2*,...) VALUES (*value1*,*value2*...);	INSERT INTO Students VALUES ('Smith','John',123456789,'Math','Selleck'); INSERT INTO Students SET FirstName='John', LastName='Smith', StudentID=123456789, Major='Math'; INSERT INTO Students (StudentID,FirstName,LastName) VALUES (123456789,'John','Smith');
Insert/Select	INSERT INTO *table* (*column1*,*column2*,...) *SELECT statement*; (See below)	INSERT INTO Students (StudentID,FirstName,LastName) SELECT StudentID,FirstName,LastName FROM OtherStudentTable; WHERE LastName like '%son';
Delete data	DELETE FROM *table* [WHERE *condition(s)*]; (Omit **WHERE** to delete all data)	DELETE FROM Students WHERE LastName='Smith'; DELETE FROM Students WHERE LastName like '%Smith%'; AND FirstName='John'; DELETE FROM Students;
Updating Data	UPDATE *table* SET *column1=value1*, *column2=value2*, ... *columnk=valuek* [WHERE *condition(s)*];	UPDATE Students SET LastName='Jones' WHERE StudentID=987654321; UPDATE Students SET LastName='Jones', Major='Theatre' WHERE StudentID=987654321 OR (MAJOR='Art' AND FirstName='Pete');
Insert column	ALTER TABLE *table* ADD COLUMN *column type options*;	ALTER TABLE Students ADD COLUMN Hometown varchar(20);
Delete column	ALTER TABLE *table* DROP COLUMN *column*;	ALTER TABLE Students DROP COLUMN Dorm;
Delete table	DROP TABLE [IF EXISTS] *table*;	DROP TABLE Animals;

SQL Commands: Querying		
What	**How**	**Example(s)**
All columns	SELECT * FROM *table*;	SELECT * FROM Students;
Some columns	SELECT *column1*,*column2*,... FROM *table*;	SELECT LastName, FirstName FROM Students;
Some rows/ columns	SELECT *column1*,*column2*,... FROM *table* [WHERE *condition(s)*];	SELECT LastName,FirstName FROM Students WHERE StudentID LIKE '%123%';
No Repeats	SELECT [DISTINCT] *column(s)* FROM *table*;	SELECT DISTINCT LastName FROM Students;
Ordering	SELECT *column1*,*column2*,... FROM *table* [ORDER BY *column(s)* [DESC]];	SELECT LastName,FirstName FROM Students ORDER BY LastName, FirstName DESC;
Column Aliases	SELECT *column1* [AS *alias1*], *column2* [AS *alias2*], ... FROM *table1*;	SELECT LastName,FirstName AS First FROM Students;
Grouping	SELECT *column1*,*column2*,... FROM *table* [GROUP BY *column(s)*];	SELECT LastName,COUNT(*) FROM Students GROUP BY LastName;
Group Filtering	SELECT *column1*,*column2*,... FROM *table* [GROUP BY *column(s)*] [HAVING *condition(s)*];	SELECT LastName,COUNT(*) FROM Students GROUP BY LastName HAVING LastName like '%son';
Joins	SELECT *column1*,*column2*,... FROM *table1*,*table2*,... [WHERE *condition(s)*];	SELECT LastName,Points FROM Students,Assignments WHERE AssignmentID=12 AND Students.StudentID=Assignments.StudentID;
Table Aliases	SELECT *column1*,*column2*,... FROM *table1* [*alias1*], *table2* [*alias2*],... [WHERE *condition(s)*];	SELECT LastName,Points FROM Students S,Assignments A WHERE S.StudentID=A.StudentID AND A.AssignmentID=12;
Everything	SELECT [DISTINCT] *column1* [AS *alias1*], *column2* [AS *alias2*], ... FROM *table1* [*alias1*], *table2* [*alias2*],... [WHERE *condition(s)*] [GROUP BY *column(s)*] [HAVING *condition(s)*] [ORDER BY *column(s)* [DESC]];	SELECT Points, COUNT(*) AS Cnt FROM Students S,Assignments A WHERE S.StudentID=A.StudentID AND A.AssignmentID=12 GROUP BY Points HAVING Points > 10 ORDER BY Cnt, Points DESC;