**Database Creation:** create database database\_name

**Use Database:** use database\_name

**Drop Database:** drop database database\_name

**Constraints:** not null, unique, default (default value), primary key, foreign key (foreign key references table\_name (col\_name)), check (check (condition)), identity (identity (1,1) aka identity (start, step)

**Data Types:**

*Numeric:*

bigint - > 10 digits (8 bytes)

int - 1 digit < > 10 digits (4 bytes)

smallint - -32768 to 32767(2)

tinyint - 0 to 255(1)

bit - 0 and 1

decimal (7,3) – 7 digit whole numbers and 3 digits after decimal (XXXX.XXX)

*Text:*

char (255)

varchar (8000) – Alphanumeric

nvarchar (4000) – Special Characters

text - 62000+ Chars (Product Feedback, Comment)

*Datetime (YYYY-MM-DD):*

date (YYYY-MM-DD)

datetime (YYYY-MM-DD HH:MM:SS) - precision is up to seconds

datetime2 (YYYY-MM-DD HH:MM:SS:XXXXXX) - precision is up to milliseconds

**Table Creation:** create table table\_name (col\_name1 datatype [constraint1|constraint2 …], col\_name2 datatype [constraint1 | constraint2 …] …)

**Table Variable Declaration:** declare @table\_name table (col\_name1 datatype [primary key | unique | not null | check (condition)], col\_name2 datatype [unique | not null | check (condition)] …)

**Insertion:** insert into table\_name [(col\_name1, col\_name2 …] values (value1, value2 …) **OR**

insert into table\_name [(col\_name1, col\_name2 …)] select value1, value2 … **OR**

insert into table\_name [(col\_name1, col\_name2 …)] output inserted.col\_name1, inserted.col\_name2 …) values (value1, value2 …)

**Explicit Insertion into Identity Column:** set identity\_insert table\_name on [after insertion] set identity\_insert table\_name off

**Backup Table:** select \* into backup\_table\_name from table\_name **–** Entire Table **OR**

select \* into backup\_table\_name from table\_name [where condition] **–** Selected Rows **OR**

select col\_name1, col\_name2 into backup\_table\_name from table\_name [where condition] **–** Selected Columns [and Rows]

**Alter Table:** alter table add col\_name datatype **OR**

alter table add col\_name datatype [constraints] **OR**

alter table add constraint [constraint1 | constraint2 | … | constraint\_n] (col\_name1, col\_name2, …, col\_name\_n) **OR**

alter table table\_name alter column col\_name datatype **OR**

alter table table\_name drop column col\_name1, col\_name2, …, col\_name\_n **OR**

alter table drop column if exists col\_name

**Update Table:** update table\_name set col\_name = value [where condition]

**Delete:** delete table\_name where col\_name = value

**Truncate Table:** truncate table table\_name

**Drop Table:** drop table [if exists] table\_name

**Index Creation:** create [unique | clustered | nonclustered] index index\_name on table\_name col\_name **OR**

create index index\_name on table\_name (col\_name1, col\_name2 ...)