**Data Types in SQL:**

Data Types are the attribute that specifies what types of data entered by the user such as integer, character, decimal, date time, etc.

1. Integer data types:
2. Decimal data types
3. Money / currency data types
4. Date and Time data types
5. Character data types
6. Binary data types
7. Special data types

**BIT :**

Smallest data type of 1 byte storage size (0,1 or NULL)

**tinyint :**

1 bytes storage size 0 to 255

**int:**

4 bytes storage ( −2,147, 483,648 )

**Float :**

Storage depends on the value of n. ( - 1.79E+308 to -2.23E-308, 0)

**Date and Time :**

datetime (Date: 1753-01-01 through 9999-12-31)

**Charcter String :**

char[(n)] 1 to 8000 characters

varchar[(n)] 1 to 8000

varchar(max) 1 to 2^31-1

**sample table:**

Creating table:

CREATE TABLE table\_name (

column1 datatype,

column2 datatype,

column3 datatype,

....

);

Inserting values into table:

insert into <tablename> values()

example:

insert into employee values('vineeth','reddy','konda vineeth reddy','vineethrk@moback.com'),('sudha','reddy','konda sudha reddy','vineethrk@moback.com')

**SQL server constraint**

Sql server constraint as a property that can be assigned to a column or columns of a table. The SQL Server Constraints are mainly used to maintain data integrity.

Types of constraint:

Syntax:

CREATE TABLE<TABLE NAME>(<COLUMN NAME><DATA TYPE><CONSTRAINTKEY>……)

1. **Default Constraint:** Default constraint in SQL Server is used to fill the column with a default value
2. **UNIQUE KEY constraint:** It won’taccept any duplicate values
3. **NOT NULL constraint:** When you want a column not to accept NULL then you need to apply the NOT NULL constraint to that column.
4. **CHECK KEY constraint:** CHECK constraint is used to limit the value range that can be placed in a column.
5. **PRIMARY KEY constraint:** it will not allow either **NULL** or **Duplicate** values into a column or columns on which the primary key constraint is applied

\*NULLs should not be allowed.

\*It should be unique

\*It can not be modified.

1. **FOREIGN KEY constraint:** Foreign Key constraint is used for binding two tables with each other

A FOREIGN KEY is a field in one table, that refers to the PRIMARY KEY in another table

\*NULL represents the absence of data or value. It’s neither ZERO nor EMPTY

**Example**:

CREATE TABLE Employee (

ID int NOT NULL,

LastName varchar(255) NOT NULL,

FirstName varchar(255),

Age int,

City varchar(255) DEFAULT 'Mumbai',

DateOfBirth date DEFAULT GETDATE(),

Salary DECIMAL (18, 2) DEFAULT 5000.00

Emailid VARCHAR(100) UNIQUE

Dept\_no INT CHECK(Dept\_no > 0 AND Dept\_no < 100)

Bcode INT PRIMARY KEY,

Bname VARCHAR(40),

Bloc CHAR(40) PRIMARY KEY

)

**Clauses**

Where clauses

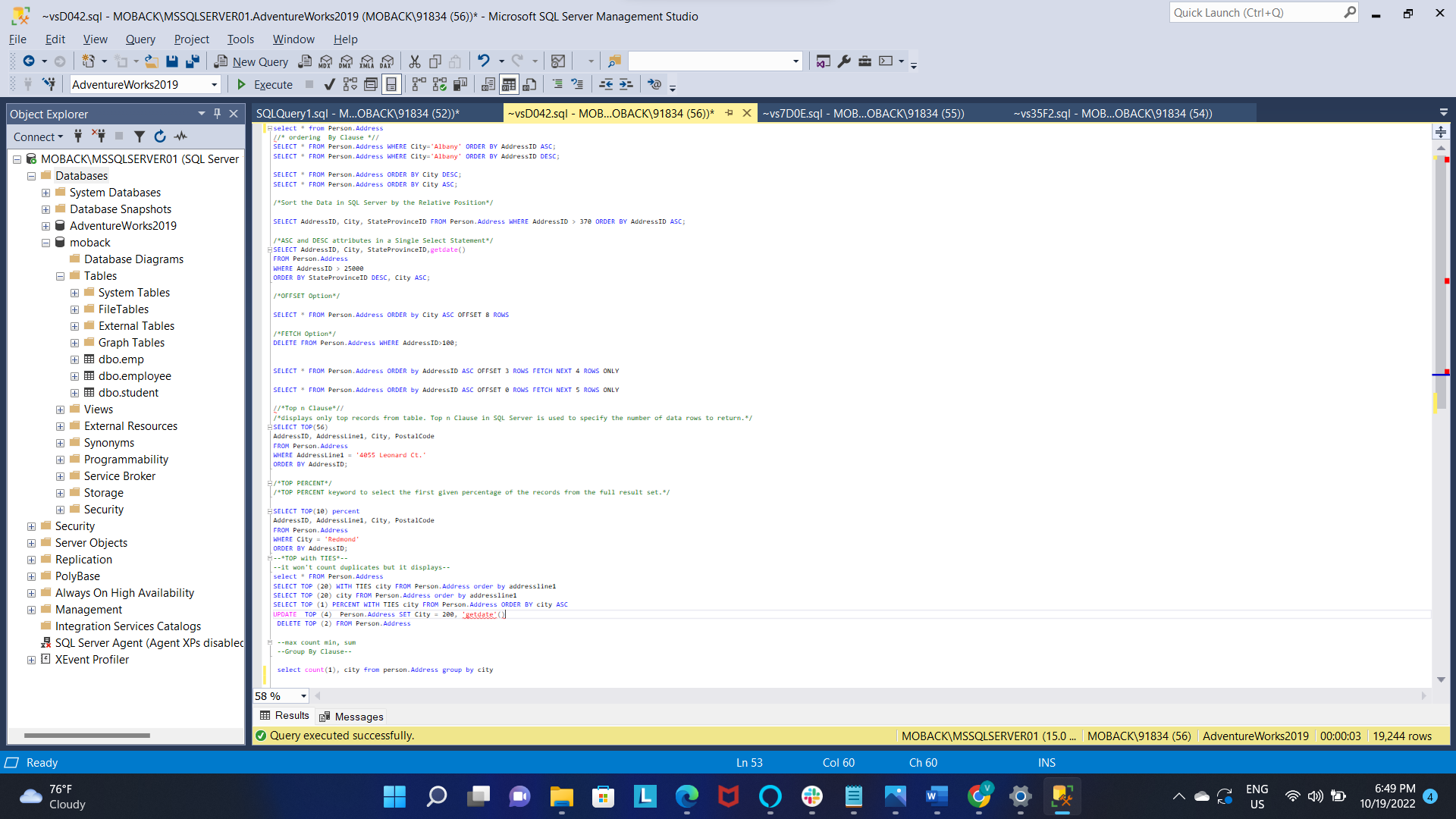
Order by clauses

Top n clauses

Group by clauses

Having clauses

**Practice Clauses :**

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