--Q.What is data?

--Collection of meaniful information.

--OR

--Collection record information.

--Q. What is database(DBMS)?

--it is collection of data in file format.

--ex:Excel,word file,text file, notepad , notepad++ etc.

--it stores less amount of data

--no relationship between two files or tables

--Q.What is RDBMS(Relatinal data base management system)?

--it is collection of table related information.

--it stores huge amount of data and to extract the data we have a simple language i.e. SQL

--There is relation between two or more tables.

--Q.what is table ?

--it is collection of rows and columns.

--There are two types of databases

--1.System defined database

--2.User defined database

--SQL is not a case sensitive language

--The meaning 'A' is always same 'a'

--for ex: 'AMAR' it has same meaning of 'amar'

--Q.How to create the Database testing18?

Create database Testing20

--Q.how to execute SQL statements?

--1.By using Execute tab form top

--2.By pressing F5 key from key board

--Q.How to navigate to Testing18 database?

use testing20

--In SQL

--Blue color indicates system defined keywords

--for ex

create, use, insert etc

--Pink color indicates system defined functions

--for ex

sum,min,max etc

--Data types

--Type of data/value of an object can hold is known as data type.

--A].Numeric data type

--1.BIT

--it stores value 0 or 1

--2.TINYINT

--It will store the value ranging from 0 to 255

--3.SMALLINT

--it will store value ranging -32768 to 32767

--4.Decimal

--an exact fixed point number

--5. INT

--it stores an integer value i.e. ranging from -2147483648 to 2147483647

--B].Approximate numeric data type

--1.Float

--it will store floating point number range is -1.8E to 308 to 1.8E to 308

--for Ex: 8.2345, 0.9876 etc

--2.Real

--it will also store an floating point numbers -3.40E to 38 to 3.40E to 38

--C].String or charecter data type

--1.char - 0-9,a-z,A-Z and Special symbol it will store data as 1 bit

--Static memory allocation and it is having size of 8000 chars

--for ex: char(20) -- AMAR - 4 char reaming 16 blocks of memory waisted because it has been fixed

--2.varchar - - 0-9,a-z,A-Z and Special symbol

--It is dynamic memory allocation and it will store data as 1 bit

--for ex: varchar(20) -- AMAR - 4 char reaming 16 blocks of memory it will releasse has been fixed

declare @val1 varchar(8000)='AMARPatil';

print @val1

print datalength(@val1)

print len(@val1)

--3.nchar

--It is static memory allocation and it can store 4000 charecters (1 char it will occupy 2bytes)

declare @value nchar(4000) = 'AMAR'

print @value

print datalength(@value)

print len(@value)

--4.nvarchar

--It is dynamic memory allocation and it can store 4000 charecters (1 char it will occupy 2bytes).

declare @value1 nvarchar(4000) = 'AMAR'

print @value1

print datalength(@value1)

print len(@value1)

--D].data and Time data type

--1.date

--It will allow you to insert the date in mulptiple formats

--For Ex: YYYY/MM/DD,DD/MM/YYYY,YYYY/DD/MM etc

select GETDATE()

declare @date1 date = getdate()

print @date1

--2.time

--it will allow you to insert the time in below format

--HH:MM:SS:MS