

DAY 2

Friday, 17 July 2020

8:59 AM

RELATIONAL MODEL :

Relational Model was designed by **E.F CODD** .

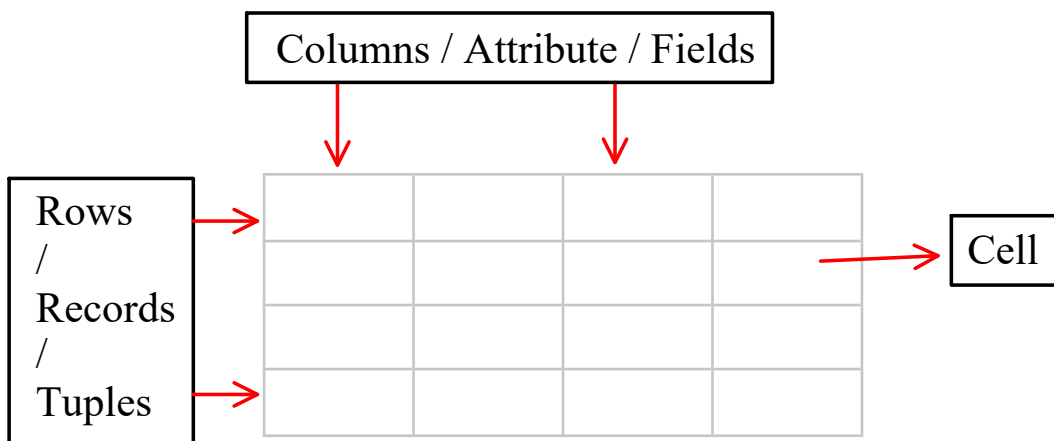
In Relational Model we can store the data in the form of *tables* .

Any DBMS which follows Relational Model becomes RDBMS .



Any DBMS which follows rules of EF CODD becomes RDBMS .

TABLE : "It is a logical organization of data which consists of Columns & Rows .



Example :

Employee : ← **Emp** (Entity)

- Eid
- Ename
- Salary

	<u>EID</u>	<u>ENAME</u>	<u>SALARY</u>
→	1	SMITH	1000
→	2	ALLEN	1500
→	3	CLARK	2000

RULES OF E.F CODD :

1. The data entered into a cell must always be a single valued data .

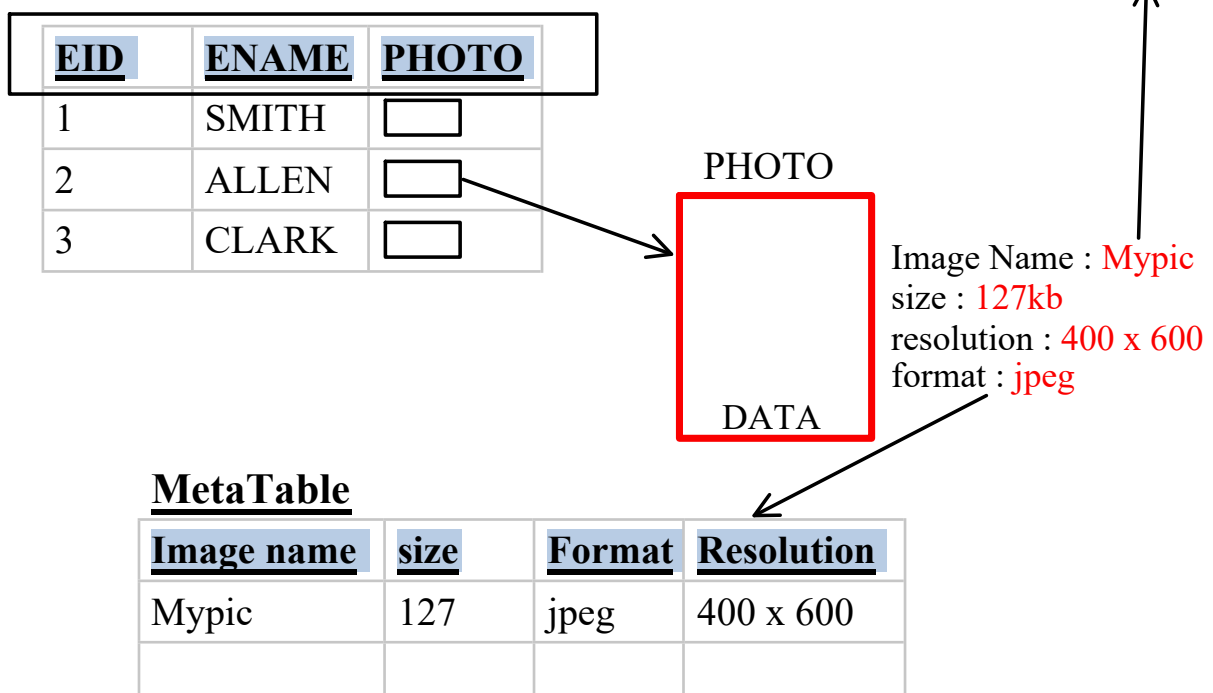
Example :

<u>EID</u>	<u>ENAME</u>	<u>PHONE NO</u>
1	SMITH	101
2	ALLEN	102 , 202
3	CLARK	103

<u>EID</u>	<u>ENAME</u>	<u>PHONE NO</u>	<u>ALTERNATE NO</u>
1	SMITH	101	
2	ALLEN	102	202
3	CLARK	103	

2. According to E.F CODD we can store the data in Multiple Tables ,
If needed we can establish a connection between the tables with the
Help of Key Attribute .
3. In RDBMS we store everything in the form of tables including
Metadata .

Example : Metadata : The details about a data is known as Metadata.



4. The data entered into the table can be validated in 2 steps .
 - i. By assigning Datatypes .
 - ii. By assigning Constraints .

Datatypes are mandatory , whereas Constraints are Optional .

DATATYPES :

*It is used to specify or determine the type of data that will be stored
In a particular memory location .*

Datatypes in SQL :

1. CHAR
2. VARCHAR / VARCHAR2
3. DATE
4. NUMBER
5. LARGE OBJECTS
 - i. Character Large Object .
 - ii. Binary Large Object .

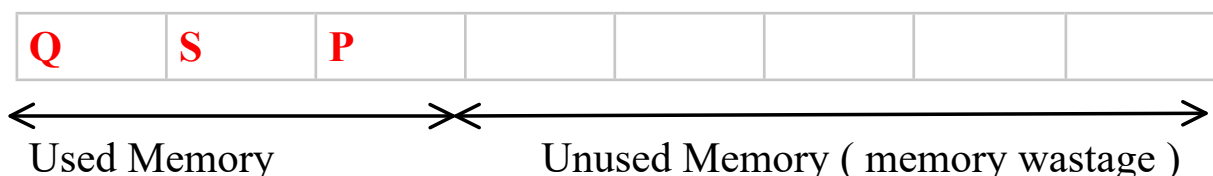
NOTE : SQL is not a Case Sensitive Language .

1. **CHAR :** In character datatype we can store 'A-Z' , 'a-z' , '0-9'
And Special Characters(\$, & , @ , ! ...) .

- Characters must always be enclosed within single quotes ' ' .
- Whenever we use char datatype we must mention size
- **Size** : it is used to specify number of characters it can store .
 - The maximum number of characters it can store is **2000ch.**
- Char follows fixed length memory allocation .

Syntax: CHAR (SIZE)

Example : CHAR (8)

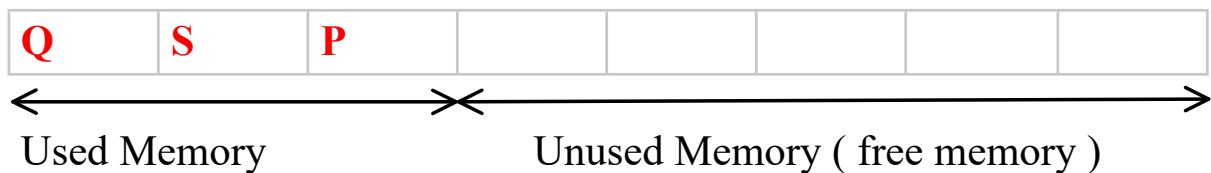


2. **VARCHAR** : In varchar datatype we can store 'A-Z' , 'a-z' , '0-9' And Special Characters(\$, & , @ , ! ...) .

- Characters must always be enclosed within single quotes ''.
- Whenever we use char datatype we must mention size
- **Size** : it is used to specify number of characters it can store .
 - The maximum number of characters it can store is **2000ch.**
- VarChar follows variable length memory allocation .

Syntax: VARCHAR (SIZE)

Example : VARCHAR (8)



NOTE : **VARCHAR2** : it is an updated version of varchar where in We can store up to **4000Ch.**

Syntax: VARCHAR2(SIZE)

Example :

STUDENT

<u>USN</u>	<u>SNAME</u>	<u>ADDRESS</u>	<u>PAN_NO</u>
CHAR(4)	VARCHAR(10)	VARCHAR(10)	CHAR(10)
QSP1	DINGA	BANGALORE	ABC123XYZ1
QSP2	DINGI	MYSORE	ABC123XYZ2

ASSIGNMENT :

1. DIFFERENTIATE BETWEEN CHAR & VARCHAR

ASCII : [American Standard Code For Information Interchange]

'A'	65
'Z'	90
'a'	97
'z'	122

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