

# DAY 2

Friday, 17 July 2020 8:59 AM

## RELATIONAL MODEL :

Relational Model was designed by E.F CODD .

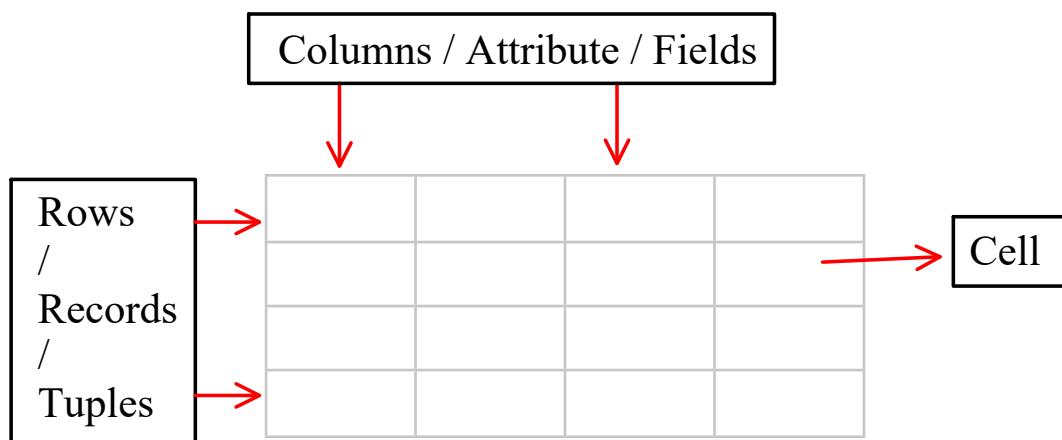
In Relational Model we can store the data in the form of *tables* .

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	- Eid - Ename - Salary
1	SMITH	1000	
2	ALLEN	1500	
3	CLARK	2000	

## RULES OF E.F CODD :

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

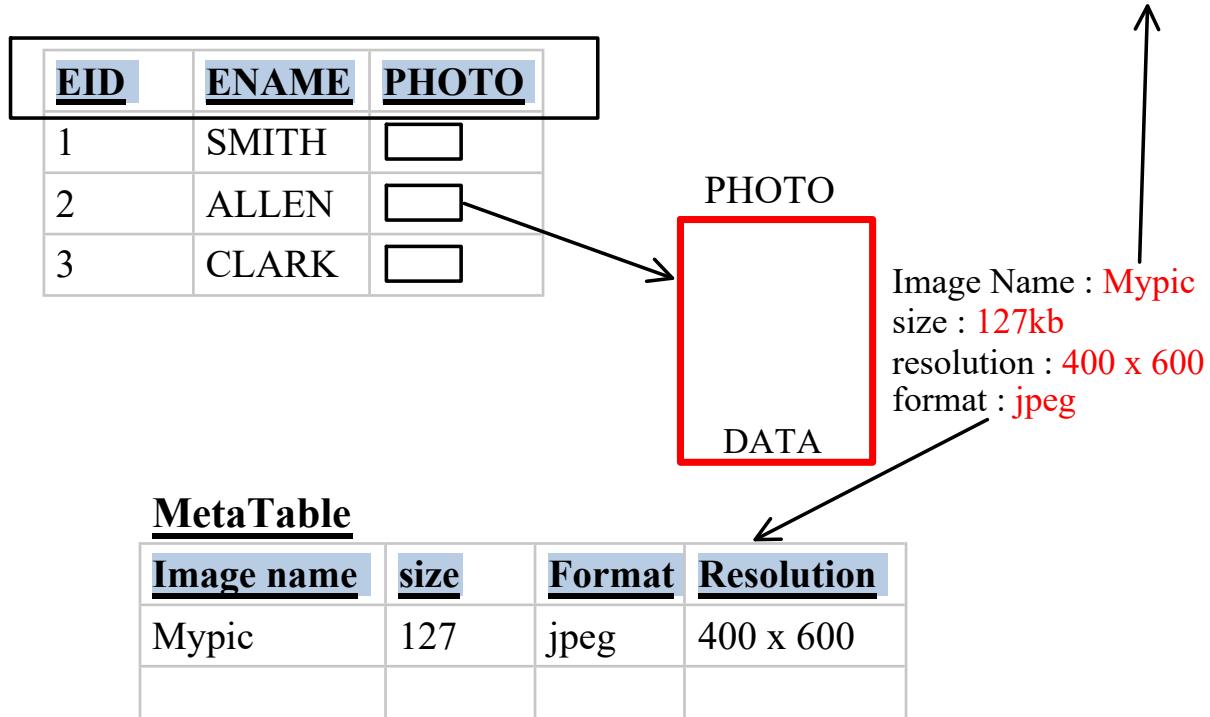
Example :

<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	

- 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* .
- 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 .

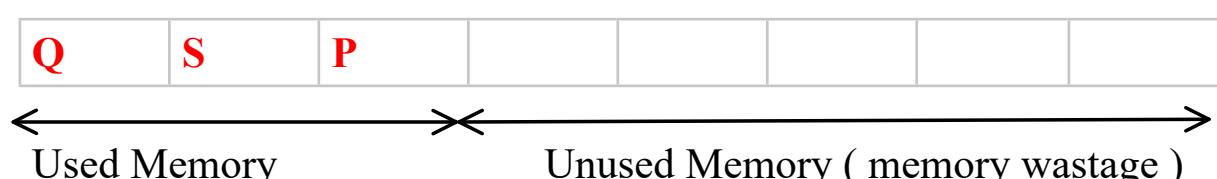
**NOTE :** SQL is not a Case Sensitive Language .

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 )
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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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My Contact :

Notes	<a href="http://bit.ly/roSQLQCDM34">bit.ly/roSQLQCDM34</a>
Software	<a href="http://bit.ly/roSoftWIN">bit.ly/roSoftWIN</a>
	<a href="http://bit.ly/roSoftMAC">bit.ly/roSoftMAC</a>
Mail	<a href="mailto:Ro.helpmate@gmail.com">Ro.helpmate@gmail.com</a>
Instagram	<a href="https://www.instagram.com/Ro_sql_helpmate">Ro_sql_helpmate</a>