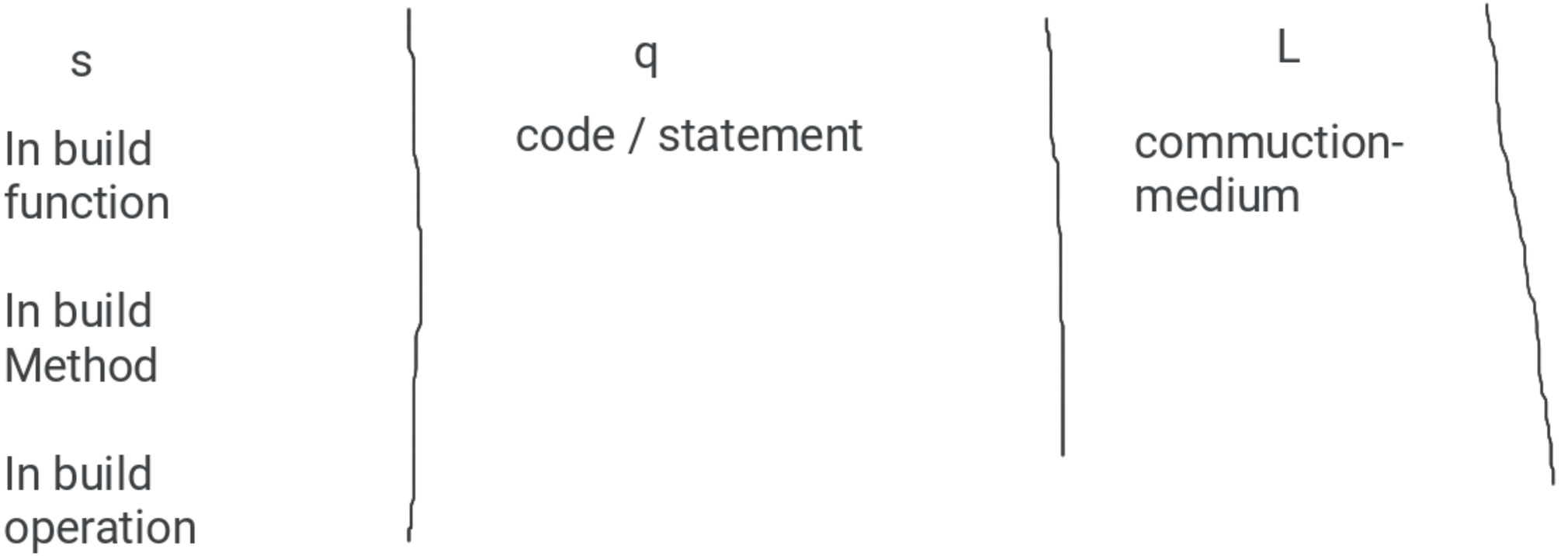
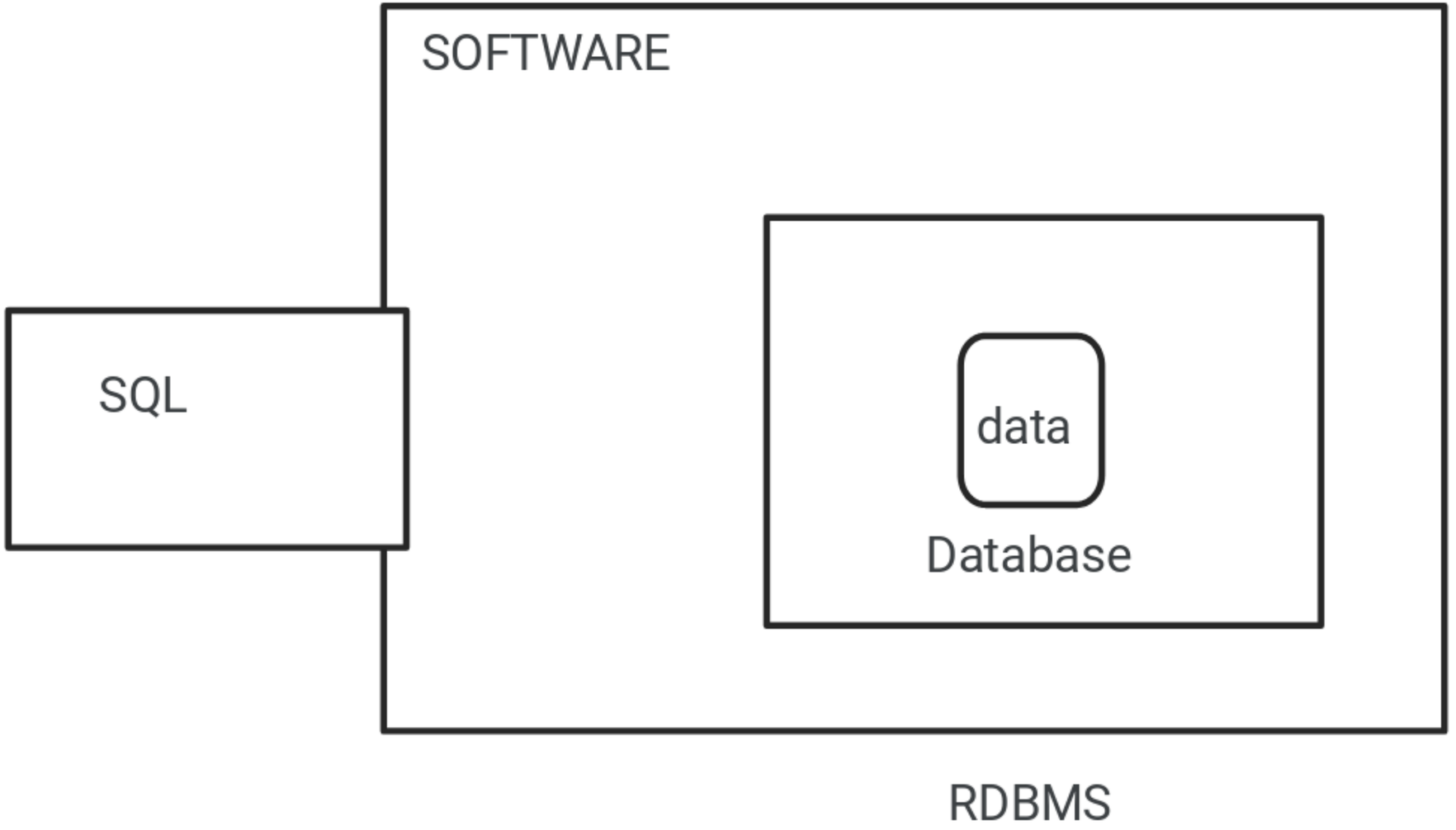
SQL:

Structured query language is standard programming which is designed for the purpose of interacting or communication between the softwer RDBM.

SQL is used to manupluate the database.[insert, update, delete].




SOFTWARE
SQL
data
Database
RDBMS

DATA:

Raw fact which is used to discribe Attributes of an Entity

Attributes- property

Entity- object

Example

Mobile

brand: Vivo
Price: 20000
Color: blue
ROM: 128gb
RAM: 16gb

Entity/object

Attributes/
properties

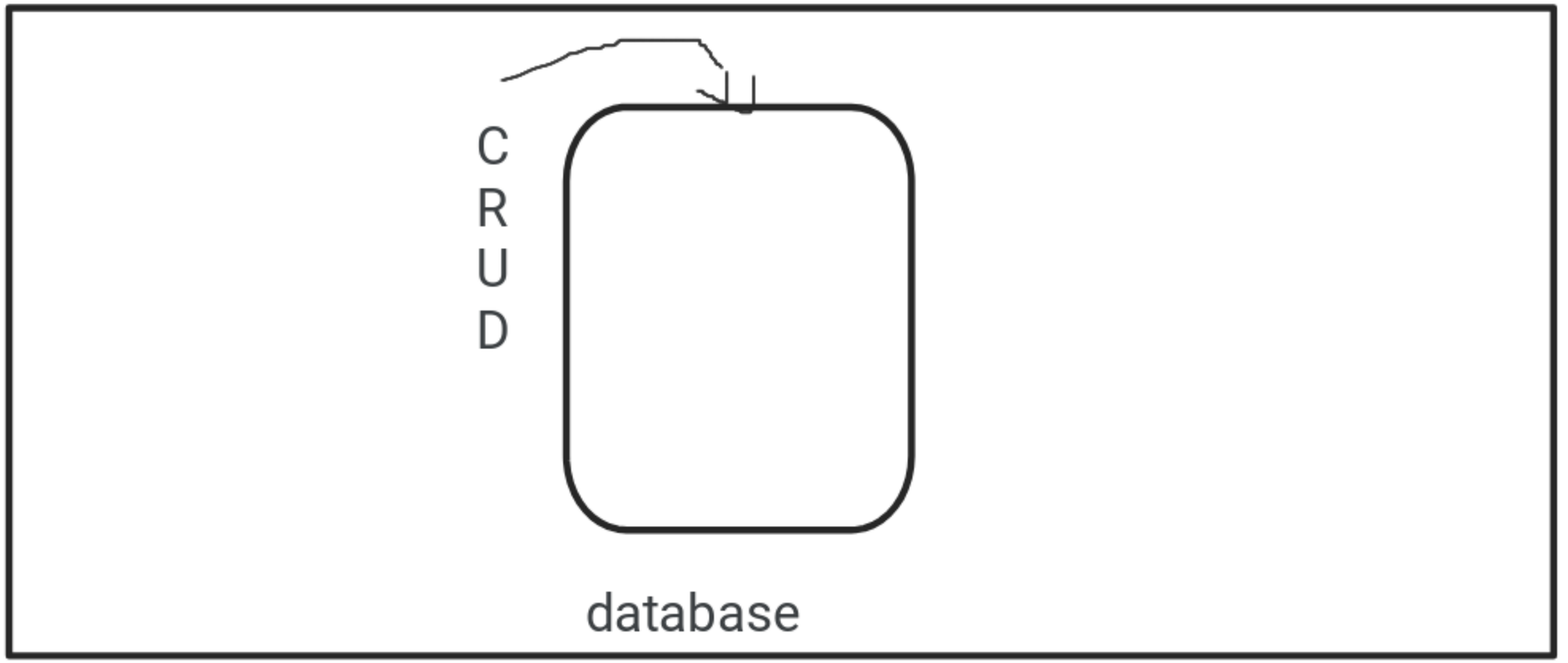
Raw fact

Data

DATABASE

database is a place or medium which is used to store a data in Systematic and organized manner.

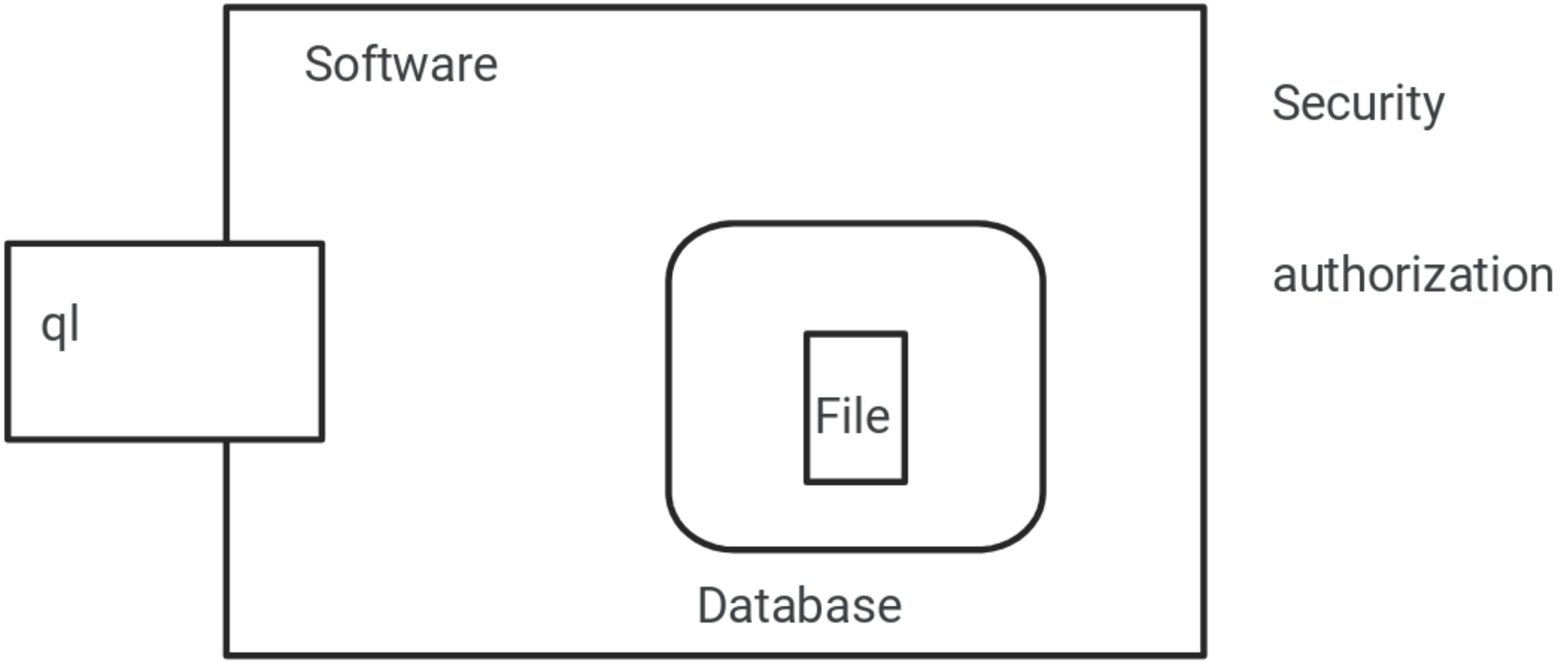
Example:



On all the database we can preform four basic operation there are: CRUD Create,read, update, delete

DBMS:

Data base management system is a software which used to maintain and manage the database

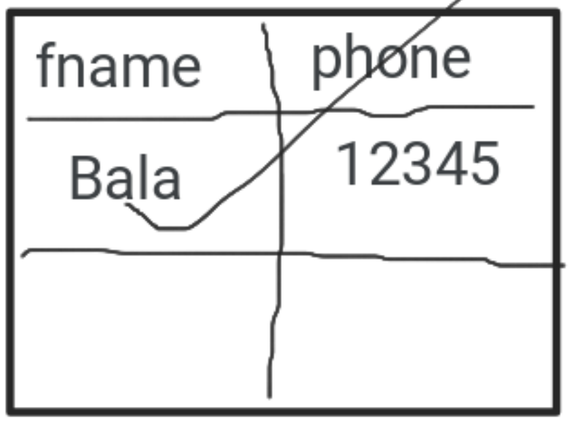


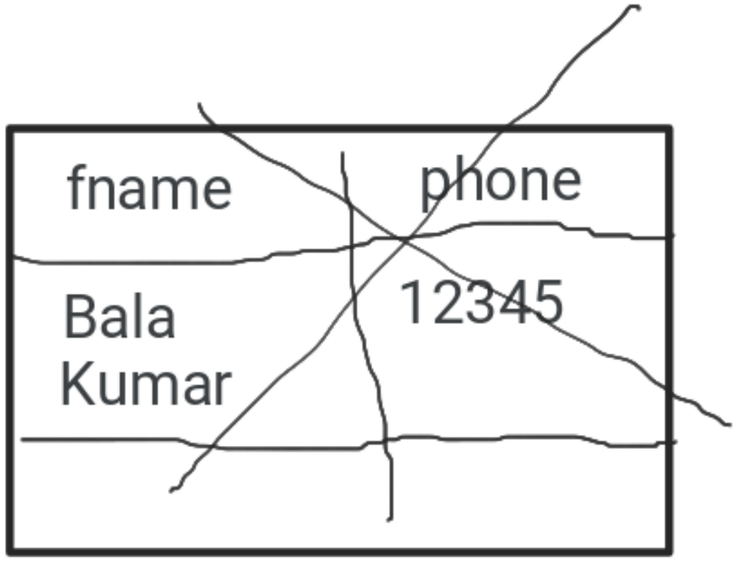
Relation Model

Relational model was invited by Data Scientist EF CODD The main rule of retional that data that we store insert a cell should be in table format .

Rule 1:

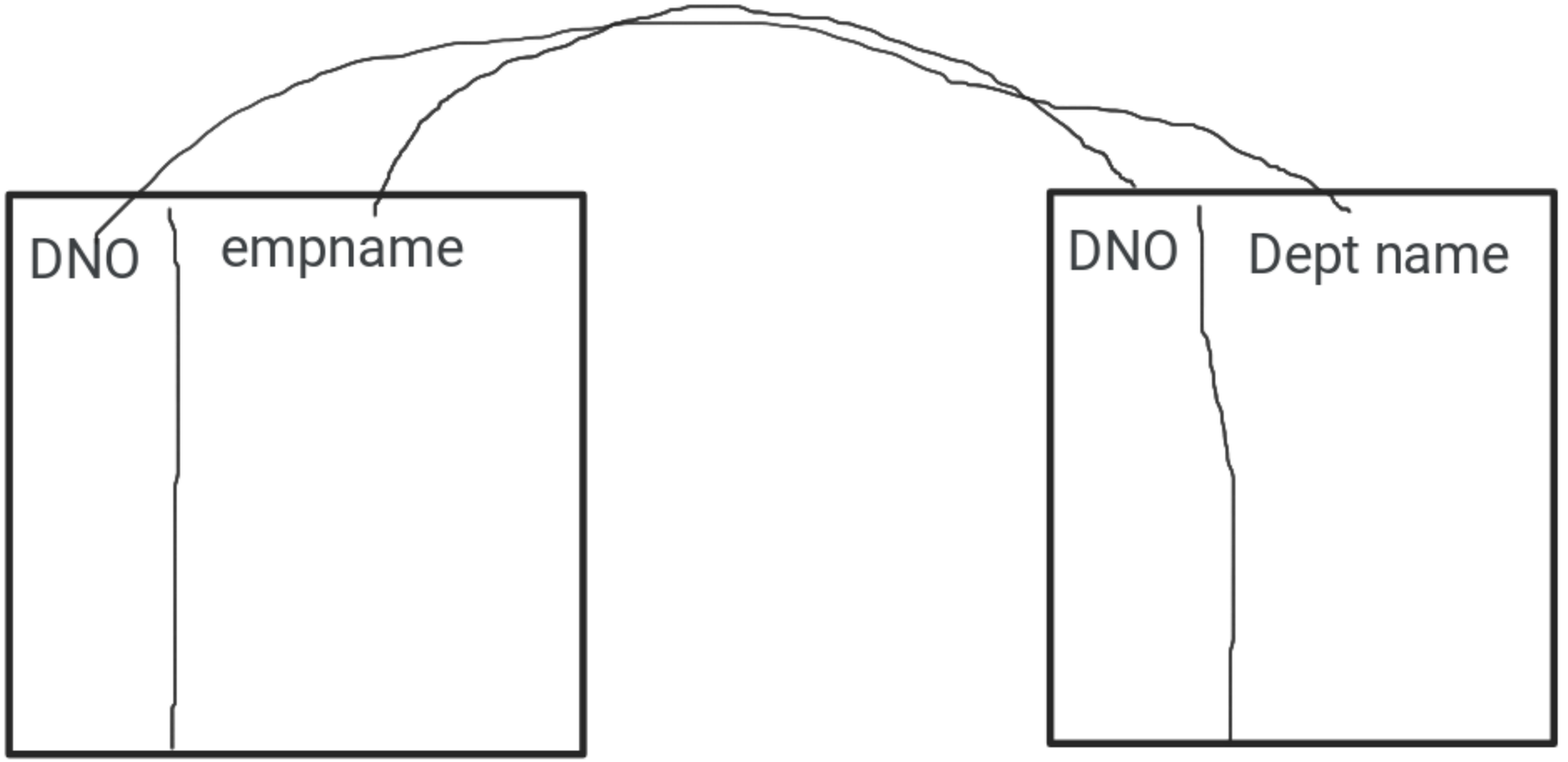
The data that be store inside a cell should be single value data
if we store a multi value data It will endup in data loss





Rule 2:

According to EF codd we can store data in multiple table if we want can established the connection between the table using key attributes.



Rule 3:

the data will be stored in table format including metadata and metatables

Metadata:

metadata is detail describration of another data

metadata is automatical genrated by operating system

metadate is readable by humans

Metatable :

Metatable are used to store a metadata
automatical genrated by operating system
metatable is not readable by humans

rule 4

Here we can verify or validate the data that are storing by using 2 methods there are

by assigning datatype
by assigning constrains

note: data type is mandatory ,constrains not mandatory

Data types:

char - support A-Z , a-z ,0-9, special characters , store 2000 characters , fixed size
varchar-support A-Z , a-z ,0-9, special characters, store 2000 characters, variable size
date- store data - dd-mm-yyyy, dd-mm-yy
number- numaric data - P -38digits S-128 digits
large objects- CLOB- Character large object , BLOB- binary large object

p>s number(5,2) + 999.99

Constrains:

constrains are set rules assigning for a particular column

there 5 types

1.unique
2.not null
3.check
4.primary key
5.foreing key

DQL:

Select- Select goto the database select the table display data
projection- goto the database select the and colums
selection-goto the database select the table select rows and colums
joins- goto the database select multiple tables simultaneously

Syntax:

SELECT */[DISTINT]COLNAME/EXPRESSION[ALIAS]
FROM TABLENAME;

Order of excutions:

SELECT CLAUSE
FROM CLAUSE

COLUMNS NAME OF EMPLOYEE TABLES

EMPNO
ENAME
JOB
MGR
HIREDATE
SAL
COMM
DEPTNO

TABLE NAMES

EMP
DEPT

COLUMNS NAME OF DEPT TABLE

DEPTNO
DNAME
LOC

1.WAQTD ALL THE DETAILS OF EMPLOYEE
2.WAQTD ALL THE EMPLOYEE NAME
3.WAQTD ALL JOB FROM EMP TABLE
4.WAQTD ALL THE MGR NO FROM EMP TABLE
5.WAQTD ALL THE COMMISSION FROM EMP TABLE
6.WAQTD ALL ENAME AND HIREDATE FROM THE EMP TABLE
7.WAQTD ALL EMPLOYEE NO AND EMPLOYEE NAME FROM EMP TABLE
8.WAQTD ALL THE DETAILS FROM DEPTMENT TABLE
9.WAQTD DNAME AND LOC FROM DEPTMENT TABLE
10.WAQTD EMPLOYEE NAME AND SALARY OF THE EMPLOYEE FROM EMPLOYEE TABLE
11 WAQTD NAME,JOB AND SALARY GIVEN ALL THE EMPLOYEE
12.WAQTD EMPLOYEE NAME AND DEPTNO FROM THE EMP TABLE
13.WAQTD NAME AND DESIGNATION OF ALL THE EMPLOYEES

DISTINCT CLAUSE

DISTINCT CLAUSE IS USED TO AVIOD REPEATED OR DUPLICATE VALUES FROM THE RESULT TABLE.

DISTINCT CLAUSE SHOULD BE USED AS FIRST ARGUMENT IN THE SELECT CLAUSE

WE CAN PASS THE MULITPLE COLUMNS FOR DISTINCT CLAUSE TO CONSIDER A VALUE AS A REPEATED VALUES WILL CHECK COMBINATION OF THE COLUMNS

1.WAQTD DISTINCT OF SALARY FROM EMP TABLE
2.WAQTD DIFFERENT DEPTNO FROM EMP TABLE

EXPRESSION:
EXPRESSION ARE STATEMENT IT IS RESPONSIBLE TO GIVEN OUTPUT
EXPRESSION ARE COMBINATION OF OPERATOR AND OPEREND

OPERATOR:
OPERATOR ARE THE SYMBOLS WHICH IS USED TO PERFORM SOME OPERATION ON OPERANDS TO GIVEN OUTPUT

(-,+,*./)

OPERAND:
OPERAND ARE THE VALUES WHICH WE PASS(0,1,2,,3,4,5.....N)

1.WAQTD ANNUAL SALARY OF EMPLOYEE
2. ... HALF YEARLY SALARY OF EMPLOYEE
3.....QUTER SALARY OF EMPLOYEE
4.....SALARY WITH HIKE OF 1000
5....SALARY WITH DEDUCTION OF 1000
6....ANNUAL SAL OF EMPLOYEE SALARY ALONG WITH HIKE OF 1000
7....DEDUCTION OF 1000 ALONG WITH HALFTERM SALARY OF EMP
8....SAL WITH ANNUAL BONUS OF 1200 ALONG WITH DEDUCTION OF 500 OUTERLY WITH HIKE OF 200