8 days:

**Day 6**

**Database:**

Data: raw fact or unprocessed data.

Information: processed data or meaning full data.

Program -🡪

Input , initialization, run time value, file system, database, network etc

Process

Output , display output on console , file system or database system or network or report in different format.

We need to store the data permanently

1. File base system:

Limitation of file base system

1. data redundancy: file system allows to store duplicate record.
2. Data inconsistency :
   1. Format the file : doc, pdf, excel et
   2. Storing the data in file

Id,name,salary

Id Name Salary

Id/Name/Salary

1. Security : read or read/write mode
2. On file doing CRUD Operation create or insert, delete, update and retrieve more complex
3. Database system (RDBMS) : it is as software which help to store the data in table format using column and rows.

DBMS: Database Management System which help to store the data in table format.

Excel sheet:

MS Access:

**DR EF Codd’s Rules**

**12 rules :** 0 to 11

The database which follow 12 rules is known as RDBMS (Relational Database Management System).

Frontend --🡪 React JS 🡨---🡪 Express (node JS)---🡪 MySQL or Mongo DB

React JS using axios 🡨--🡪Rest API 🡨🡪 connect DB🡨-> MySQL or Mongo

Testing testing

Deployment

Docker and Kubernetes with CI and CD tool with Clouse as AWS or Azure

Trainer -🡪sheet1

**TId TName Tech Salary**

100 Raj Java 45abc

101 Ravi Python abc

101 Ravi Python

Student -🡪sheet2

**Sid SName Age TID TName Tech**

1 Meeta 21 100 Raj Java

2 Leeta 22 100 Raj Java

3 Keeta 23

Database Model

Network model

Hierarchical model

Relational model

In RDBMS

Trainer -🡪 table name

**TID TName Tech**

Int varchar(30) float

Number(4) varchar2(40) number(6,2)-🡪

PK (primary key) :if column is pk. That column doesn’t allow duplicate and doesn’t allow null value. Single tale we can create only one column as pk.

100 Ravi Java

101 Raju Python

102 Raj

Student -🡪 table name

Sid SName Age TID

**PK** **FK**

1 Reeta 21 100

2 Meeta 22 100

3 Leeta 23 101

4 Keeta 24

If table contains foreign key is use to connect PK of same table or different table. That column allow only those values which present in PK. It allow duplicate. It allow null value. In single table we can create many fk column.

**RDBMS**

Relational database management system.

RDBMS Database

**MySQL, Oracle, SQL Server 2020, Db2, Postgres etc.**