Database Life Cycle (DBLC):

1) Analysis
   System analyst makes a **requirements document**.
2) Design
   DB designer makes an **ERD** based on the req doc.
3) Mapping
   DB designer maps the ERD to the **actual schema**.
4) Implementation
   DB developer makes the **physical schema** using **RDMS(Relational Database Management System)** tools like MSSqlServer.
5) Programmer
   Uses the database into software like web , mobile , desktop software
6) User
   uses the final software product.

File Based System:

Problems:

1) No data quality
   can't specify data type to prevent insertions of wrong types e.g. non numerical value in the age columns.
2) Low performance
3) Duplicate data
4) No security
5) No relationships
6) Manual backup

Types of Keys:

1) Primary Key (**Unique** + **Not Null**)
2) Foreign Key()
3) Unique Key
4) Composite key
5) Artificial key
6) Natural key
7) Super Key
8) Alternative Key

DB Roles:

1) DB Analyst -> Req Doc
2) DB Designer -> ERD -> Mapping
3) DB Developer
4) DB Admin
5) App Developer
6) BI Developer