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| **Database**: Collection of related data.  **DBMS**: provides a way to perform operations on related data. (Insert , update , delete)  **RDBMS**:Structured data stored in the form of relations |
| **File system vs DBMS**  Searching  Attributes  Concurrency  Security: Role based access  Redundancy: Duplicates |
| **Schema**: (used for data independence)Logical representation of Data , Logical level: DB designer, Physical: DBA |
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| **CANDIDATE KEY**(Driving License, Aadhar, Phone, email)  **PRIMARY** key (Any one from CANDIDATE keys and remaining called Alternate keys.) |
| **PRIMARY KEY**: Unique + NOT Null |
| **Foreign Key: Maintains referential Integrity**  **Not Integrity: Mobile price differ in online , offline** |
| **Referenced Table** (**PK**)  Insert (No problem)  Update  delete  **Referencing Table** (**FK**)  Insert  Update  Delete (No problem) |
| Super Key: Any Candidate key + any other column in the table. |
| ER Model: **Conceptual View** of the design Database.  1.Entity : Student(Name, Roll, Address)  2.Attributes: Name, Roll, Address  3.Relationship (Relation between multiple entity)  Study  Cource  Student |
| ER Model for Student: |
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| One-to-one Mapping    Rather than creating a third table we can do the same using 2 tables as following |
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| ONE-TO-MANY relationship: |
| So trick is many side should be merged….. |
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| MANY to MANY: We can not reduce number of Table: |
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