ENTITY RELATIONSHIP MODEL

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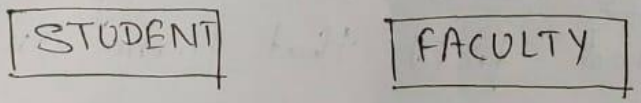
E-R Model

Entity-Relationship is a high level data model based on Entity and relationship among entities.

Entity :- Any real world object about which data is collected comes under entity.

Eg. Student, Faculty etc.

* It is represented in rectangle box.

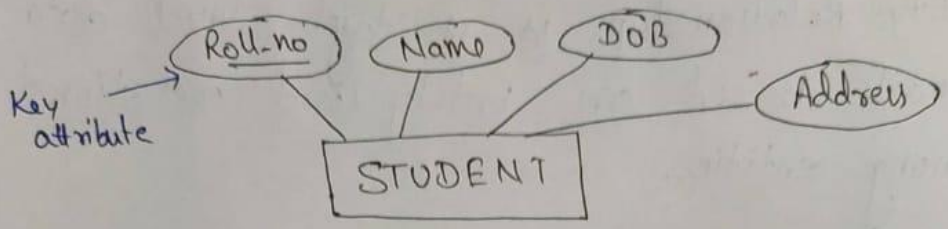


Entity Set is a set of similar type of entities which have similar properties or say attributes.

Attributes :- It defines the properties of entities.

For example if Student is an entity. its attributes can be Roll-number, name, father's-name, address, branch, marks etc.

Attributes are represented in elliptical shape.



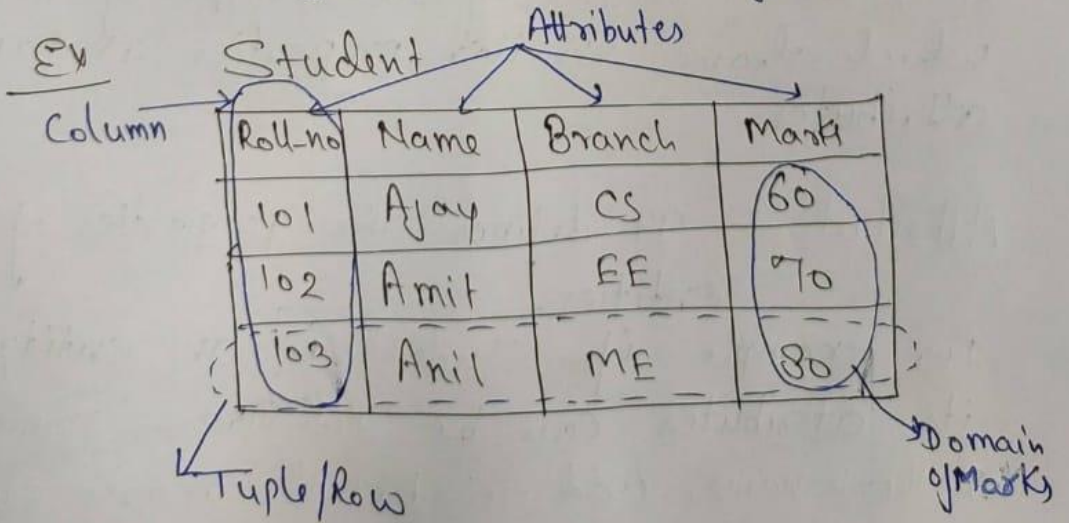
Domain :- All possible values that an attribute can have.

Field / Column :- Column contains similar type of information about any entity set.

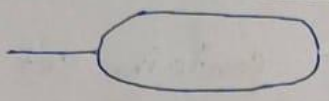
Tuple / Row :- It is collection of multiple related field that form an unit.

Table :- Logical collection of records.

Ex

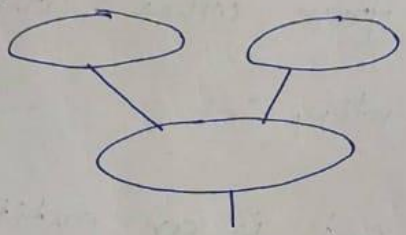


Notations of E-R Diagram:-

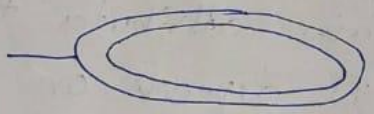


Attribute

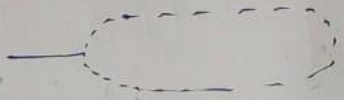
Key attribute



Composite attribute

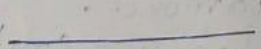


Multivalued Attribute



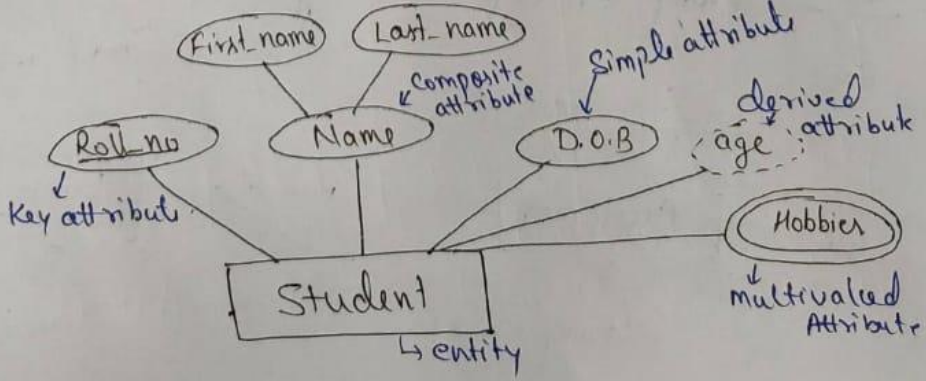
Derived Attribute

Relationship



links

eg



- Simple Attribute:- Attributes which can not be further divided into sub parts.

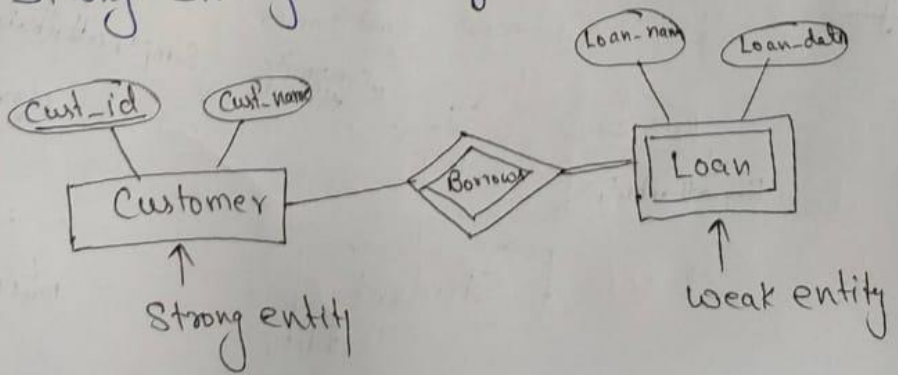
- Multivalued attributes contains set of values for that entity.
- Derived Attributes are those whose value are derived from other attributes.

Weak - Strong Entity Set :-

- weak entity set is an entity set that does not contains attributes to form a primary key. It depends on strong entity. whereas strong entity does not depend on any other entity.
  weak entity is represented by double rectangle. Also the relationship between Strong and weak entity is denoted by double diamond.

Note:- Strong entity always contains Primary Key.

Ex:



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