Table: It is structured data made up of rows and columns.

Table → Entity

Columns → Attributes/Fields

Rows → Observations/Records

Degree → Attribute

Cardinality → Record

**Entity and Attributes**

Entity: Anything that has a physical existence.

Attributes: Properties of an entity.

Entity Set: Set of entities sharing similar properties.

It is of two types:

1. Weak Entity Set: These are always dependent on other entities.

They don’t have their own attributes.

They are represented by a rectangle.

Ex- Installments

1. Strong Entity Set: These are independent of other entities.

These sets have sufficient attributes to uniquely identify each entity.

Primary key exists here.

Ex- Loans

Installments are dependent on Loans.

Attribute: These are the fields of a table which describe its property.

Type of attributes:

1. Simple Attribute: The attributes which can’t be subdivided.

It is represented by an ellipse.

Ex- Id of a student.

1. Composite Attribute:Any attribute that can be subdivided.

It is represented by an ellipse with connected lines.

Ex- Name of a student.

1. Key Attribute: It is used to represent the main characteristics of an entity.

It is represented by an ellipse with an underline inside.

Ex- Roll number of a student.

1. Multivalued Attribute: An attribute which can have more than one value.

It is represented by a double ellipse.

Ex- Mail Id of a student.

1. Derived Attribute: An attribute that is derived from an existing attribute.

It is represented by a dashed ellipse.

Ex- Deriving Year of Birth from Age of a student.

**Relationship**

A relationship is used to describe how two or more tables are related to each other.

It is represented by a diamond.

It is of 4 types.:

1. One to One
2. One to Many
3. Many to One
4. Many to Many