RDBMS Terminologies:

- **Schema and Instance:**

  The overall design, structure and description of the database are called the *database schema*.

  The collection of information stored in the database at a particular moment is called an *instance of the database*.

  The important point is that instance of the database may get changed frequently but the schema of database may not get changed frequently.

  Every time when user insert/update/delete records in the database, the instance changes from one state to another state. At the given time, each schema has its own set of instances.

- **Entity:**

  An entity is a real world or conceptual object /thing for which data are to be stored in the database.

  For example in School or University database, *student, teacher, class, subject* etc is considered as entity.

  In some Organizational database *employee, department, salary, project* etc is considered as entity.

- **Entity Set:**

  Groups of entity of same type that share the same properties are called entity set. For example:

  The entity set instructor that is the set of all people who are instructor.

  The entity set student that represents the set of all students in the school.

- **Weak Entity:**

  A weak entity is that entity that cannot be uniquely identified by its own attributes alone. It depends on other entity. For example

  *installment* entity is weak entity that depends on *loan* entity.
loan entity is weak entity that depends on customer entity.

- **Attribute:**

  An attribute describes the entity. Entities are represented by means of their properties called attribute. The values of attributes are stored in the database. For example

  **Student** entity may have attributes like

  `stu_rollno, stu_name, stu_fname, stu_dob, stu_mobile` etc

  **Employee** entity may have attributes like

  `emp_id, emp_name, emp_fname, emp_city` etc

  **Department** entity may have attributes like

  `dept_id, dept_name, dept_location, dept_budget` etc.

**Exercises:**

1. Identity Entities and Attributes in any Ecommerce Organization database.
2. Explain about weak entity. Any example of weak entity.