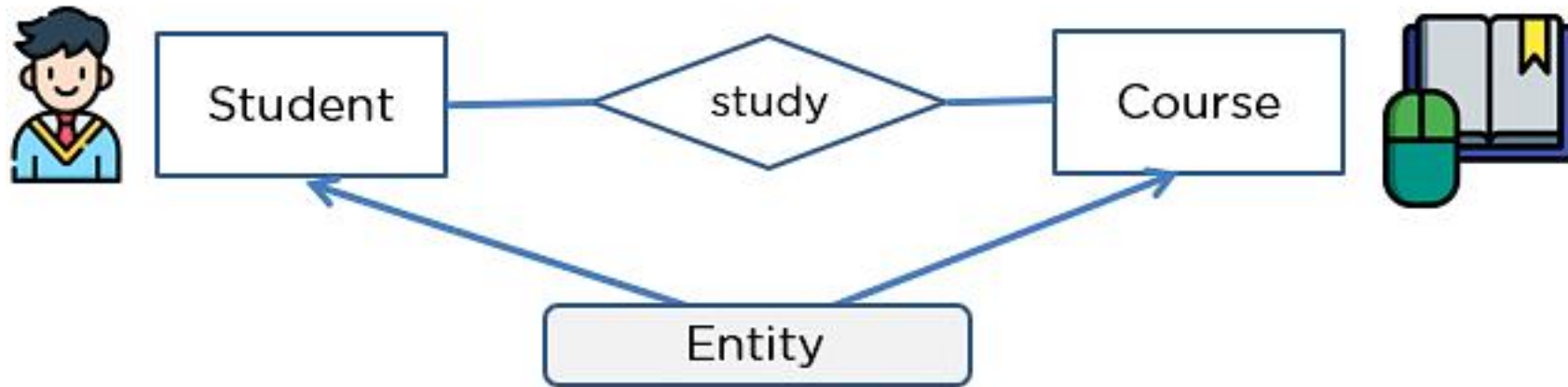An entity can be a real-world object or can be a living or non-living component.

What is Entity?
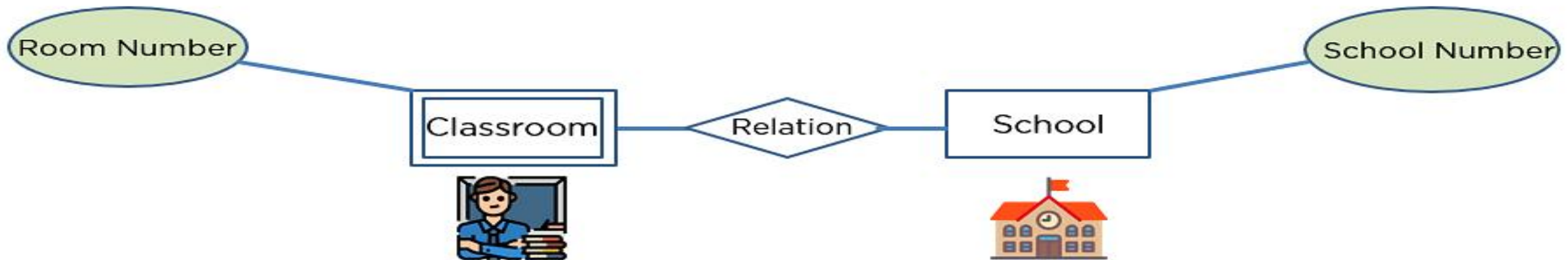
An entity may participate in a relation either totally or partially.

Strong Entity: A strong entity is not dependent on any other entity in the schema. A strong entity will always have a primary key. Strong entities are represented by a single rectangle.

Weak Entity: A weak entity is dependent on a strong entity to ensure its existence. Unlike a strong entity, a weak entity does not have any primary key. A weak entity is represented by a double rectangle. The relation between one strong and one weak entity is represented by a double diamond. This relationship is also known as identifying relationship.

In relation to a database , an entity is a

- Person(student, teacher, employee, department, …)

- Place(classroom, building, …) --a particular position or area

- Thing(computer, lab equipment, …) --an object that is not named

- Concept(course, batch, student's attendance, …) -- an idea,

about which data can be stored. All these entities have some **attributes** or **properties** that give them their **identity**.

Every entity has its own characteristics.

When you are designing attributes for your entities, **you will sometimes find that an attribute does not have a value**. For example, you might want an attribute for a person's middle name, but you can't require a value because some people have no middle name. **For these, you can define the attribute so that it can contain null values.**
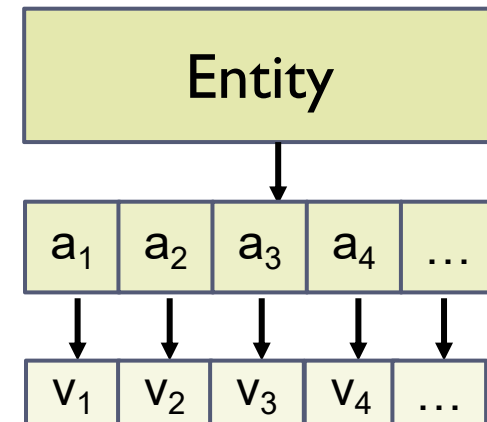
In database management systems, **null** is used to represent missing or unknown data in a table column.

What is an Attribute?

Attributes are the properties that define a relation.
e.g. student(ID, firstName, middleName, lastName, city)

In some cases, you might not want a specific attribute to contain a null value, but you don't want to require that the user or program always provide a value. In this case, a default value might be appropriate. **A default value is a value that applies to an attribute if no other valid value is available.**

Entity				
a_1	a_2	a_3	a_4	…
v_1	v_2	v_3	v_4	…

A table has rows and columns

In RDBMS, a table organizes data in rows and columns. The **COLUMNS** are known as **ATTRIBUTES / FIELDS** whereas the **ROWS** are known as **RECORDS / TUPLE**.

In Relation: EMP

Attributes

ID	EmployeeName	Job	Hiredate	Salary
1	KING	PRESIDENT	2017-02-15	5000
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…

Rows