



SNS COLLEGE OF TECHNOLOGY, COIMBATORE-35
(AN AUTONOMOUS INSTITUTION)



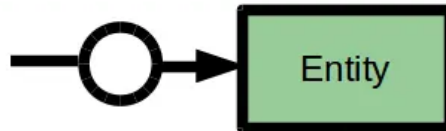
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
23CST201-Database Management Systems

UNIT-I

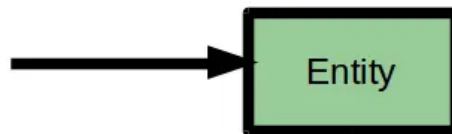
Introduction

ER Notation

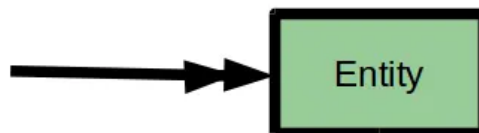
Zero or one
relationship



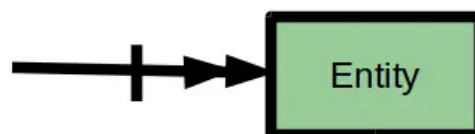
One and only
one
relationship



Zero or many
relationship

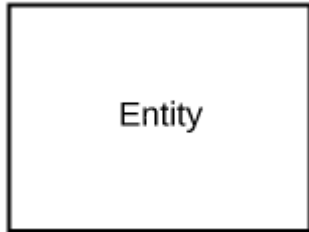


One or many
relationship



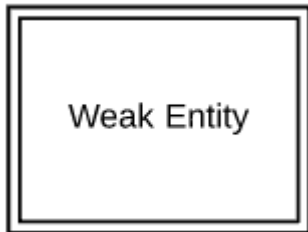
- **Zero or one relationship** – a single-headed arrow, with an open circle on the line.
- **One relationship** – A straight line with one arrowhead
- **Zero or many relationships** – Two arrowheads, one sitting just behind the other, and a straight line

- **One or many relationships** – Two arrowheads, like above, with a short, perpendicular line.



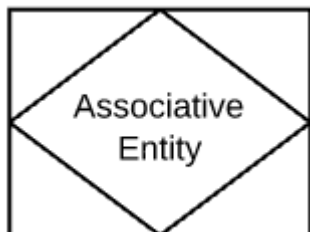
Strong entity

These shapes are independent from other entities, and are often called parent entities, since they will often have weak entities that depend on them. They will also have a primary key, distinguishing each occurrence of the entity.



Weak entity

Weak entities depend on some other entity type. They don't have primary keys, and have no meaning in the diagram without their parent entity.

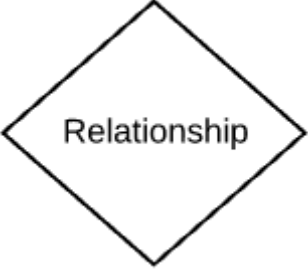



Associative entity

Associative entities relate the instances of several entity types. They also contain attributes specific to the relationship between those entity instances.

ERD relationship symbols

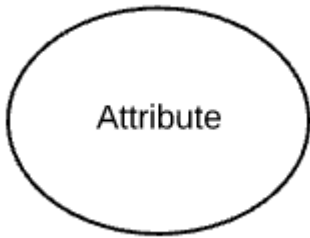
Relationship Symbol	Name	Description
	Entity	Strong entity
	Weak Entity	Weak entity
	Associative Entity	Associative entity

Attribute Symbol	Name	Description
	Relationship	Relationships are associations between or among entities.
	Weak relationship	Weak Relationships are connections between a weak entity and its owner.

Within entity-relationship diagrams, relationships are used to document the interaction between two entities. Relationships are usually verbs such as assign, associate, or track and provide useful information that could not be discerned with just the entity types.

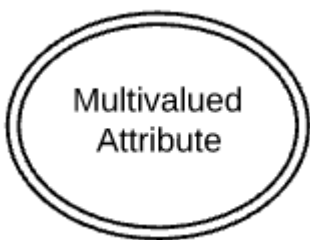
ERD attribute symbols

ERD attributes are characteristics of the entity that help users to better understand the database. Attributes are included to include details of the various entities that are highlighted in a conceptual ER diagram.



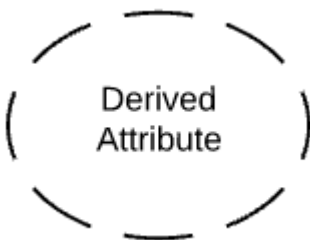
Attribute

Attributes are characteristics of an entity, a many-to-many relationship, or a one-to-one relationship.



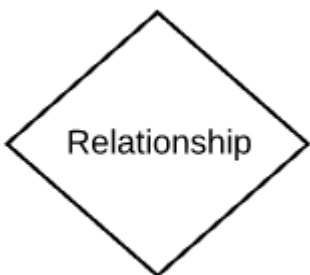
Multivalued attribute

Multivalued attributes are those that are can take on more than one value.



Derived attribute

Derived attributes are attributes whose value can be calculated from related attribute values.



Relationship

Relationships are associations between or among entities.