{Lecture:-4}

Extended ER Model

- As the complexity of DB increases, it's better to use the extend ER model.

→ Specialisation:-

- In ER model, we may require to subgroup an entity set.
- It is a splitting up the entity set into further sub entity sets.
- It's a Top-Down approach.

E.g. ⇒ A Person entity set can be divided into customer, Student, employee.
Person is superclass and other specialised entity sets are subclasses.

1. "is-a" relationship exist.
2. Depicted by triangle component. ▽

3. Why specialisation ?
   1. Certain attributes may only be applicable to a few entities of the parent entity set.
   2. It shows distinctive features of the sub entities.

→ Generalisation

- It's just a reverse of specialisation.
- There are some entities which properties are same, so they can be grouped as a generalised entity set.
- It's a "Bottom-up" approach. "is-a" relationship is present between subclass and superclass.
- eg. ⇒ Car, Jeep & Bus all have some common attributes. They all are can be grouped as "Vehicle".

(S) Why generalisation?
(1) Makes DB more refined & simpler.
(2) common attributes are not repeated.

→ Attribute inheritance

Eg. Customer & employee inherit the attribute of a Person

→ Participation inheritance
entity set

If a parent participates in a relationship, then child entity set also do the same.

→ Aggregation :- a technique to show aggregation among relationships among relationship.