Date.
Page No.

ER FEATURES

→ Specialisation

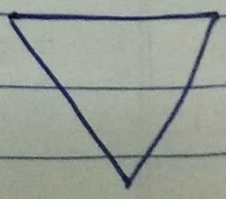
→ Specialisation is splitting up the entity set into further sub entity sets on the basis of their functionalities, specialities and features

→ It is a top down approach.

→ Inheritance takes place in specialisation.

ex:- Consider an entity Account. Which will have attributes like Acc-No and balance. Account entity may have some other attributes like current-Acc and Savings-Acc. Now current-Acc may have Acc-No, Balance and Transactions while Savings-Acc may have Acc-No, Balance and Interest-Rate hencefourth we can say that specialized entities inherits characteristics of higher level entity.

→ specialisation is depicted by triangle component.



Date.
Page No.

Need of Specialisation
→ Certain attributes may only be applicable to a few entities of the parent entity set.
→ DB designers can show the distinctive features of the sub entities.
→ To group such entities we apply specialisation, to overall refine the DB blueprint.

→ Generalisation
→ It is reverse of specialisation
→ In Generalization lower level functions are combined to form higher level function which is called as entities.
→ It is bottom-up approach
→ There is no inheritance in generalization

ex:- Consider two entities student and patient. These two entities will have some characteristics of their own. For example student entity will have Roll-no, Name and Mob-No while patient will have Pid, Name and Mob-No

Date.
Page No.

characteristics. Now here Name & Mob-No of both student and patient can be combined as a person to form one higher level entity.

Need of Generalization
→ Makes DB more refined and simpler
→ Common attributes are not repeated.

→ Attribute Inheritance
→ Both specialisation and generalisation has attribute inheritance.
→ The attributes of higher level entity sets are inherited by lower level entity sets.
→ ex. Customer & Employee inherits the attributes of Person.

→ Participation Inheritance
If a parent entity set participates in a relationship then its child entity sets will also participate in that relationship.

Date.
Page No.

→ Aggregation

- → Aggregation is used to show relationships among relationships
- → Abstraction is applied to treat relationships as higher-level entities.
- → Avoid redundancy by aggregating relationship as an entity set itself.