



# **SNS COLLEGE OF ENGINEERING**

Kurumbapalayam (Po), Coimbatore – 641 107

**An Autonomous Institution**

Accredited by NBA – AICTE and Accredited by NAAC – UGC with ‘A’ Grade  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

## **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING(IoT and Cybersecurity Including BCT)**

**COURSE NAME : 19SB504 DATABASE MANAGEMENT SYSTEMS**

**III YEAR / V SEMESTER**

**Unit III-E-R Diagram models and NORMAL FORMS**

**Topic : Constrains**



# CONSTRAINS

## ➤ Membership constraints:

➤ Condition defined: Membership of a specialization/generalization relationship can be defined as a condition in the requirements. Ex: Account– SavingAccount and CurrentAccount.

➤ User defined: The membership is manually defined.

Acc No.	Name	Branch	Type
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# CONSTRAINS

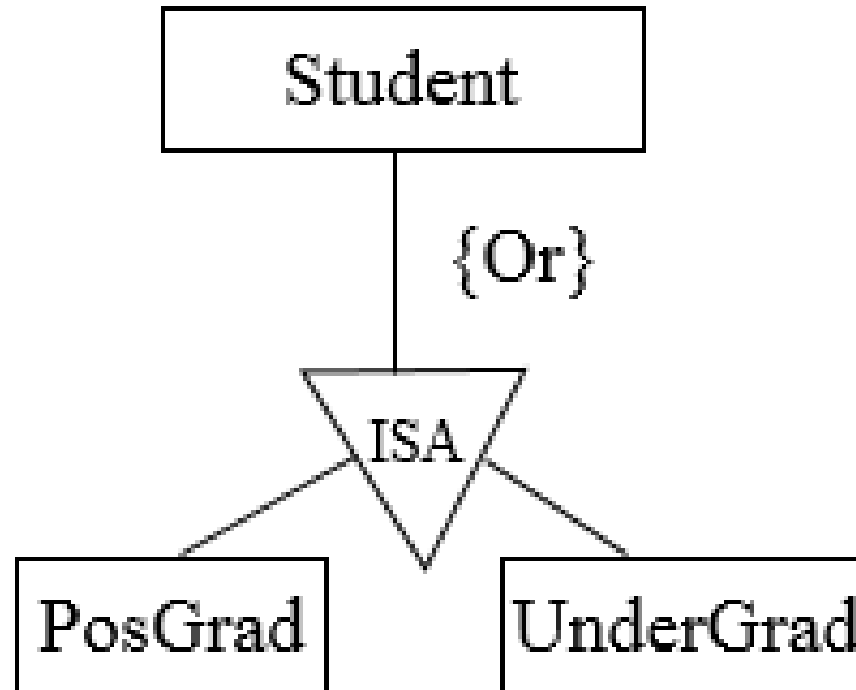
## ➤ **Disjoint constraints: {or}**

- The disjoint constraint only applies when a superclass has more than one subclass.
- If the subclasses are disjoint, then an entity occurrence can be a member of only one of the subclasses.



# CONSTRAINTS

## ➤ Disjoint constraints:

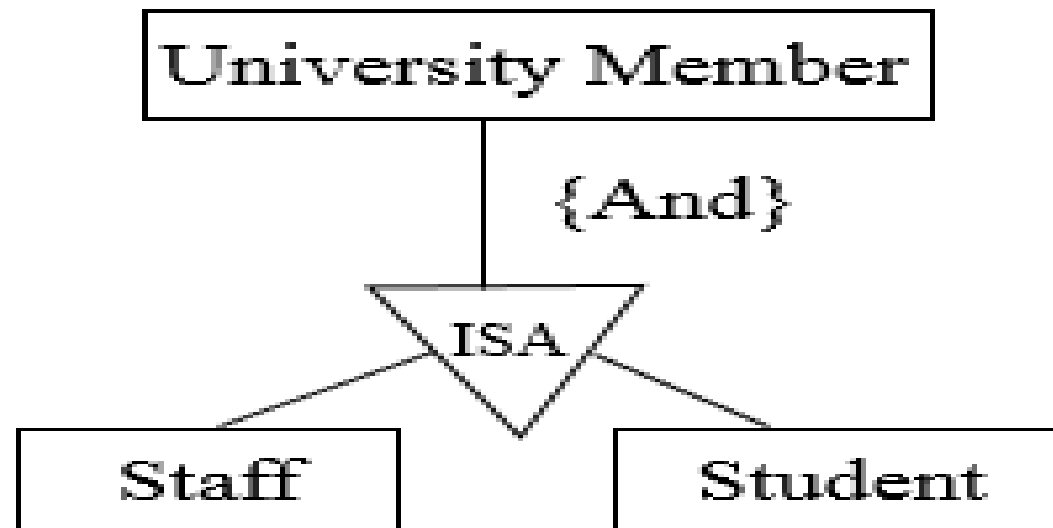




# CONSTRAINS

## ➤ **Overlapping constraints: {and}**

- This applies when an entity occurrence may be a member of more than one subclass.





# CONSTRAINS

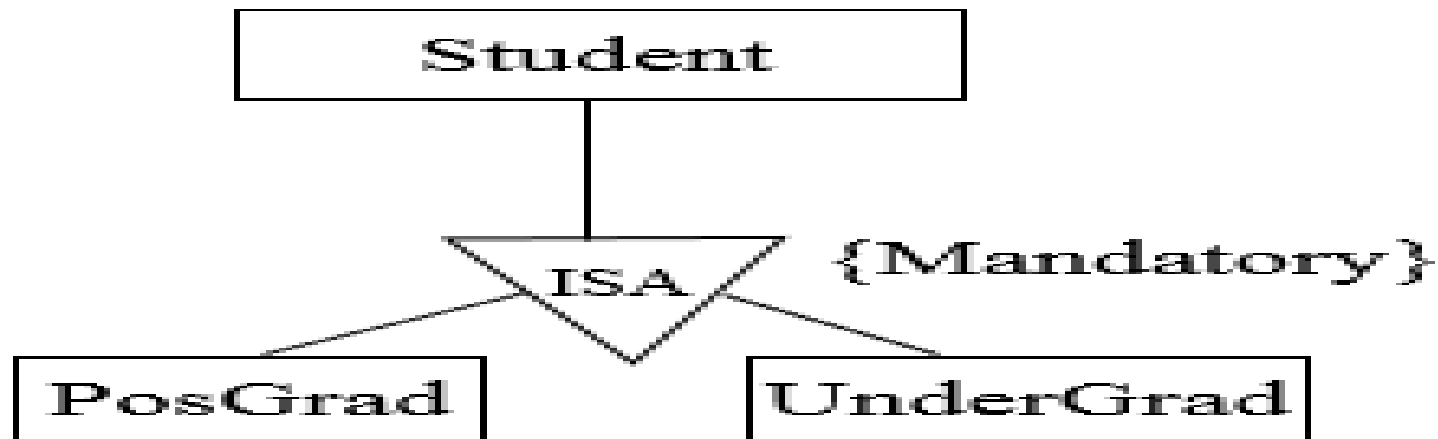
## ➤ **Completeness:**

- It specifies whether or not an entity in the higher level entity set must belong to at least one of the lower-level entity sets within the generalization/specialization.



# CONSTRAINS

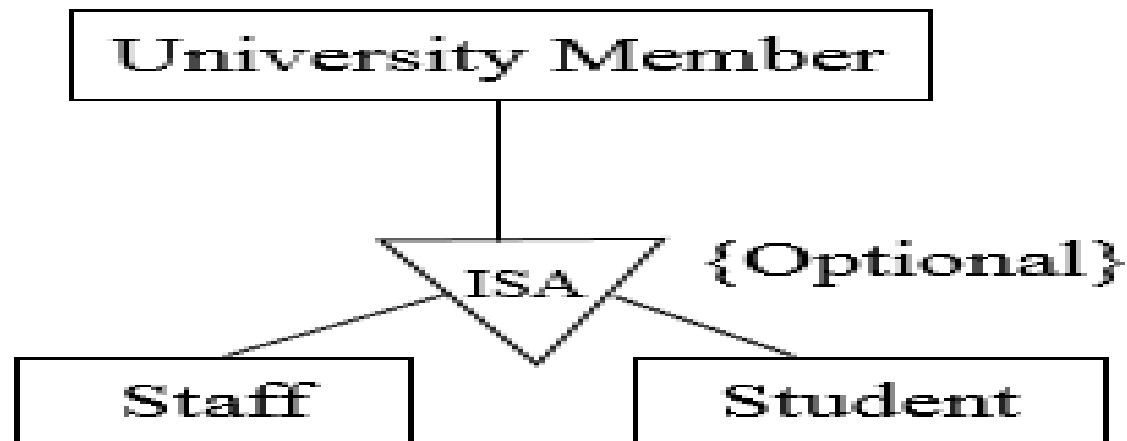
- **Completeness:**
- Total generalization and specialization: {Mandatory}
- Each superclass (higher-level entity) must belong to subclasses (lower-level entity sets).





# CONSTRAINS

- Partial generalization and specialization: {Optional}
- Some super classes may not belong to subclasses (lower-level entity sets).







# CONSTRAINS

- Constraints on Specialization and Generalization:
- Types of Specializations - Condition-defined specialization:
  - Determine exactly the entities of each sub class by placing a condition of the value of an attribute in the super class.



# CONSTRAINS

## ➤ **Mapping of Entity Set to Relationship:**

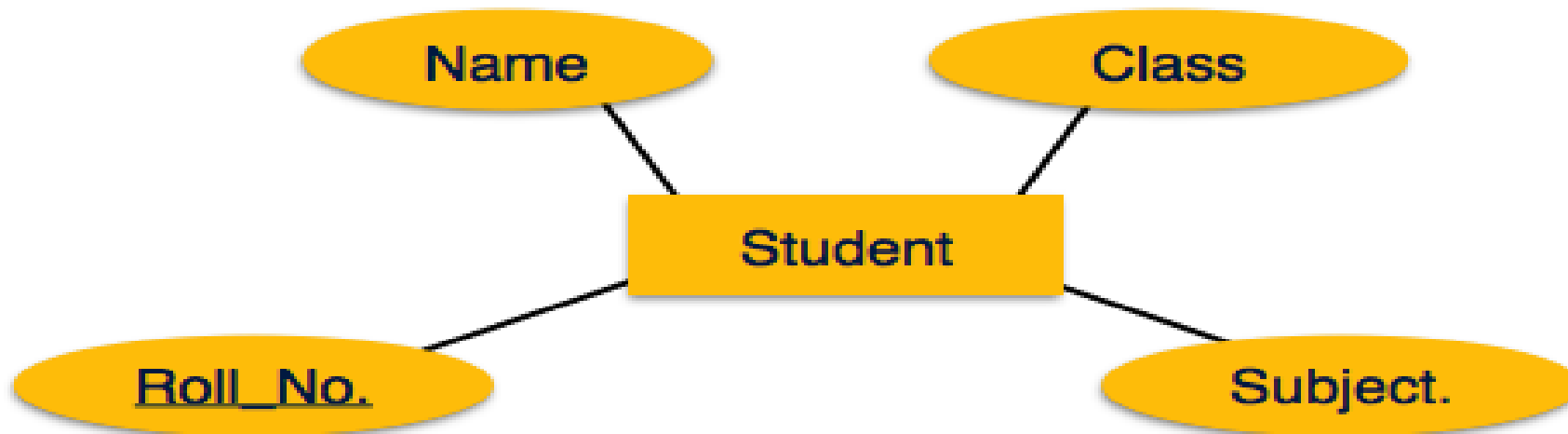
- Each attribute of entity set becomes an attribute of the table.
- The primary key attribute of entity set becomes an entity of the table.



# CONSTRAINS

## ➤ Mapping of Entity Set to Relation:

- create table Student(Roll\_No char(11),Name char(30),class char(30), subject char(30), primary key(Roll\_NO))





# CONSTRAINS

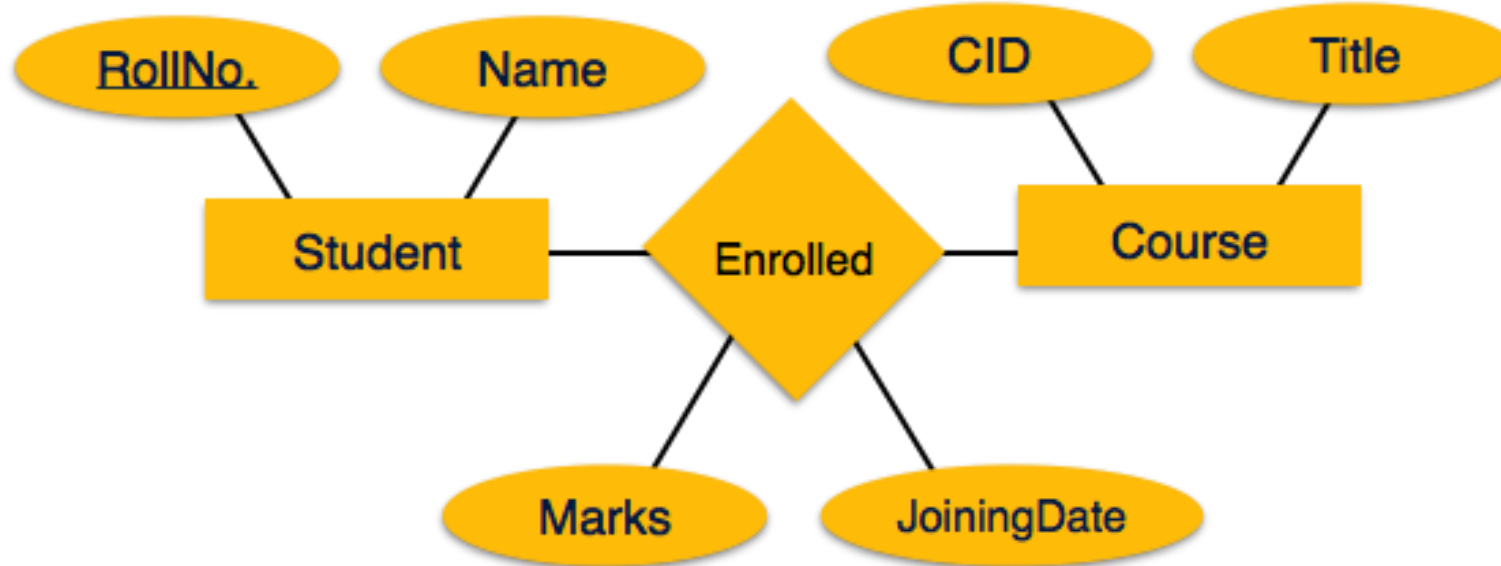
## ➤ **Mapping Relationship sets to tables:**

- Create a table for the relationship set.
- Add all primary keys of the participating entity sets as fields of the table.
- Add a field for each attribute of the relationship
- Declare a primary key using all key fields from the entity sets.



# CONSTRAINS

➤ Mapping Relationship sets to tables:





# CONSTRAINS

## ➤ Mapping Relationship sets to tables:

- create table enrolled(Roll\_No int, Name char(30), cid int, title char(30),  
PRIMARY KEY (Roll\_No, cid), FOREIGN KEY (Roll\_No)  
REFERENCES Student, FOREIGN KEY (cid) REFERENCES Course)



Conn...



# Thank You.....