CSE 317

20-01-2026

Class-06 | System Analysis and Design

Class Test ~~——~~ Marks-15

Date: 26-01-26

Time: 9:45 AM

Topic: = Chapter 1 (all)
= Chapter 2 (up to ER Diagram)

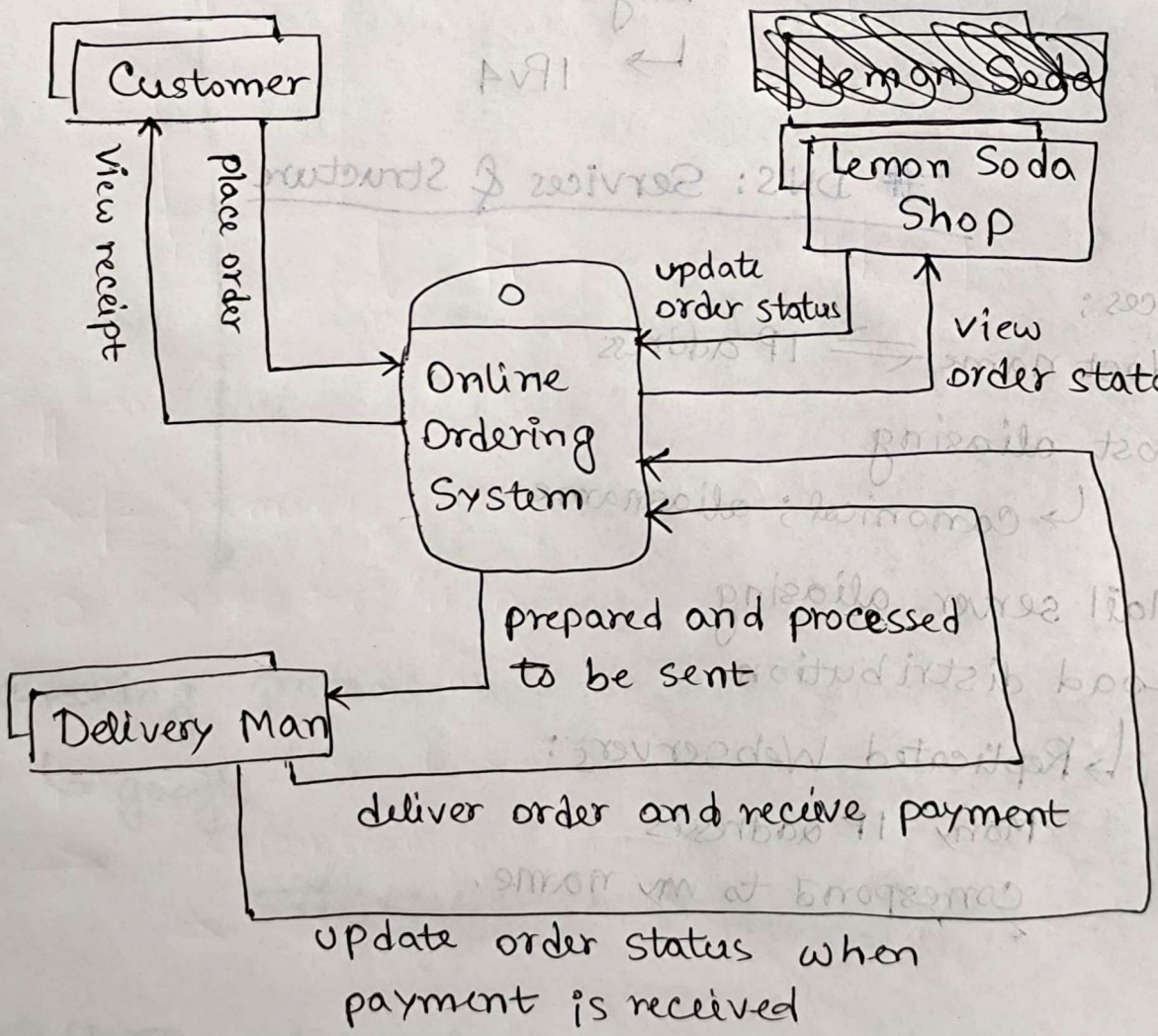
2য় CT (Best Count)
3য় CT (Average)

Scenario: Lemon Soda Service

Entities:
1. Customer
2. Lemon soda
3. Delivery man

System (Process)
Online Ordering System

Types
1. Direct
2. Assumption



Entity

1. Customer
2. Lemon Soda Service Provider
3. Delivery
4. ~~[illegible]~~

Process

Lemon Soda Ordering System

Data flow

1. Place Order
2. View Receipt
3. Order Details
4. Order Prepared / Processed
5. Order details
6. Update delivery status
7. Payment Received

Entity-Relationship Diagram

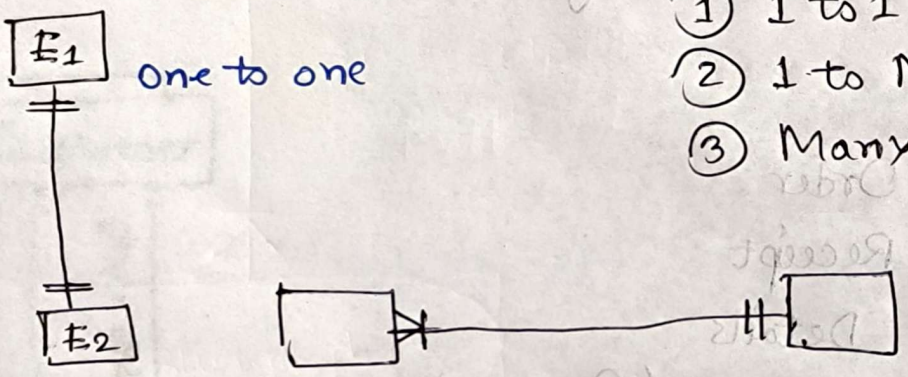
① Focus on the entities and how they are connected with each other.

Relationship Types:

1. 1-1
2. 1-Many
3. Many-1
4. Many-Many

Mapping Cardinality → Kinda same

1. 1 to 1
2. 1 to Many
3. Many to Many



|| → one

→+ → many

O → zero/none

→O → zero or more

+O → 0 or 1

→ → (controversial many)

→ (optional many)

Types of Entities

1. Fundamental Entity (Strong Entity)
2. Associative Entity
3. Attributive Entity

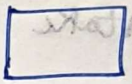
{ M2M is not supported in Relational Database }

→ has one or more attributes

Fundamental Entity:

A real life object than can exist independently.

E.g.: Student, Course, Employee



Symbol

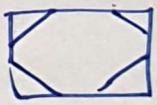
Associative Entity:

Created to resolve a many to many relationship between fundamental entity.

→ Contains foreign keys from connected entities.

→ (Map) Have its own attributes

E.g.: Enrollment

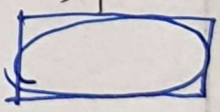


Symbol

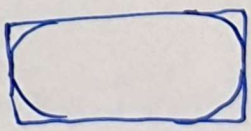
Attributive Entity: (less used)

→ used to store the multi-valued attributes of another (entity) → {mostly fundamental entity}

→ Depends on the fundamental entity.

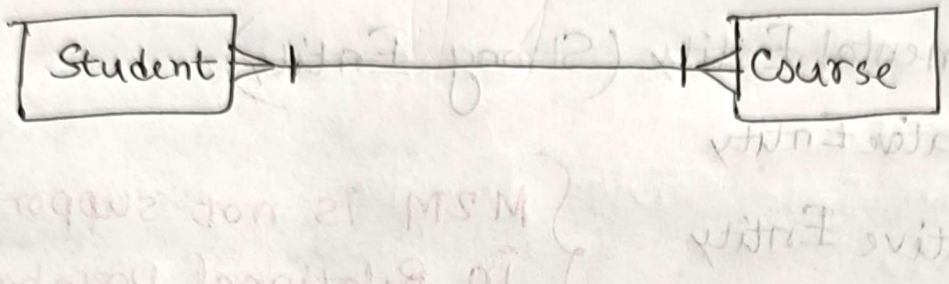


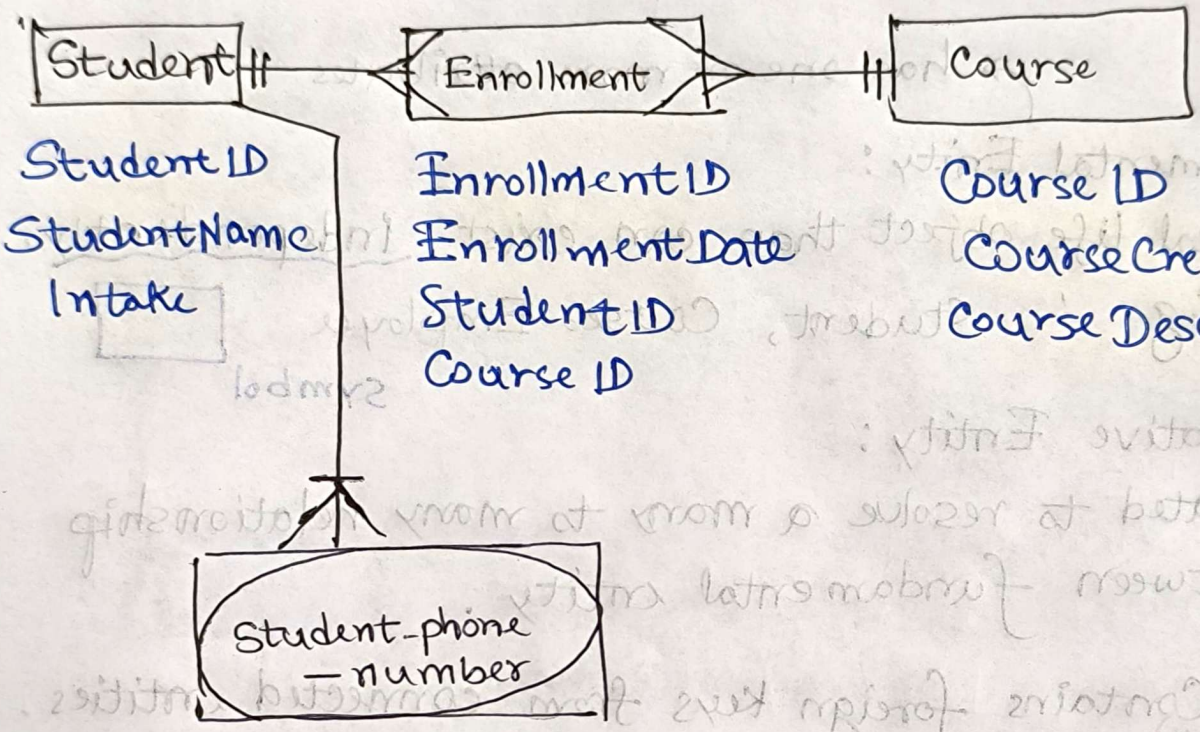
E.g.: Student-phone-number



symbol

Example


Student
Course


Student
Enrollment
Course
Student ID
StudentName
Intake
EnrollmentID
EnrollmentDate
StudentID
CourseID
CourseID
CourseCredit
CourseDescription
Student-phone-number