	Bansilal Ramnath Agarwal Charitable Trust's Vishwakarma Institute of Information Technology **Department of Artificial Intelligence and Data Science**

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Class: SY	Division: B	Roll No: 272028
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Title of Assignment: Class Diagram.		
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Aim: - To make class diagram.

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1. Introduction to class Diagram

→ A class diagram is a types of UML diagram used in software engineering to model the structure of a system in term of its classes, their attributes, method, and the relationship among them.

2) In a class diagram, each class is represented as a rectangle with tree section the top section contain the class name, the middle section contain the class attributes, and the bottom section contain the class method.

3) The attributes of a class ~~method~~: represent the data that is stored in an object of that class, and the method represent the operation that can be performed on that data.

4) The relationship between classes can also be depicted in a class diagram

5 The most common relationship are inheritance, where one class extend another, and composition, where a class is composed of one or more other classes.

2. Component of class diagram.

Ans The main component of a class diagram are: →

1. Class : A class is a blueprint for creating object. define the properties (Attributes) and behaviour of an object.

2 Interface : An interface define a set of method that implementing the interface must have.

3. Association: An association represent a relationship between the two classes. It can be one-to-one, one-to-many, or many-to-many.

4. Inheritance: Inheritance is a mechanism by which one can inherit the properties and behavior another class.

5. Aggregation: Aggregation is a special form of association one class represent a whole that is compose. other classes, which are it part.

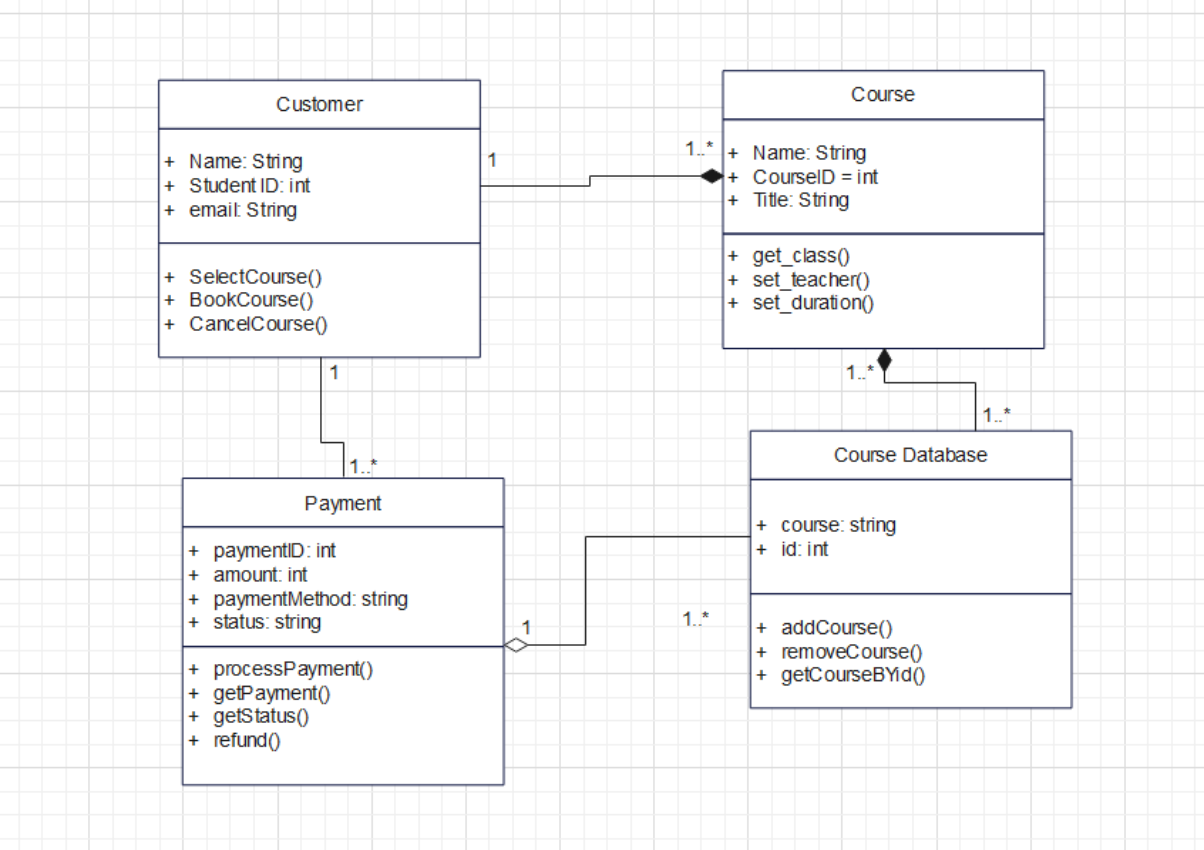
6. Composition: composition is a stronger form of aggregation the lifetime of the part is tied to the lifetime of the whole. If the whole is destroyed, then all it part are also destroyed.

These component help to model the structure of software system and it relationship, and can be used as a blueprint for implementation.

Pranjali

Software Requirement: Star UML.

User story:



Conclusion: Hence we have successfully implemented the class diagram and learned how to make class diagram for any CPS.