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2) WHAT IS OOP? LIST OF CONCEPT.

- OOP is a programming paradigm that focuses on the use of objects to represent and manipulate data.

- OOP, data is encapsulated within objects, and objects are defined by their properties and behaviours.

LIST OF CONCEPT

- **OBJECT**
- **CLASS**
- **ENCAPSULATION**
- **INHERITANCE**
- **POLYMORPHISM**
- **ABSTRACTION**

- **OBJECT :-**

  Object oriented programming language is based on classes and objects. It is used to structure a program into a simple, reusable piece of code.

- **CLASS :-**

  In object-oriented programming, a class is a blueprint for creating objects (a particular data structure), providing initial values for state (member variables or attributes), and implementations of behaviour (member functions or methods). The user-defined objects are created using the class keyword.

SE_ASSIGNMENT_M4

- **ENCAPSULATION :-**

  Encapsulation is the process of bundling data and methods together within a single unit called an object. It allows us to hide the internal implementation details of an object and expose only the necessary interfaces. By encapsulating data, we can ensure data integrity and protect it from unauthorized access

- **INHERITANCE :-**

  Inheritance allows us to create new classes based on existing classes, inheriting their attributes and behaviours. It promotes code reuse and enables the creation of hierarchical relationships between classes

- **POLYMORPHISM :-**

  Polymorphism allows objects of different classes to be treated as objects of a common superclass. It enables us to write code that can work with objects of multiple types, providing flexibility and extensibility.

- **ABSTRACTION :-**

  Abstraction focuses on creating simplified representations of complex systems. It allows us to define abstract classes and interfaces that provide a common interface for a group of related objects.

ANAS CHAUHAN

3) WHAT IS THE DIFFERENCE BETWEEN OOP AND POP?

OOP	POP
-OOP stands for object-oriented programming language.	-POP stands for procedure-oriented programming language.
-Based on object.	-Based on concept of calling procedure.
-In OOP, the program is divided into a small part called object.	-In POP, the program is divided into a small part called function.
-It follows Bottom-up approach.	-It follows Top-down approach.
-Adding new data and function is easy.	-Adding new data and function is not easy.
- Ex: c++, python, java, etc.	-Ex: Fortran, Pascal, C , etc.