Pyhton

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Div A Roll No:3

Exp2

Aim: A Python program to create Emp class and make all the members of the Emp class available to another class.

Theory:

**Class**

The class can be defined as a collection of objects. It is a logical entity that has some specific attributes and methods. For example: if you have an employee class, then it should contain an attribute and method, i.e. an email id, name, age, salary, etc.

## Object

The object is an entity that has state and behavior. It may be any real-world object like the mouse, keyboard, chair, table, pen, etc.

Everything in Python is an object, and almost everything has attributes and methods. All functions have a built-in attribute \_\_doc\_\_, which returns the docstring defined in the function source code.

## Method

The method is a function that is associated with an object. In Python, a method is not unique to class instances. Any object type can have methods.

## Inheritance

Inheritance is the most important aspect of object-oriented programming, which simulates the real-world concept of inheritance. It specifies that the child object acquires all the properties and behaviors of the parent object.

## Polymorphism

Polymorphism contains two words "poly" and "morphs". Poly means many, and morph means shape. By polymorphism, we understand that one task can be performed in different ways.

## Encapsulation

Encapsulation is also an essential aspect of object-oriented programming. It is used to restrict access to methods and variables. In encapsulation, code and data are wrapped together within a single unit from being modified by accident.

## Data Abstraction

Data abstraction and encapsulation both are often used as synonyms. Both are nearly synonyms because data abstraction is achieved through encapsulation.