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Object Oriented Programming Made Easy



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What is OBJECT-ORIENTED PROGRAMMING?

Object-oriented programming is a programming paradigm built on the concept of objects.

In Other Words, it is an approach to problem-solving where all computations are carried out using objects.

1. Program is divided into small parts called objects.
2. Object-oriented programming follows a bottom-up approach.
3. Have access specifiers like private, public, protected, etc.
4. Adding new data and functions is easy.
5. Provides data hiding so it is more secure than procedural programming.
6. Overloading is possible in object-oriented programming.
7. Data is more important than function.
8. Provides the ability to simulate real-world
9. Examples: C++, Java, Python, C#, JavaScript, Ruby, PHP, [VB.NET](#)

TERMINOLOGIES

- **Class** - A class is a group of objects that share common properties and [behavior](#). It is a blueprint created.
- **Object** - Object is any real-world entity that can have some characteristics or which can perform some action. It is an instance of a class

For example, we can consider a car as a class that has characteristics like steering wheels, seats, brakes, etc.

Class - color. Red - an object of color

- **Constructor** - Constructors are special methods whose name is the same as the class name. Their purpose is of initializing the objects.
- **Interface** - Like a class, an interface can have methods and variables, but the methods declared are abstract.
- **Default constructor** - The default constructor is the constructor which doesn't take any arguments.
- **Parameterized constructor** - The constructors that take some arguments are known as parameterized constructors.
- **Copy constructor** - A copy constructor is a member function that initializes an object using another object of the same class.
- **Friend Function** - It is basically a function that is used to access all private and protected members of a class.
- **Member Function** - It is basically a function that can be declared as members of a class. It is used to perform operations on data members of the same class.
- **Destructor** - It frees up the resources and memory occupied by an object. Destructors are automatically called when an object is destroyed.