what is object oriented programming?

Object-oriented programming is a software development technique that emphasizes the division of programs into discrete, self-contained objects. An object, in this case, is an independent construct like a data structure and an executable unit of code. An object could depict real-life things like people, cars, and buildings. On the flip side, it can represent more abstract things, such as operations or algorithms.

Developers use object-oriented programming to create software around groups of related data. This approach is more flexible than procedural programming, allowing a more dynamic structure and code organization.

Moreover, OOP enables programmers to write useful code in many different programs. And so, it’s not surprising that OOP  languages are widely used in modern software engineering.

**What are the building blocks of object-oriented programming?**

* **Class**

In object-oriented programming, classes define the structure of a program or the relationships between objects. Classes can also specify the types of attributes and behaviors that an object should have. Classes enable programmers to reuse elements when multiple instances of a specific data type exist.

* **Object**

An object is a discrete entity representing a real-world concept or an abstraction. Also, an object is a collection of related data fields and functions to be treated as a whole. An object references other objects for interaction within the system. 

* **Method**

A method is a function or set of rules that act on an object. Methods are useful for grouping related tasks, making the code quicker to read and maintain. Also, methods enable an object to interact with other objects and receive input.

* **Attributes**

The members of each class are attributes. An attribute is a data-modifying descriptor that identifies the properties of an object. Developers can modify these attributes over time to change how an object behaves. For example, if you wish to change how an object moves, alter its acceleration attribute.