

the program handling. This is the mechanism of handling the undesirable states that the program outcomes of such states.

Try-catch is the most common method used for handling exceptions in the program.

Garbage Collection: It refers to the mechanism of handling the memory in the program. Through memory is freed up by removing the objects that are no longer needed.

- **Interface v/s Abstract class difference** - Interface and abstract classes both are special types of declaration and not their implementation. But the interface is entirely different from an abstract class. One of the differences between the two is that, when an interface is implemented, the subclass must define all its methods and provide its implementation. When an abstract class is inherited, the subclass does not need to provide the definition of its abstract methods as it is using it.

Also, an abstract class can contain abstract methods as well as non-abstract methods

- **Private** - The access level of a private modifier is only within the class. It cannot be accessed from outside the class.
- **Default** - The access level of a default modifier is only within the package. It cannot be accessed from outside the package. If not specify any access level, it will be the default.
- **Protected** - The access level of a protected modifier is within the package and outside the package. If the child class is in the same package, it can be accessed from outside the package.
- **Public** - The access level of a public modifier is everywhere. It can be accessed from within the package and outside the package.

Why we use object-oriented programming?

Object-oriented programming is the programming paradigm that is defined using objects. Objects can be entities like class, that have some characteristics and behaviors.

- OOPs helps users to understand the software easily, although they don't know the actual implementation.
- With OOPs, the readability, understandability, and maintainability of the code increases multifold.
- Even very big software can be easily written and managed easily using OOPs.

What are the main features of OOPs?

Data Abstraction

1. Data abstraction refers to providing only essential information about the data to the outside world and hiding the implementation.
2. Hiding the implementation and displaying only the functionality to the users.

Advantages

1. It reduces the complexity of viewing things.
2. Reduces the duplication of the code

Real Life Example

Consider a real-life example of a man driving a car. The man only knows that pressing the accelerators and applying brakes will stop the car but he does not know about how on pressing the accelerator the speed increases. He does not know about the inner mechanism of the car or the implementation of the accelerator, brakes, etc in the car.