

# Glossary of Terms

## Algorithm

A step-by-step procedure or formula for solving a problem or completing a task, especially by a computer.

## Abstraction

The process of hiding implementation details and showing only the essential features of an object or system.

## Recursion

A programming technique where a function calls itself to solve smaller instances of the same problem until reaching a base case.

Also refers to the mathematical concept where a function is defined in terms of itself with modified parameters.

## Polymorphism

The ability of objects or functions to take multiple forms, allowing the same operation to behave differently for different types.

## Encapsulation

The bundling of data and methods into a single unit (class) while hiding internal details and protecting data from unauthorized access.

## Interface

A contract that defines a set of methods and properties that implementing classes must provide, enabling consistent interaction with objects.