GLOSSARY OF SAP

ABAP BASICS - ABAP OBJECT ORIENTATION

A Quick Reference Guide to SAP Terminologies

Get any SAP Video course -https://zarantech.teachable.com/courses/category/sap
Linkedin Learner Community page -https://www.linkedin.com/showcase/sap-learner-community/

SAP ABAP Basics - ABAP OO
Key Concepts

Concept/Term	Definition
ABAP (Advanced Business Application Programming)	A programming language used in SAP for developing applications and reports within SAP systems.
Object-Oriented Programming (OOP)	A programming paradigm that uses objects and classes for organizing data and functionality in software development.
Class	A blueprint for creating objects in ABAP OO, defining methods and attributes that objects will have.
Object	An instance of a class, containing data and methods as defined by the class.
Constructor Method	A special method used to initialize an object when it is created.

Concept/Term	Definition
Method	A function or procedure that belongs to a class or object, defining its behavior.
Attribute	A variable defined in a class that holds data or state for objects of that class.
Inheritance	The concept where a class can inherit properties and methods from a parent class, promoting reuse of code.
Polymorphism	The ability of a class to provide different implementations of methods based on the object type.
Encapsulation	The practice of hiding an object's internal state and only exposing necessary information and behavior through methods.

Concept/Term	Definition
Abstraction	The process of hiding complex implementation details and showing only the essential features of an object.
Interface	A collection of abstract methods that a class must implement, defining a contract for its behavior.
Event	A mechanism in ABAP OO used to notify other objects of a change or action within an object.
Exception Handling	The process of managing errors and exceptions in ABAP OO, using TRY, CATCH, and RAISE statements.
Instance Method	A method that operates on an instance of a class and can access its attributes.

Concept/Term	Definition
Static Method	A method that belongs to the class rather than an instance, used for class-level functionality.
Instance Variable	A variable defined in a class that holds data specific to an instance of the class.
Static Variable	A variable defined in a class that is shared among all instances of that class.
Getter Method	A method used to retrieve the value of an object's attribute.
Setter Method	A method used to set or modify the value of an object's attribute.
Class Constructor	A special method that is invoked when a class is initialized, typically used for resource allocation.

Concept/Term	Definition
Destructor	A method called when an object is destroyed, used for cleanup tasks like memory deallocation.
Private Access Modifier	Restricts access to attributes or methods to within the class only.
Public Access Modifier	Allows access to attributes or methods from outside the class.
Protected Access Modifier	Restricts access to attributes or methods to within the class and its subclasses.
Abstract Class	A class that cannot be instantiated and must be inherited by other classes. It may contain abstract methods.

Concept/Term	Definition
Abstract Method	A method that is declared without implementation in an abstract class and must be implemented by subclasses.
Dynamic Method	A method called at runtime, determined based on the object type.
Interface Implementation	A class must implement all methods defined by an interface it implements.
Polymorphic Call	A call to a method where the exact method invoked depends on the object type at runtime.
Method Overloading	Defining multiple methods with the same name but different parameters in the same class.

Concept/Term	Definition
Method Overriding	Redefining a method in a subclass to provide a specific implementation.
Super Keyword	A keyword used to refer to the parent class or call parent class methods in a subclass.
Self-Referencing	Referring to the current object in a method using the "SELF" keyword.
Composition	A design principle where one object is made up of one or more objects of other classes, reflecting a "has-a" relationship.
Aggregation	A type of association between objects, where one object contains references to other objects but they can exist independently.

Concept/Term	Definition
Association	A relationship between two or more classes where objects of one class interact with objects of another class.
Relationship Cardinality	Defines how objects of one class can relate to objects of another class (e.g., one-to-one, one-to-many).
Factory Method	A method that returns an object of a particular class, often used to create instances of related classes.
Singleton Pattern	A design pattern where a class can only have one instance throughout the application lifecycle.
Decorator Pattern	A design pattern where new functionality is added to an object dynamically without modifying its structure.

Concept/Term	Definition
Observer Pattern	A design pattern where objects (observers) are notified of changes in another object (subject).
Command Pattern	A design pattern used to encapsulate requests as objects, allowing parameterization and queuing of requests.
Facade Pattern	A design pattern that provides a simplified interface to a complex subsystem of classes.
Adapter Pattern	A design pattern that allows incompatible classes to work together by providing a wrapper or adapter.
Prototype Pattern	A design pattern where new objects are created by copying an existing object (prototype).

Concept/Term	Definition
Composite Pattern	A design pattern that treats individual objects and compositions of objects uniformly.
Iterator Pattern	A design pattern that provides a way to sequentially access elements in a collection without exposing the underlying structure.
State Pattern	A design pattern that allows an object to change its behavior when its internal state changes.
Strategy Pattern	A design pattern that defines a family of algorithms and allows switching between them based on context.
Observer Event	An event-driven mechanism in ABAP OO where one object can notify others of changes in state.