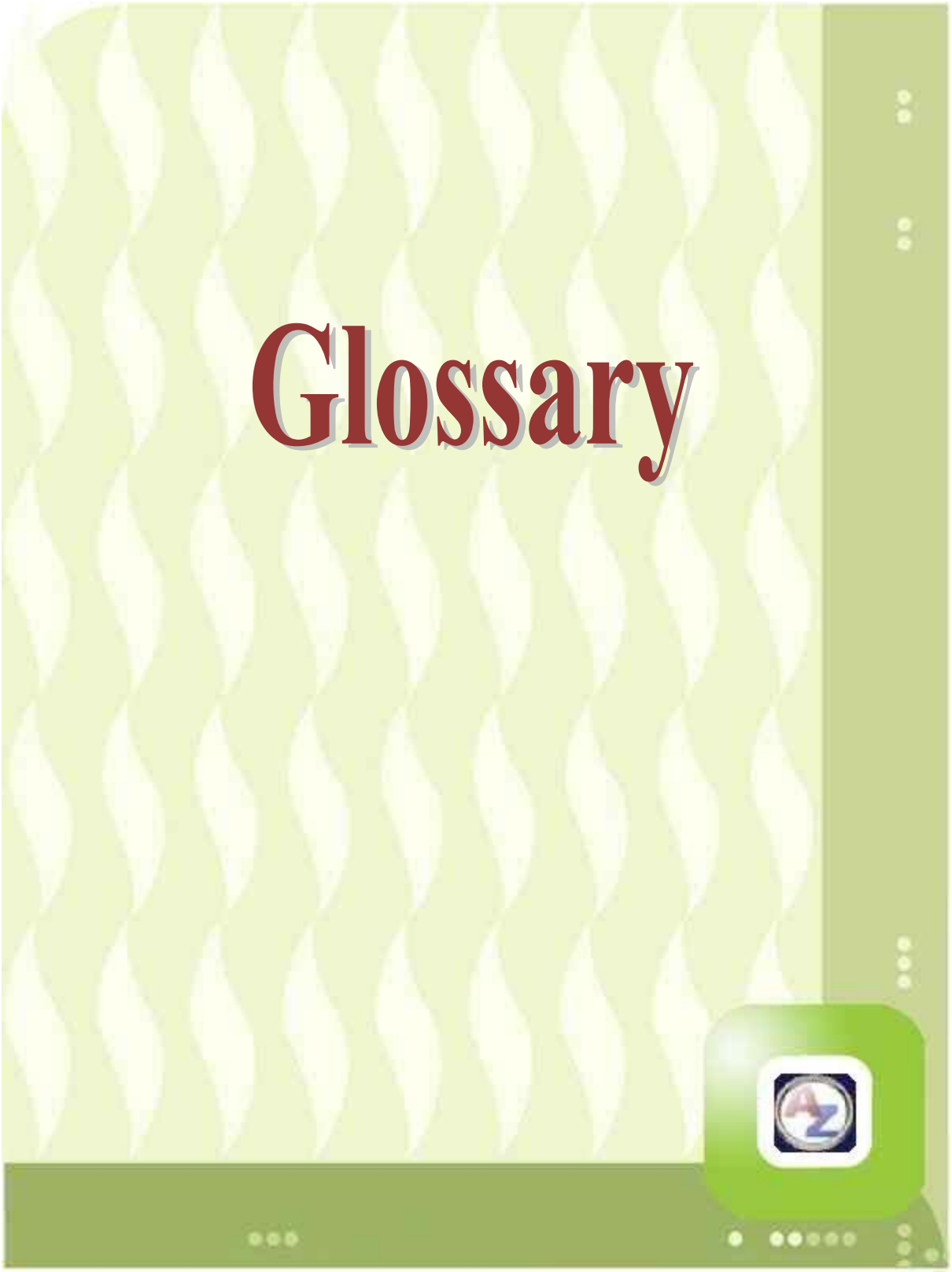
Glossary



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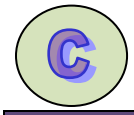
Term	Description
Abstract Class	A class that contains one or more abstract methods and therefore, can never be instantiated. Abstract classes are defined so that other classes can be subclass and make them concrete by implementing the abstract methods.
abstract Keyword	Are used with classes and methods. The 'abstract' keyword when used with a class indicates that the class cannot be instantiated and when used with methods, indicates that the method is abstract.
Abstract Window Toolkit (AWT)	An API containing a collection of Graphical User Interface (GUI) components that have look-and-feel similar to native-platform components.
Abstraction	An object-oriented feature that focuses only on the essential features of an entity for a specific problem domain.
Access Specifier	Are specified to control the access of classes and class members.
Annotations	Annotations or metadata processing in Java source code was introduced in Java 5. They are comments, notes, remarks, or explanations. They help associate additional information to the program elements. An annotation declaration consists of @ followed by the annotation type.
Anonymous Class	An inner class declared within the body of a method without naming it.
API	Stands for Application Programming Interface, which represents a set of programs and routines, similar to a library.
Arithmetic Operators	These are binary operators and are provided to facilitate arithmetic functions such as addition, subtraction, multiplication, and so on.
Array	An array is a structure that stores one or more items belonging to a single data type. Arrays are fixed in size.
Assertion	An assertion allows testing the correctness of any assumptions that have been made about the program.
Assignment Operator	This operator assigns value to a variable.
Associativity of Operators	Refers to assigning priority or precedence to operators having same precedence level.
Autoboxing	Refers to automatic conversion of primitive types to object types.

Term	Description
Base 64 Encoding API	Base 64 encoding API has an in-built encoder and a decoder. The three types of Base 64 encoding are Simple, URL, and MIME.
Binary Operator	An operator that has two arguments.
Bitwise Operator	Works on binary representation of data. It computes values by comparing each bit of one value with the corresponding bit of the other value.
boolean Keyword	Java programming language provides boolean data type which stores boolean literal values, true or false.
break Keyword	This keyword is used in a statement within a loop to immediately terminate the loop.
Bytecode	Machine-independent code generated by the Java compiler and executed by the Java interpreter.



Term	Description
catch Block	Declares a block of statements that are executed when a runtime exception occurs in the preceding 'try' block.
Class	In the Java programming language, refers to a type that defines the implementation of a particular kind of object.
Class Variable	A data item associated with a particular class as a whole rather than with particular instances of a class. Class variables are defined in class definitions. Also, called static variables.
Classpath	An environmental variable that specifies the location of the class files and libraries needed by the Java compiler to compile a Java application.
Clock Class	In Java 8, clock class is used to get the current instant, date, and time using time-zone.
Collection	A collection is a set of date, in the form of objects or elements. In Java, it also represents a core interface that encapsulates different types of collections.
Comment	Comments are statements written by the programmer to document the program and increase its readability. Comments are ignored by the compiler.
Concurrency	Concurrency is an approach in which multiple processes can start, run, and finish in overlapping time periods.

Term	Description
Constructors	Methods that are invoked during the creation of an object. They are used to initialize objects with data.
continue Keyword	Can be used to skip statements within a loop and proceed to the next iteration of the loop. If followed by a label, resumes execution where the label occurs.
Currying	Currying is the process of transforming a function having multiple arguments into a function with a single argument.

Term	Description
@Deprecated Annotation	The @Deprecated annotation is used for deprecating or marking a class, method, or field as deprecated signifying that the part of code will no longer be used.
@Documented Annotation	The @Documented annotation is used for informing the JavaDoc tool that custom annotations must be available in the JavaDoc for classes that are using custom annotation.
Data Type	Determines the type of value that can be stored in a variable and the operations that can be performed on them.
Date-Time API	An interface introduced in Java 8, which is immutable and does not have setter procedures. It provides thread-safety and has utility methods to manage date operations. All its classes are located within the java.time package.
default Keyword	The keyword 'default' in a 'switch' statement indicates that if none of the case values are matching with the result of the condition given in the switch expression, then statement(s) in the default case block will be executed.
Default Method	Default method is a feature introduced in Java 8 that allows default implementation for methods in an interface. It contains default modifiers.
Derived Classes	Are sub classes that are created while implementing inheritance.
do Keyword	A Java keyword used to declare a do-while loop that will iterate a block of statements. The loop's exit condition is specified with the 'while' keyword.
Duration Class	Duration class comprises a set of methods that can be used to perform calculations based on a Duration object.

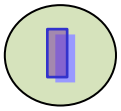
Term	Description
Encapsulation	A mechanism that combines data and implementation details into a single unit called class. It also secures the data through a process called data hiding which makes the object as a black box providing services.
Escape Sequence	An escape sequence is a special sequence of characters that is used to represent characters, which cannot be entered directly into a string.
Exception	An exception is an event or an abnormal condition in a program occurring during execution of a program. It leads to disruption of normal flow of program instructions.
Exception Handler	A block of code that reacts to a specific type of exception. If the exception is for an error that the program can recover from, the program can resume executing after the exception handler has executed.
extends Keyword	In Java, 'extends' keyword is used to inherit a class.
Enumeration	An enumeration is defined as a list that contains constants. In Java, enumeration is a class type.

Term	Description
Field	A data member of a class.
final Modifier	The modifier final is added to a class when its specification is frozen. The final modifier is used with variables, methods, and classes. Final variables cannot be reassigned a value, final methods cannot be overridden and final classes cannot be subclassed.
finally Block	Is always executed irrespective of whether or not an exception occurs in the try block.
Format Specifier	Format specifiers can be used to format the output displayed on the screen.
Function<T,R>	Function<T,R> is an in-built functional interface that is used to map scenarios. For example, when an object of specific type is given as input, it is converted into different type.
Functional Descriptor	A functional descriptor describes the signature of the abstract method of a functional interface.

Term	Description
Functional Interface	Functional interface helps the compiler to confirm the annotated class and verify whether it is a functional interface or not. It has one abstract method.
Functional Programming	Functional programming is a programming approach that emphasizes on utilization of functions and writing code that does not change state. It helps to make a program easier to test, thread-safe, and modular.

Term	Description
Garbage Collection	A mechanism that automatically destroys unused objects in the memory.

Term	Description
Heap	An area of memory that deals with dynamic memory allocations. This means, Java objects are allocated physical memory space on the heap at runtime.

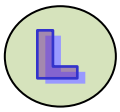


Term	Description
if	A conditional construct that evaluates a given condition and based on the result of evaluation executes a certain section of code.
Immutability	Immutability is the capability of an object to resist or prevent change. If the state of an object cannot change after it is constructed, it is considered immutable. For example, in Java, String is an immutable type.
Immutable Class	Immutable class is one in which the state of its instances does not change while it is constructed.
implements Keyword	A Java keyword included in the class declaration to specify any interfaces that are implemented by the current class.
import Keyword	A Java keyword used at the beginning of a source file that can specify classes or entire packages to be referred to later in the current Java class without including their package names in the reference.

Term	Description
Infinite Stream	An infinite stream is a sequence or collection of elements that has no limit.
Inheritance	The ability of one class to inherit the members of another class is called inheritance.
Instance	In Java programming language, an object of a particular class is created using the new operator. The newly created object is also referred to as instance of a class.
Instance Method	Function that represents some action to be performed on an object of a class.
Instance Variable	Any item of data that is associated with a particular object. Each instance of a class has its own copy of the instance variables defined in the class. Also called a field.
Instant Class	The Instant class in Date-Time API is used for time stamp creation. It denotes a specific moment in time. One Instant is defined as the offset from the origin or the starting point, which is 1/1/1970-00:00-Greenwich Mean Time (GMT).
interface Keyword	A Java keyword used to define a collection of method definitions and constant values. It can later be implemented by classes that define this interface with the implements keyword.
Intermediate Operations	An operation in which the operators apply logic such that the inbound stream generates another stream. A stream can have n number of intermediate operators.

Term	Description
jar File	All the source files of a Java application are bundled into a single archive file called Java Archive (JAR) file.
java.lang Package	This package contains classes that form the basis for core classes of Java language.
java.util Package	This package contains classes and interfaces that provide additional utility.
javac	A command that is used to compile a Java program. It compiles the source code and generates a .class file.
javadoc	A documentation tool that helps to document the classes in a package and the methods of the classes.
JDK	Java Development Kit (JDK) is a binary software development kit that provides implementation of Java. It provides an environment for writing applications and applets in Java programming language.

Term	Description
jjs Tool	jjs is a new command line tool for running JavaScript through Nashorn. In Java Development Kit 8, it is located in the bin folder. It is used to launch the Nashorn command line interpreter.
JRE	Refers to Java runtime environment that provides JVM and class libraries used to run a Java program.
JVM	Java Virtual machine is a software concept based on the idea of an imaginary computer, which has a logical set of instructions, and these instructions define the operations of this computer. JVM provides the runtime environment for Java programs to work.



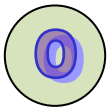
Term	Description
Local Class	A local class is declared within a method, constructor, or an initializer. In other words, a local class is declared within a block of code and is visible only within that particular block.
Local Variable	A variable defined within a method or a block and is not accessible outside that method or block.
Literal	Represents a fixed value assigned to a variable. For example, a value 56 represents an integer literal and value 'a' represents a character literal.
Lambda Expression	Lambda expression is a new feature introduced in Java 8 to facilitate functional programming and make application development easier. It is a function that does not belong to any class.
LocalDate Class	This class is contained in the java.time package. It denotes a date without time-zone information. The instance of this class is immutable.
LocalDateTime Class	This class is contained in the java.time package. It denotes a date and time without time-zone information. The instance of this class is immutable.
LocalTime Class	This class in Date-Time API signifies the exact time of day without any time-zone data.

Term	Description
Math Class	The Math class in Java contains several built-in methods to perform basic numeric calculations such as exponential, logarithmic, square root, and trigonometric methods. It is located in the java.lang package.

Term	Description
Math.abs()	Math.abs() method produces the absolute value of the given input in the calculation. This method can be overloaded in four ways: int, double, long, or float.
Math.ceil()	Math.ceil() method rounds a floating-point value close to the integer value. The rounded value returns double.
Math.exp()	Math.exp () method produces e (Euler's number) increased to the power of the value given as a parameter.
Math.floor()	Math.ceil() method rounds a floating-point value down to the integer value. The rounded value returns double.
Math.log()	Math.log () method produces the logarithm of the given value. It functions under the basis of logarithm e (Euler's number). This method performs the reverse function of math.exp () method.
Math.pow()	Math.pow () method takes two parameters and produces the value of the first parameter raised to the power of the second parameter.
Math.sqrt()	Math.sqrt () method performs the square root operation for the given parameter.
Member Class	A member class is a non-static inner class and is declared as a member of an outer or an enclosing class.
Method	In Java, a function declared as a member of a class is called a method.
Method Overloading	Method overloading is the ability of a class to define several methods with the same name.
Method Overriding	When a subclass defines a new method having the same signature as the superclass method, then the process is called overriding.
Method References	Method reference is a new feature introduced in Java 8 that allows reference to constructors or methods in a program without executing them.
MonthDay class	The MonthDay class in Date-Time API is used to represent month as well as day-of-month.
Multiple Inheritance	In multiple inheritance, classes can inherit methods and properties from several different classes. Java does not support multiple inheritance.

Term	Description
native Modifier	The modifier, native, can be used only with methods. It indicates that the implementation of the method is in a language other than Java such as C or C++.
Nashorn	Nashorn is a newly included JavaScript engine in Java 8 replacing Rhino. Its goal is to provide a lightweight and high-performance JavaScript runtime in Java with a native JVM.

Term	Description
Nested Class	A nested class is a class defined within another class. It has access to members of the outer or enclosing class even if the members are declared private.
new Keyword	In Java, the operator new is used to create object because it assigns memory space to store the object of the given type.
Null Literals	An undefined value assigned to reference variables.



Term	Description
Object	The principal building blocks of object-oriented programs. Each object is a programming unit consisting of state (variables) and behavior (methods).
Operator	Operators are symbols that help to manipulate or perform some sort of function on data.
Object-oriented Analysis	The process that determines the functionality of the system.
Object-oriented Design	The process of planning a system in which objects interact with each other to solve a software problem.
Object-oriented Programming	Deals with the actual implementation of the application.
@Override Annotation	The @override annotation is used to create a compile time check to indicate that a method is being overridden.

Term	Description
Packages	A package is a collection of classes, interfaces, and/or other packages.
PATH	The PATH variable is set to point to the location of executables such as javac.exe, java.exe, and program files.
Polymorphism	Refers to an object that can have many different forms.
Portability	Means running the same code on different platforms with different OS and processor.
private Keyword	A Java keyword used in a method or variable declaration. It signifies that the method or variable can only be accessed by the members of the class.

Term	Description
protected Keyword	A Java keyword used in a method or variable declaration. It signifies that the method or variable can only be accessed by members of the class, subclasses, or classes in the same package.
public Keyword	A Java keyword used in a class, method, or variable declaration. It signifies that the class, method, or variable can be accessed by any class.

Term	Description
Recursion	Recursion is a Java programming language feature that permits a method to call itself repeatedly. A method that calls itself is known as recursive.
Reduction Operation	Refers to terminal operations such as average, max, sum, and so on, that return one value by combining the contents of stream is called reduction operations.
Reflection API	Reflection API is used to access annotations on any type such as class or interface or methods.
Repeating Annotations	Repeating annotations help to apply the same annotation to a declaration or type. The repeating annotations are loaded in a container annotation generated by the Java compiler.

Term	Description
@SuppressWarnings Annotation	The @suppressWarnings annotation can suppress compiler warnings in any available method.
Scanner Class	The Scanner class allows the user to read values of various types.
Short-circuiting Operations	If an operation (intermediate or terminal) generates a finite stream in an infinite stream, it is known as short-circuiting operations. For example, limit() and skip().
static Keyword	A Java keyword used to define a member to be accessible without an instance. In other words, members declared as static can be used directly using the class name; there is no need to create an instance to access them.

Term	Description
Static Method Reference	A static method reference facilitates use of a static method as a lambda expression. A static method can be defined as an enum, class, or an interface.
Stream	A stream is a series or set of elements that support sequential and parallel aggregate operations such as filtering, sorting, and so on.
Stream API	In Java 8, Stream API allows parallel processing. It supports sequential and parallel aggregate operations to process data while completely abstracting out the low-level multithreading logic.
Stream Range	Stream range is an approach that allows creating a range of numbers as stream.
StringBuilder Class	The StringBuilder class provides various methods to manipulate a string object. Objects of StringBuilder class are growable and flexible.
Subclass	A class that is derived from a particular class, perhaps with one or more classes in between.
super Keyword	The 'super' keyword allows a subclass to invoke the super class constructor and methods. It is extremely helpful when member names of subclass hide the members existing by the same name in the super class.
Superclass	A class from which a particular class is derived, perhaps with one or more classes in between.
switch-case	The switch-case statement contains a variable as an expression whose value is compared against different values specified with the 'case' keyword.

Term	Description
Terminal Operations	A terminal operation is a final call operation to consume a Stream. A terminal operator is found at the end of a call stack that performs the terminal operation.
this Keyword	'this' keyword can be used within an instance method or a constructor to refer to the current object. Any member of the current object can be referred from within an instance method or constructor using the keyword 'this'.
throw Keyword	In Java, when an error condition arises in a program, the user can send an exception up to the call chain by using the throw keyword.
throws Keyword	A Java keyword used in method declarations that specify which exceptions are not handled within the method, but rather passed to the next higher level of the program.
transient Modifier	The 'transient' modifier is used to declare fields that are not saved or restored as a part of the state of the object.

Term	Description
try Block	The try block consists of a set of executable statements that can possibly throw exception while executing them. A method, which may throw an exception, can also be included in the try block. A try block is followed by one or more catch blocks to handle exceptions.
Type annotations	Type annotations are formed to maintain better analysis of Java programs and ensure better type checking.
Type Casting	Refers to changing an entity from one data type to another.

Term	Description
Variable	Variable stores the values required in the program. Variables should be declared before they are used.
void	A keyword that is used in method declarations. It informs the compiler that the method will not return any value.
volatile Modifier	This modifier is used only with variables and it indicates that the value of the variable may be changed.

Term	Description
while	A keyword used in looping constructs that executes a statement or a block of statements until the specified condition is true.
Wrapper Classes	Allow accessing primitive data types as objects in the Java program.

--- End of Glossary ---