

Programming in Java

Topics	Sub topics	Date
Introduction to JAVA	Overview and Features of Java Programming Language Architecture Of Java JDK, JVM, JRE overview	13th October (06:00-07:00)
	Discussion on Source Code and Bytecode "Hello World" on JAVA Editors and Eclipse IDE	17th October (06:00-07:00) 23th October (06:00-07:00)
Basics of JAVA programming language	Data types and Variables Keywords in JAVA Common Operators in JAVA Primitive Datatypes	25th October (06:00-07:00) 28th October (06:00-07:00)
	Introduction to Strings datatype Datatypes Casting - Widening & Narrowing Conversions For, While loops Switch case and if blocks Basic Programs using the learned concepts.	31th October (06:00-07:00)
Methods/Functional programming in JAVA	Methods, & Classes overview Discussion on industry standards Method Structure MARlration	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Methods/Functional programming in JAVA	Method calls type and return type. Method Parameters Scope Static methods and Intro to static keyword Packages and Static imports	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Arrays and Strings	Intro to Arrays Properties and functionality of an array Strings Methods and Properties Basic Programs on Strings and Arrays Mutable and Immutable Strings String Buffer and String Builder Command-line arguments using args[]	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
OOPs (Object Orientation Programming)	Overview Need and Benefits of OOP Pillars of OOPs "new" Keyword Discussion on HEAP memory and Garbage Collector Constructors Super and This Keyword "static" keyword w.r.t. to OOP	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer

Pillar 1: Encapsulation	Access modifiers Setter and getters Final keyword	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Pillar 2: Inheritance	Importance of Inheritance and Types of Inheritance Single Inheritance Multi-Level Inheritance Hierarchical Inheritance Super keyword w.r.t. to Inheritance Access modifier w.r.t. to Inheritance Intro to Object Class Methods	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Pillar 3: Polymorphism	Method Overloading Method Overriding Runtime and Compile time polymorphism toString, equals method manual overriding Override Annotation	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Pillar 4: Abstraction	Discussion for Abstraction Abstract keyword Difference between concrete and abstract Methods Interfaces Marker Interface and its usage Intro to Functional Interface Lambda /Innerclasses and Functional Interfaces	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Exception handling	Exceptions and Errors in JAVA Exception class Hierarchy Try, catch and finally block Try with Resource and Autocloseables Throw and throws keywords Default Exception Handler Custom User Defined Exception Handler Corner cases and best practices.	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Collection Framework in JAVA	Collection Interface hierarchy ArrayList Set LinkedList Traversing using Iterators Fail-Safe and Fail-Fast Way of using Collection Comparator and Comparable usage Map Interface Hierarchy HashMap Purpose of various Collection Classes	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer

File Handling and I/O	Various File Types Common filetype and Usage File operations using Java InputStream and OutputStream in Java Read and Write Operation on a text file using Stream Serialization and Deserialization and best practices.	13th October (06:00-07:00)
Multi-Threading	Parallel Processing Computation and its Advantage Thread in JAVA Achieving Multi-Threading in JAVA using Thread class and Runnable interface Thread Pool Thread State and its Lifecycle Deadlock event Concurrency and Thread Safety Synchronization Volatile keyword for visibility Atomic Integer	17th October (06:00-07:00) 20th October (06:00-07:00)