

**Course: Core Java**

Module No.(Day Wise)	Module Name	Subject
1.	Introduction to Java	<ul style="list-style-type: none"> <li>• Evolution of Java</li> <li>• What is java bytecode</li> <li>• JDK, JVM and JRE instalation</li> </ul>
	Language Basics	<ul style="list-style-type: none"> <li>• Keywords</li> <li>• Conditional Statements</li> <li>• Loops</li> <li>• Data Types</li> <li>• Operators</li> </ul>
2.	Class and Objects and different Access Modifiers, Basic Input / Output using Scanner class	<ul style="list-style-type: none"> <li>• What is a Class ?</li> <li>• What is an Object : Object Properties and Operations</li> <li>• Signature of a Method and Method Overloading</li> </ul>
	Constructors	<ul style="list-style-type: none"> <li>• What is a Constructor</li> <li>• Constructor Overloading</li> <li>• The 'this' Reference</li> </ul>
3.	Understanding 'static'	<ul style="list-style-type: none"> <li>• Static Variables</li> <li>• Static Methods</li> <li>• Static and Non static field initializers, Initialization Blocks</li> </ul>
	Nested or Inner Classes	<ul style="list-style-type: none"> <li>• Static Member Nested Classes</li> <li>• Member Inner Classes</li> <li>• Local Inner Classes</li> </ul>
4.	Packages and Access Modifiers revisited	<ul style="list-style-type: none"> <li>• Creating Packages and Compiling and Running classes within Packages</li> </ul>
	Inheritance & Polymorphysm	<ul style="list-style-type: none"> <li>• What is Inheritance, Types of Inheritance using Examples</li> <li>• Using Instanceof Operator</li> <li>• Method Overriding and Dynamic Method Dispatch</li> </ul>
5.	Abstract Class, Abstract Methods and final Keyword	
6.	Interface and runtime polymorphysm	<ul style="list-style-type: none"> <li>• Interfaces and its implementations</li> <li>• Multiple inheritance</li> <li>• Types of Interface :</li> </ul>

		<b>Marker Interface, Functional Interface etc.</b>
<b>7.</b>	<b>Wrapper Class, Exception Handling</b>	<ul style="list-style-type: none"> <li>• <b>What is an Exception, Exception Handling using try, catch, throw and finally, Custom exception demo</b></li> </ul>
<b>8.</b>	<b>Multi-Threading</b>	<ul style="list-style-type: none"> <li>• <b>Creating Thread and Multiple Threads using Thread class and Runnable Interface</b></li> <li>• <b>Thread priorities</b></li> <li>• <b>Synchronization</b></li> </ul>
<b>9.</b>	<b>Introduction to Java Generics</b>	<ul style="list-style-type: none"> <li>• <b>Creating parameterised types in java</b></li> <li>• <b>Objectives of creating Parameterised Type</b></li> </ul>
<b>10.</b>	<b>Introduction to Java Collection Framework</b>	<ul style="list-style-type: none"> <li>• <b>Java Collection Hierarchy</b></li> <li>• <b>Core Collection Interfaces and their implementations: Collection,List,Set Map, Sorted set etc.</b></li> </ul>

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**Duration: 4-week (3 days per week)**

**Class duration: 2 hrs/class, 10 number of classes**