

## Table of Contents JAVA

Date	Topics	Theory/Lab
<b>Week 1</b>		
Day-1	<b>Introduction to Object Oriented Programming concepts</b> <ul style="list-style-type: none"> <li>• Introduction to Java API,</li> <li>• The Architecture,</li> <li>• Data types</li> <li>• Arrays</li> </ul>	Hands on
Day-2	<ul style="list-style-type: none"> <li>• Classes as Blueprints for Objects</li> <li>• Information Hiding</li> <li>• Declaring Constructors</li> <li>• Identifiers, Keywords, and</li> <li>• Comments</li> <li>• Primitive Types</li> <li>• Logical - boolean</li> <li>• Textual - char and String</li> <li>• Integral - byte, short, int, and long</li> <li>• Floating Point - float and double</li> <li>• Java Reference Types</li> <li>• Constructing &amp; Initializing Objects</li> </ul>	Hands on
Day-3	<b>Inheritance and Advanced class Features</b> <ul style="list-style-type: none"> <li>• The is a Relationship</li> <li>• Single Inheritance</li> <li>• Constructors Are Not Inherited</li> <li>• Polymorphism</li> <li>• Heterogeneous Collections</li> <li>• The instanceof Operator</li> <li>• Casting Objects</li> <li>• Overriding Methods</li> <li>• Overloading Method Names</li> <li>• The Object Class</li> <li>• Wrapper Classes</li> <li>• Access specifiers and modifiers</li> <li>• Packages and Interface</li> <li>• Creating Packages</li> <li>• Accessing Packages</li> <li>• Defining an Interface</li> <li>• The Cloneable Interface</li> </ul>	Hands on

Day-4	<b>Exception Handling</b> <ul style="list-style-type: none"> <li>• Try - catch block</li> <li>• Throw and throws</li> <li>• Throwable class hierarchy</li> <li>• User defined Exceptions</li> </ul> <b>Multithreading in Java</b> <ul style="list-style-type: none"> <li>• Threads in Java</li> <li>• The Runnable Interface</li> <li>• The Thread Class</li> <li>• The Life Cycle of a Thread</li> <li>• Thread Synchronization</li> </ul>	Hands on
Day-5	<u><b>Collection</b></u> <ul style="list-style-type: none"> <li>• Collection Framework</li> <li>• The Collection Interface</li> <li>• The Set Interface</li> <li>• The List Interface</li> <li>• The Map Interface</li> <li>• The Sorted Set Interface</li> <li>• Enumeration</li> </ul>	Hands on
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Day-6	<ul style="list-style-type: none"> <li>• Iterator</li> <li>• Arrays</li> <li>• ArrayList</li> <li>• Date</li> <li>• HashTable</li> <li>• HashMap</li> <li>• Vector</li> <li>• Stack</li> <li>• String Tokenizer</li> <li>• Random</li> </ul>	Hands on
Day-7	<u><b>I/O Streams</b></u> <ul style="list-style-type: none"> <li>• Byte Streams</li> <li>• Character Streams</li> <li>• Over view of IO</li> <li>• Streams Using different Streams</li> <li>• Serializing Objects Using the File Class</li> <li>• Random Access File</li> <li>• Reader and Writer class</li> </ul>	Hands on

Day-8	<u>Swings</u> <ul style="list-style-type: none"> <li>• Foundation Classes</li> <li>• Heavyweight Components</li> <li>• Lightweight Components</li> <li>• Lightweight vs. Heavyweight</li> <li>• Model View Controller</li> <li>• Delegation Event Model</li> <li>• JDK 1.1 Event Listeners</li> <li>• New Swing Event Classes</li> <li>• How do I Use Swing?</li> <li>• Adding components to containers</li> </ul>	Hands on
Day-9	<ul style="list-style-type: none"> <li>• Data Modeling</li> <li>• Normalization</li> <li>• SQL</li> <li>• Data Definition Language</li> <li>• DML</li> <li>• Joins , Sub Queries</li> <li>• Procedures and functions</li> <li>• Working with JDBC 2.0</li> <li>• The JDBC architecture</li> <li>• Connecting to ODBC data sources</li> <li>• The JDBC API</li> <li>• Connection of Java to Database</li> </ul>	Hands-on
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Day-12	<ul style="list-style-type: none"> <li>• Java Servlet Technology</li> <li>• Servlet Fundamentals</li> <li>• Service / Request / Response Methods</li> <li>• Multithreaded model of Servlets</li> <li>• Why use Servlets?</li> <li>• The structure of a Servlet API</li> <li>• Lifecycle of a Servlet</li> <li>• Get Vs POST</li> </ul>	Hands-on
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Day-20	<ul style="list-style-type: none"> <li>• Introduction to design patterns and architectures</li> <li>• Pattern</li> <li>• Architectural Patterns</li> <li>• Pattern Idioms</li> <li>• Pattern Systems</li> <li>• MVC</li> <li>• Test, Debug Deploy</li> </ul>	Hands on
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