

Core Java Programming Syllabus PDF

Topic	Contents
Basics of Java	<ul style="list-style-type: none">➤ Java - What, Where and Why?➤ History and Features of Java➤ Internals of Java Program➤ Difference between JDK,JRE and JVM➤ Internal Details of JVM➤ Unicode System➤ Naming Convention
Data Types	<ul style="list-style-type: none">➤ Primitive data types(Predefine)➤ byte➤ short➤ int➤ long➤ float➤ double➤ boolean➤ char➤ Non-Primitive data types(User Define)➤ class➤ Arrays

Want to Know? [Tips to Prepare for Written Exam](#)

Core Java Syllabus – Variables & Arrays

Types Of Variables	<ul style="list-style-type: none">➤ Variable declaration➤ Object Reference variables➤ Life time of variables➤ Initial values of variables➤ Default values of variables➤ Initializing local variables of primitive data types➤ Initializing local reference variables
Types Of Arrays	<ul style="list-style-type: none">➤ One dimensional array➤ Declaring array variables➤ Constructing an array➤ Initializing an array➤ Using an array➤ Anonymous array➤ Multidimensional array

Core Java Syllabus - Loops In Java & Operators

Control statements:	<ul style="list-style-type: none"> ➤ Sequence ➤ Branch/Conditional ➤ Repetitive/Iterative/Looping ➤ Jump
Type of operators:	<ul style="list-style-type: none"> ➤ Arithmetic Operators ➤ Java-instance of-operator ➤ Bitwise Operators ➤ Relational Operators ➤ Boolean Logical Operators ➤ Assignment Operators ➤ The Conditional(Ternary) Operator

START NOW:- [Online Quiz for Competitive Exams](#)

Core Java Syllabus:

Java Artifacts	<ul style="list-style-type: none"> ➤ Literals ➤ White Spaces ➤ Identifiers ➤ Keywords ➤ Separators ➤ Comments
Introduction to Classes and Objects	<ul style="list-style-type: none"> ➤ Classes ➤ Declaring Members: Fields and Methods ➤ Objects ➤ Class Instantiation ➤ Object References ➤ Printing Objects
Methods	<p>Types of methods</p> <ul style="list-style-type: none"> ➤ Create and use a Method ➤ Methods returning primitive value ➤ Methods returning objects ➤ Methods that take parameters ➤ Overloading Methods
Constructors	<ul style="list-style-type: none"> ➤ Default Constructors ➤ Parameterized Constructors ➤ Overloading Constructors
Garbage Collection	<ul style="list-style-type: none"> ➤ The finalize() method
OOPS Concepts	<p>Inheritance</p> <p>Types Of Inheritance:</p> <ul style="list-style-type: none"> ➤ Introduction ➤ Classes Inheritance ➤ Interface Inheritance ➤ Multilevel Inheritance ➤ Accessing members of other

	class/interface <ul style="list-style-type: none"> ➤ Chaining Constructor using this() and Super() ➤ This() constructor call ➤ Super()constructor call Dynamic method Dispatch Method Overriding
Modifiers	Java Access Specifies: <ul style="list-style-type: none"> ➤ Public ➤ Protected ➤ Private ➤ Default
Other modifiers for members	<ul style="list-style-type: none"> ➤ Static ➤ Final ➤ Abstract ➤ Synchronized ➤ Native ➤ Transient ➤ Volatile Other modifiers for classes: <ul style="list-style-type: none"> ➤ Abstract classes ➤ Final classes
Packages	Introduction to Packages: <ul style="list-style-type: none"> ➤ Defining packages ➤ Using Packages ➤ Importing, Compiling and Running code from packages
Interfaces	Working with interfaces: <ul style="list-style-type: none"> ➤ Defining interfaces ➤ Method prototype declaration ➤ Implementing interfaces ➤ Extending interfaces ➤ Constants in interfaces
Fundamental Classes	Types Of Fundamental Classes : <ul style="list-style-type: none"> ➤ The Object class ➤ The Wrapper Classes ➤ The Math Class ➤ The String Class ➤ The String Buffer Class ➤ The String Builder Class
String	String Handling: Creating Format String String Length Method <ul style="list-style-type: none"> ➤ String : What and Why? ➤ Immutable String ➤ String Comparison ➤ String Concatenation ➤ Substring ➤ Methods of String class ➤ String Buffer class

	<ul style="list-style-type: none"> ➤ String Builder class ➤ Creating Immutable class ➤ toString method ➤ StringTokenizer class
Exception	<p>Exception Handling:</p> <ul style="list-style-type: none"> ➤ Exception Handling: What and Why? ➤ try block and catch block ➤ Multiple catch block ➤ Nested try ➤ finally block ➤ throw keyword ➤ Exception Propagation ➤ throws keyword ➤ Exception Handling with Method Overriding ➤ Custom Exception ➤ StringTokenizer class
Nested Classes	<ul style="list-style-type: none"> ➤ Nested Class : What and Why? ➤ Member Inner class ➤ Anonymous Inner class ➤ Shadowing in Java ➤ Local Inner class ➤ static nested class ➤ Nested Interface
Threads	<p>Multithreading:</p> <ul style="list-style-type: none"> ➤ Multithreading : What and Why? ➤ Life Cycle of a Thread ➤ Creating Thread ➤ Thread Scheduler ➤ Sleeping a thread ➤ Joining a thread ➤ Thread Priority ➤ Daemon Thread ➤ Thread Pooling ➤ Thread Group ➤ Shut down Hook ➤ Performing multiple task by multiple thread ➤ Garbage Collection ➤ Runnable class
Collections and Maps	<ul style="list-style-type: none"> ➤ Core interfaces ➤ Implementations
Collections	<ul style="list-style-type: none"> ➤ Basic Operations ➤ Bulk Operations ➤ Array operations ➤ Iterators
Sets	<ul style="list-style-type: none"> ➤ HashSet and linked hashset
Lists	<ul style="list-style-type: none"> ➤ ArrayList, Linked list and vector
Maps	<ul style="list-style-type: none"> ➤ Basic Operations

	<ul style="list-style-type: none"> ➤ Bulk Operations ➤ Collections views ➤ Hashmap, Linked hashmap and Hashtable
Sorted sets Sorted maps	<ul style="list-style-type: none"> ➤ The Comparator interface ➤ The Comparable Interface ➤ The SortedSet interface ➤ The SortedMap interface ➤ TreeSet and MapSet ➤ hashCode() and equals() Methods Properties: <ul style="list-style-type: none"> ➤ Load() Method ➤ Store() Method
Synchronization	<ul style="list-style-type: none"> ➤ Synchronization : What and Why? ➤ synchronized method ➤ synchronized block ➤ static synchronization ➤ Deadlock ➤ Inter-thread Communication ➤ Interrupting Thread
Stream	<p>Input and output:</p> <ul style="list-style-type: none"> ➤ FileOutputStream and FileInputStream ➤ ByteArrayOutputStream ➤ SequenceInputStream ➤ BufferedOutputStream and BufferedInputStream ➤ FileWriter and FileReader ➤ CharArrayWriter ➤ Input from keyboard by InputStreamReader ➤ Input from keyboard by Console ➤ Input from keyboard by Scanner ➤ PrintStream class ➤ PrintWriter class ➤ Compressing and Uncompressing File ➤ Reading and Writing data simultaneously ➤ DataInputStream and DataOutputStream ➤ StreamTokenizer class
Serialization	<ul style="list-style-type: none"> ➤ Serialization and Deserialization ➤ Serialization with IS-A and Has-A ➤ transient keyword
Networking	<ul style="list-style-type: none"> ➤ Socket Programming ➤ URL class ➤ Displaying data of a web page ➤ InetAddress class ➤ DatagramSocket and DatagramPacket ➤ Two way communication
AWT and Event Handling	<ul style="list-style-type: none"> ➤ AWT Controls

	<ul style="list-style-type: none"> ➤ Event Handling by 3 ways ➤ Event classes and Listener Interfaces ➤ Adapter classes ➤ Creating Games and Applications
Swing	<ul style="list-style-type: none"> ➤ Basics of Swing ➤ JButton class ➤ JRadioButton class ➤ JTextArea class ➤ JComboBox class ➤ JTable class ➤ JColorChooser class ➤ JProgressBar class ➤ JSlider class ➤ Digital Watch ➤ Graphics in swing ➤ Displaying Image ➤ Edit Menu for Notepad ➤ Open Dialog Box ➤ Creating Notepad ➤ Creating Games and applications
Java New Features	<ul style="list-style-type: none"> ➤ Assertion ➤ For-each loop ➤ Varargs ➤ Static Import ➤ Autoboxing and Unboxing ➤ Enum Type ➤ Annotation
Internationalization	<ul style="list-style-type: none"> ➤ Internationalization ➤ ResourceBundle class ➤ I18N with Date ➤ I18N with Time ➤ I18N with Number ➤ I18N with Currency