JAVA Syllabus

Unit I

① Introduction to JAVA programming.

* Basics of JAVA
* Background / History of JAVA
* JAVA and Internet
* Advantages of JAVA
* JVM (Java Virtual Machine) & Byte Code
* Java Environment Setup.
* Java Program Structure

→Basics of OOPS

* Abstraction
* Inheritance
* Encapsulation.
* Classes
* Sub-classes & super-classes
* Polymorphism & Overloading
* Message Communication
  ↳ Procedure oriented & object oriented Programming

Unit 2

1st half

Primitive Data-types

↳ * Integer
* Floating Point type
* Characters
* Boolean
* User-defined data type
* Identifiers and Literals.

* Declarations of Constants and variables.
* Type conversion & Casting
* Scope of Variables & default values of variables declared.
* Wrapper classes
* Comment syntax
* Garbage collection

2nd half

~~Types~~ ○ Arrays of Primitive Datatypes
↳ * Types of Array
* Creation
* Concatenation and conversion of string
* Decision and Control Statement.
* Different operators

1st half

Unit 3

● Constructors
↳ * Default constructors
* Parameterized constructors
* Copy constructors
* Passing objects as a parameter
* Constructor overloading

Unit 3

2nd half

* Class
↳ * Defining classes
* ~~Pha~~ Fields and methods
* Creating objects
* Accessing rules.
* "This" keyword.
* "Static" keyword

* Method overloading
* final keyword

~~2nd half~~

Unit 4

1st half

* Basics of Inheritance
↳ * Types of Inheritance
↳ * Single
* Multiple
* Multilevel
* hierarchical
* hybrid
* Concepts of method over-riding
* Extending class, super-class, abstract class

2nd half

* Package
↳ ① Creating Package
② Importing Package
③ Access rules for Package
④ Defining Interface
⑤ Inheritance on Interface
⑥ Implementing Interface
⑦ Multiple Inheritance using Interface

Unit 5

1st half

* Exception handling
↳ * Introduction
* Built in Classes for exception handling
* Mechanism of exception handling in Java

* Error handling
* Exception classes

2nd half

Multi-threading

↳* Creating threads
* Extending threads class
* Implementing runnable interface
* Lifecycle Of threads
* Thread priority & synchronization
* Exception handling in threads