Java course

- ❖ Introduction to java
- ❖ Java... Why? What? How(Green Project)? When?
- ❖ Where? –Different Java Versions.
- ❖ How Java is different from other Technologies

Java Environment

How to Install & set Path.

- ❖ A Simple Java Program –Compiling & executing Java Program
- ❖ Phases of Java Program
- ❖ Analysis of a Java Program
- ❖ Understanding Syntax and Semantic Error,
- ❖ Runtime Exception
- ❖ Name of a Java Source File
- ❖ Platform Independency
- ❖ Java Technology(JDK, JRE, JVM, JIT)
- ❖ Features of Java
- ❖ Text Editors
- ❖ Consoles

Java Array

- ❖ What is Array
- ❖ Array Declaration in java vs C and C++.
- ❖ Instantiation of an Array
- ❖ String vs character array.Accessing Array Elements, Default Value,
- ❖ for-each loop, varargs.
- ❖ Length of an Array (What is
- ❖ ArrayIndexOutOfBoundsException).
- ❖ Increasing, Decreasing the Size
- ❖ and Copy of an Array
- ❖ Multi-Dimensional Arrays
- ❖ Problem Solving

OOP- PROCEDURAL vs OOP

- ❖ Different type of Program Procedural Vs
- ❖ Object Oriented.
- ❖ Top DownVs Bottom Up Approach.
- ❖ Introduction to Object Oriented
- ❖ Programming –Abstraction, Encapsulation, Inheritance,
- ❖ Polymorphism. –Introduction to Classes and Objects
- ❖ Custom Class Definition
- ❖ Instance and Static Variables
- ❖ Different ways to create Object Instance 5

- ❖ Types of Class 3-5
- ❖ Instance Variable and it's role in a Class
- ❖ Constructors, types of Constructor,
- ❖ Constructor Rule, Constructor Overloading.
- ❖ Static Variable and it's use.
- ❖ Methods and their behavior.
- ❖ Constructor vs Methods
- ❖ Java Access Modifiers (andSpecifiers)
- ❖ Explanation of psvm() , sopl()

ABSTRACT CLASS
- ❖ Introduction to Abstract Methods,
- ❖ Abstract Classes and Interface
- ❖ Interface as a Type
- ❖ Interface v/s Abstract Class
- ❖ Interface Definition
- ❖ Interface Implementation
- ❖ Multiple Interfaces' Implementation
- ❖ Interfaces' Inheritance
- ❖ How to create object of Interface

INHERITANCE
- ❖ A Little knowledge on Inheritance
- ❖ Sub-Classes
- ❖ Object Classes
- ❖ Constructor Calling Chain
- ❖ The use of "super" Keyword
- ❖ The use of "private" keyword inheritance.

POLYMORPHISM
- ❖ Types of Polymorphism
- ❖ Overloading Methods
- ❖ Overriding Methods
- ❖ Hiding Methods
- ❖ Final Class and Method
- ❖ Polymorphic Behaviour in Java
- ❖ Benefits of Polymorphism
- ❖ "Is-A" vs "Has-A"
- ❖ Association Vs Aggregation

EXCEPTION HANDLING

- ❖ Introduction to Exceptions
- ❖ Effects of Exceptions
- ❖ Exception Handling Mechanism
- ❖ Try,catch,finally blocks
- ❖ Rules of Exception Handling
- ❖ Exception class Hierarchy, Checked & Unchecked Exception
- ❖ Throw & throws keyword
- ❖ Custom Exception Class
- ❖ Chained Exception.
- ❖ Resource handling & multiple exception class

LAMBDA EXPRESSIONS

- ❖ Introduction
- ❖ Lambda Expression Fundamental
- ❖ Functional Interface
- ❖ Block Lambda Expression
- ❖ Generic Functional Interface
- ❖ Passing Lambda Expressions as Argument
- ❖ Lambda Expression and Exception
- ❖ Lambda Expression and Variable Capture

Database

- ❖ MySql Introduction
- ❖ Install MySql Connector for python
- ❖ Curd(Create,Update,Read,Delete) Operations
- ❖ Basic functions
- ❖ All Types of Joins
- ❖ Wildcards
- ❖ Triggers
- ❖ Union
- ❖ Stored Procedure
- ❖ Views
- ❖ Indexes

GUI In Java

- ❖ Applets and AWT
- ❖ Creating Applets
- ❖ GUI Basic
- ❖ Abstract Window Tool Kit

Swings

- ❖ Swing Basic
- ❖ Swings vs AWT
- ❖ Creating GUI Application
- ❖ Swings Component
- ❖ Form, Panel and Layouts
- ❖ Menus, Menu Bars, Tabbed
- ❖ Pane, Dialog Boxes,Table
- ❖ Java course