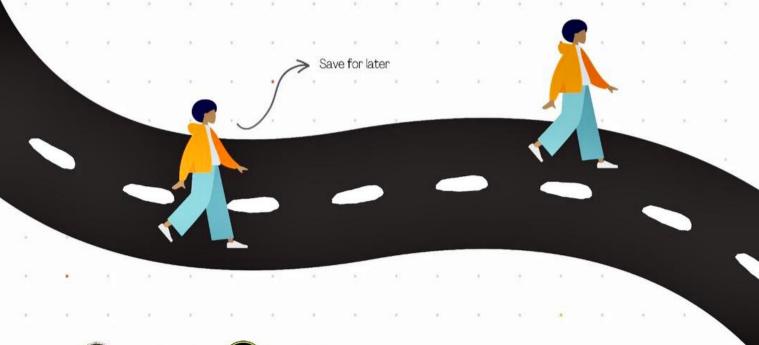
Java & Roadmap 2022

From beginner to advance





Introduction ---

- Java Hello world
- How Java Works
- JVM, JRE, JDK
- Variables
- Data Types
- Primitive vs Reference Data types
- Naming Conventions
- Escape Sequence
- Casting
- Operators
- Keywords
- Unicode System
- Reading Input



Flow Control

Methods -

- If Else
- Ternary
- while loop
- · do while loop
- for loop
- for each loop
- Nested Loops
- Switch
- Break and Continue



- Syntax of Method
- Method Parameters
- Method Scope
- Shadowing
- Method Overloading
- Method Overriding





Arrays

OOPs

- Why we need Array
- What is an Array?
- Internal working of Array
- Dynamic memory allocation
- Array Input & Output
- Array Passing in Function
- Multidimensional Array



- Object and Class
- Constructor
- Inheritance
- Polymorphism
- Encapsulation
- Abstraction





String

- What is String?
- String Creation: string literal
- String Pooling
- String Immutability
- String Creation: new keyword
- String Comparison: == & equals()
- PrintStream Class
- toString() Method
- Format Specifiers
- String Concatenation Operator
- StringBuilder Class
- String Methods



Exception Handling —

- What is an Exception?
- What is an Error?
- Error vs Exception Hierarchy
- Types of Exceptions
- Checked Exceptions vs Unchecked Exceptions
- Keywords for Exception Handling in Java
- Methods for Exception Handling in Java
- Common Exceptions in Java



Multi threading

- What are Multitasking and the Types of Multitasking?
- What is a Thread in Java?
- Lifecycle of a Thread in Java
- What is Multithreading in Java?
- Methods of Multithreading in Java





Collection Framework

- What is a Java Collection?
- What is the Java Collection Framework?
- Java Collection Framework Hierarchy
- Java Collections Interface Methods
- Java Collections Interface
- Java Collection Classes
- Collection API Algorithms
- Benefits of Java Collections





Regex

- Three Classes of Regex
- Methods
- Regex in Java Character Class
- Regex in Java Quantifiers
- Regex in Java
 Metacharacters

Hands on project

- CBSE Board percentage Calculator
- Rock, Paper Scissors Game
- Number Guessing Game
- Online Libray
- Java Object to JSON Convertor
- Online Voting System
- Work Scheduler



