

Core JAVA



1. Introduction of Java

- A. History of java
- B. What is java?
- C. What is JVM?
- D. Java Keywords
- E. Difference between JDK, JRE & JVM
- F. Technologies based on Java
- G. Features of java

2. Data types in Java

- A. Data types in java
- B. Primitive Data Types
- C. Non- Primitive Data Types

3. Operators In Java

- A. Arithmetic Operators
- B. Unary Operators
- C. Increment Operator (++)
- D. Decrement Operator (--)
- E. Assignment Operator (=)
- F. Relational Operators
- G. Boolean Operators
- H. Bitwise Operators
- I. Ternary Operator / Conditional Operator (? :)
- J. new Operator
- K. Cast Operator

4. Control Statements in java

- A. Control Statement
- B. if Statements
- C. If-else statements
- D. switch-case Statements
- E. Iteration Statements
- F. for Statements
- G. while Statements
- H. do-while Statements
- I. Transfer Statements break and continue

5. Arrays in Java

- A. What is array
- B. Types of array
- C. arrayname.length Property
- D. Command Line arguments

6. String Class in Java

- A. Creating Strings
- B. String Class methods
- C. Immutability of String

7. StringBuffer and StringBuilder

- A. String Buffer class
- B. String Buffer class methods
- C. String Builder class
- D. String Builder class method

8. Introduction to OOP

- A. Class / Object
- B. Encapsulation
- C. Abstraction
- D. Inheritance
- E. Polymorphism

9. Classes & Objects

- A. Understanding Methods
- B. Static Variables, Methods and Block
- C. 'this' Keyword
- D. Instance Methods
- E. Passing Primitive data types, Objects & Arrays to Methods

10. Inheritance

- A. 'super' Keyword
- B. Types of Inheritance
- C. Access Specifiers

11. Polymorphism

- A. Polymorphism with Variables
- B. Polymorphism using Methods

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- C. Static Polymorphism
- D. Dynamic Polymorphism
- E. Polymorphism with Static Methods
- F. Polymorphism with Private Methods
- G. Polymorphism with final Methods
- H. 'final' class

12.Type Casting

- A. Casting with Primitive Data Types
- B. Casting with User Defied Data Types
- C. Generalization and Specialization
- D. Object Class
- E. Cloning the class Objects

13.Abstract Classes & Interfaces

- A. Abstract Method & Abstract Classes
- B. Multiple Inheritance using Interfaces
- C. Interface within Interface
- D. Abstract classes V/s Interfaces

14.Packages

- A. Types of Packages
- B. Interfaces in Package
- C. Creating Sub Package In Package

15.Exception Handling

- A. What are Exceptions?
- B. Types of Exceptions
- C. Handling Exception
- D. 'try' , 'catch'
- E. Handling Multiple Exception
- F. 'finally' , 'throw' , 'throws'

16.Wrapper Classes

- A. Character class
- B. Byte class
- C. Short class
- D. Integer class
- E. Long class

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- F. Float class
- G. Double class
- H. Boolean class
- I. Math class

17. Threads

- A. What is Multithreading?
- B. Ways to create multithreading
- C. Thread Scheduler
- D. Thread class method
- E. Runnable interface
- F. Demon Thread
- G. Thread class methods
- H. Difference between yield and sleep method.
- I. Thread priority
- J. Serialization
- K. Inter Thread Communication

18. IO Streams & Files

- A. File Handling
- B. Byte Oriented Streams
- C. Character Oriented Streams

19. Generics

- A. Introduction Generics
- B. Using Built-in Generics Collections
- C. Writing Simple Generic Class
- D. Bounded Generics e. Wild Card Generics

20. Collection & MAP

- A. Collection Interface
- B. List
- C. Set
- D. cursors
- E. Comparable
- F. Comparator
- G. Map
- H. Arrays class
- I. Collections class

- J. String Tokenizer
- K. Calendar & Date Class

21.AWT

- A. What is AWT?
- B. AWT Frames
- C. AWT Components
- D. AWT methods
- E. Different window creation
- F. AWT form design
- G. AWT graphics design
- H. AWT login page application

22.Swing

- A. What is swing?
- B. Swing class object creation approach.
- C. Advantages of Swing
- D. Different form designs in Swing
- E. Swing class components
- F. Integrating Multi-frame model in Swing



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