

### Core Java Basics

- 1. JDK Setup
- 2. First Program
- 3. Developmnt structure
- 4. JDK 15 and Eclipse Setup
- 5. Programing elements
- 6. Printing in Command prompt
- 7. Local variables
- 8. Unary Operators
- 9. Command line arguments
- 10. if block
- 11. nested if blocks
- 12. if blocks with unary operators
- 13. else block
- 14. if-else blocks inside if block
- 15. if-else blocks inside else block
- 16. if-else blocks with unary operators
- 17. ternary operator
- 18. switch-cases
- 19. for-loop



- 20. break and continue
- 21. nesting of loops
- 22. labeled loops
- 23. for-each loop
- 24. while loop
- 25. do-while
- 26. Methods
- 27. attributes
- 28. SIB
- 29. IFR and Multiple classes
- 30. Object and reference variable
- 31. this key word
- 32. constructors
- 33. constructor overloading and this()
- 34. IIB
- 35. objects count
- 36. Encapsulation
- 37. Inheritance
- 38. super() calling statement
- 39. packages



- 40. access levels
- 41. abstrcat classes
- 42. interfaces
- 43. method overloading
- 44. method overriding
- 45. auto widening
- 46. explicit narrowing
- 47. auto upcasting
- 48. explicit down casting
- 49. achieving polymorphism
- 50. final key word
- 51. classpath
- 52. Javadoc, javap and jar commands
- 53. Scanner class
- 54. Eclipse

### Core Java Advanced

- 1. Wrapper classes basics
- 2. auto boxing and auto unboxing
- 3. why do we require Exception Handling



- 4. try-catch
- 5. try-catches
- 6. try-catch-finally
- 7. exceptional conditions of finally
- 8. return statement
- 9. Errors and Exceptions
- 10. Checked and Unchecked
- 11. throws
- 12. throw
- 13. throws in overriding
- 14. assertions
- 15. toString
- 16. equals
- 17. hashCode
- 18. Garbage Collection and clone
- 19. reflection api
- 20. basics
- 21. advanced
- 22. annotations
- 23. static imports



- 24. why do we required an inner classes
- 25. non static, staic and local inner classes
- 26. anaymous inner class
- 27. lambda expressions
- 28. basics
- 29. synchronization
- 30. thread life cycle
- 31. accessories
- 32. basics and important methods
- 33. StringBuffer
- 34. Formatters
- 35. Regular expressions
- 36. DateFormaters and NumberFormatters
- 37. arrays
- 38. introduction
- 39. basic operations
- 40. different collections
- 41. list
- 42. queues
- 43. avoiding duplicates (set)



- 44. maps
- 45. iterators
- 46. sorting
- 47. TreeSet and TreeMap
- 48. sorting map based on values
- 49. modifying collections classes as synchronized
- 50. concurrent package
- 51. sort even and odd separately
- 52. basics
- 53. advanced
- 54. basics
- 55. readers and writers
- 56. streams
- 57. serialization
- 58. adv serialization and externalization
- 59. PrintStream
- 60. serialVersionUID
- 61. for Each() method in Iterable interface.
- 62. default and static methods in Interfaces.
- 63. Functional Interfaces and Lambda Expressions.



- 64. double colon (::) Operator
- 65. for Each in detailed
- 66. Java Streams creation
- 67. Java Streams Usage
- 68. Java IO improvements.
- 69. Java Date and Time API Improvement
- 70. Collection API improvements
- 71. Concurrency API improvements

#### **General Logical Coding**

- 1. Display patterns set1
- 2. Display patterns set2
- 3. Display patterns set3
- 4. Display patterns set4
- 5. Display patterns set5
- 6. Number system set1
- 7. Number system set2
- 8. Arrays set1
- 9. Arrays set2
- 10. Arrays set3
- 11. Arrays set4
- 12. Strings set1
- 13. Strings set 2
- 14. Strings set3



- 15. Strings set4
- 16. Strings set5
- 17. Strings set6
- 18. Strings set7
- 19. Strings set8
- 20. Strings set9
- 21. Strings set10
- 22. Strings set11
- 23. Strings set12
- 24. Strings set13
- 25. Strings set14
- 26. Multiple Separators
- 27. play around with the file system
- 28. word count in the file

### **Data Structures**

Data Structures set1

Data Structures set2

Data Structures set3

Data Structures set4

Data Structures set5

Data Structures set6



Data Structures set7

Data Structures set8

**Data Structures set9** 

Data Structures set10

Data Structures set11

Data Structures set12

### **Algorithms**

- 1. recursive algo set1
- 2. recursive algo set2
- 3. recursive algo set3
- 4. recursive algo set4
- 5. sorting algo set1
- 6. sorting algo set2
- 7. search algo set1

#### **JavaScript**

1. basics



- 1. why do we require
- 2. pre requisites
- 3. softwares required.
- 2. output
  - 1. write
  - 2. log
  - 3. alert
- 3. input
  - 1. prompt
  - 2. confirm
- 4. events
  - 1. onclick
  - 2. onload
  - 3. onchange
  - 4. onblur
- 5. execution



- 1. functions
- 2. var
- 3. let
- 6. default
  - 1. values
  - 2. typeof
  - 3. default with if
  - 4. double equals (==)
  - 5. triple equals (===)
- 7. basic form validations
  - 1. text, password and textarea
  - 2. radio
  - 3. checkbox
  - 4. select
  - 5. multi select



- 8. getElementById
  - 1. p, div and span
  - 2. swap
  - 3. hidden and show
  - 4. change color
- 9. display validation errors
  - 1. single field
  - 2. multiple fields
- 10. objects
  - 1. with fields
  - 2. with functions
  - 3. with nested
- 11. arrays
  - 1. basics
  - 2. sort
  - 3. array with objects



- 12. form data manipulation
  - 1. select all
  - 2. reverse select all
  - 3. dynamic population
  - 4. transfer options
  - 5. string functions
  - 6. trim
  - 7. email validation
  - 8. multi dimentional array
  - 9. sorting records based on column
  - 10. sorting options of drop down

### **Angular**

- 1. Installations
- 2. Un Installations
- 3. Creating a project and understanding default code



- 4. Creating a component
- 5. Creating a component with different options
- 6. Creating a component without ng command
- 7. typescript datatypes and fields declaration
- 8. typescript methods declaration
- 9. typescript methods body development
- 10. access specifiers and constructor
- 11. bindings
- 12. directives
- 13. template variable
- 14. template driven forms
- 15. reactive forms
- 16. http client
- 17. routing
- 18. modular development
- 19. tyscript compiler
- 20. type assertion
- 21. arrow functions
- 22. directives
- 23. http with template variables
- 24. one-to-one mapping



- 25. one-to-many create and read-all
- 26. one-to-many read, update and delete
- 27. managing checkbox
- 28. many-to-many CRUD

### <u>SQL</u>

- 1. Oracle 11g Installation
- 2. SQL Developer installation
- 3. Oracle 11g un installation
- 4. DDL and DML
- 5. DQL
- 6. NOT NULL, UNIQUE AND PRIMARY
- 7. FOREIGN KEY
- 8. ONE-TO-ONE
- 9. ONE-TO-MANY
- 10. MANY-TO-MANY
- 11. DATE AND TIMESTAMP
- 12. DESIGNING EMPLOYEE DATABASE
- 13. 1NF, 2NF and 3NF



14. Designing Car database

