

Java Program

1. Data Structures

a. Stack - LIFO

- i. Simple stack with array implementation
- ii. Dynamic stack
- iii. Stack with Generics
- iv. Word Reverse using Stack
- v. Decimal to binary using Stack
- vi. Delimiter Matcher using Stack
- vii. Towers of Hanoi using Stack

b. Queue - FIFO

- i. Simple queue with array implementation
- ii. Dynamic queue
- iii. Double-ended queue
- iv. Double-ended queue with doubly linked list

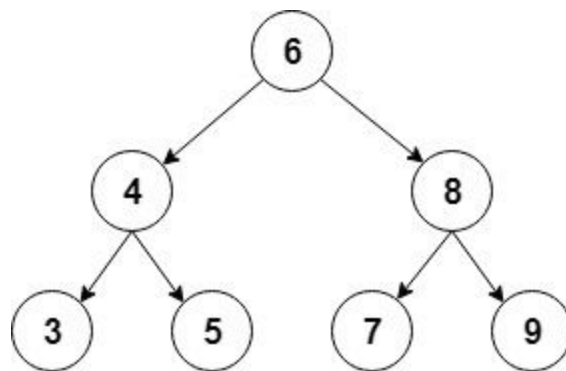
c. Collections

- i. Array to collection
- ii. Compare elements
- iii. Collection to array
- iv. Print collection - tree example
- v. Read-only collections
- vi. Remove specific element - CollectionTest
- vii. Collection reverse
- viii. Shuffle collection
- ix. Collection size
- x. HashMap iteration
- xi. Different types of collections
- xii. Hashtable enumeration
- xiii. Hashtable keys
- xiv. List Min and Max

2. Generics

- a. Old generics
- b. Generics new
- c. Method
- d. Bounded Type Parameter
- e. Type

- f. Interface
 - g. Class
 - h. Wildcard
- 3. Class/Objects
 - a. Objects
 - b. Attributes
 - c. Methods
 - i. Best practices
 - d. Constructors
- 4. Encapsulation
 - a. Packages
- 5. Inheritance
- 6. Polymorphism
- 7. Sorting
 - a. Bubble sort
 - b. Insertion sort
 - c. Selection sort
 - d. Quick sort
 - e. Merge sort
- 8. Searching
 - a. Binary search
 - b. Sequential search
- 9. Tree Data Structure



- a.
 - b. Depth-First Search
 - c. Breadth-First Search
 - d.
- 10. Next