Parsed Quicksort.ic successfully!

Abstract Syntax Tree: Quicksort.ic

15: Declaration of class: Quicksort
16: Declaration of field: a
16: Primitive data type: 1-dimensional array of int
18: Declaration of virtual method: partition
18: Primitive data type: int
18: Parameter: low
18: Primitive data type: int
18: Parameter: high
19: Declaration of local variable: pivot, with initial value
19: Primitive data type: int
19: Reference to array
19: Reference to variable: a
19: Reference to variable: low
20: Declaration of local variable: i, with initial value
20: Primitive data type: int
20: Reference to variable: low
21: Declaration of local variable: j, with initial value
21: Primitive data type: int
21: Reference to variable: high
22: Declaration of local variable: tmp
22: Primitive data type: int
24: While statement
24: Block of statements
25: While statement
25: Logical binary operation: less than
25: Reference to array
25: Reference to variable: a
25: Reference to variable: i
25: Reference to variable: pivot
25: Assignment statement
25: Reference to variable: i
25: Mathematical binary operation: addition
25: Reference to variable: i
25: Integer literal: 1
26: While statement
26: Logical binary operation: greater than
26: Reference to array
26: Reference to variable: a
26: Reference to variable: j
26: Reference to variable: pivot
26: Assignment statement
26: Reference to variable: j
26: Mathematical binary operation: subtraction
26: Reference to variable: j
26: Integer literal: 1
28: If statement
28: Logical binary operation: greater than or equal to
28: Reference to variable: i
28: Reference to variable: j
28: Break statement
30: Assignment statement
30: Reference to variable: tmp
30: Reference to array
30: Reference to variable: a
30: Reference to variable: i
31: Assignment statement
31: Reference to array
Quicksort.ic.ast

31: Reference to variable: a
31: Reference to variable: i
31: Reference to array
31: Reference to variable: a
31: Reference to variable: j
32: Assignment statement
32: Reference to array
32: Reference to variable: a
32: Reference to variable: j
32: Reference to variable: tmp
33: Assignment statement
33: Reference to variable: i
33: Mathematical binary operation: addition
33: Reference to variable: i
33: Integer literal: 1
34: Assignment statement
34: Reference to variable: j
34: Mathematical binary operation: subtraction
34: Reference to variable: j
34: Integer literal: 1
37: Return statement, with return value
37: Reference to variable: j
40: Declaration of virtual method: quicksort
40: Primitive data type: void
40: Parameter: low
40: Primitive data type: int
40: Parameter: high
40: Primitive data type: int
41: If statement
41: Logical binary operation: less than
41: Reference to variable: low
41: Reference to variable: high
41: Block of statements
42: Declaration of local variable: mid, with initial value
42: Primitive data type: int
42: Call to virtual method: partition
42: Reference to variable: low
42: Reference to variable: high
43: Method call statement
43: Call to virtual method: quicksort
43: Reference to variable: low
43: Reference to variable: mid
44: Method call statement
44: Call to virtual method: quicksort
44: Mathematical binary operation: addition
44: Reference to variable: mid
44: Integer literal: 1
44: Reference to variable: high
48: Declaration of virtual method: initArray
48: Primitive data type: void
49: Declaration of local variable: i, with initial value
49: Primitive data type: int
49: Integer literal: 0
50: while statement
50: Logical binary operation: less than
50: Reference to variable: i
50: Reference to array length
50: Reference to variable: a
50: Block of statements
51: Assignment statement
51: Reference to array
51: Reference to variable: a
51: Reference to variable: i
Quicksort.ic.ast

51: Call to static method: random, in class Library
51: Mathematical binary operation: multiplication
  51: Reference to array length
      51: Reference to variable: a
      51: Integer literal: 2
52: Assignment statement
  52: Reference to variable: i
  52: Mathematical binary operation: addition
      52: Reference to variable: i
  52: Integer literal: 1

56: Declaration of virtual method: printArray
  56: Primitive data type: void
57: Declaration of local variable: i, with initial value
  57: Primitive data type: int
  57: Integer literal: 0
59: Method call statement
  59: Call to static method: print, in class Library
  59: String literal: "Array elements: 
60: While statement
  60: Logical binary operation: less than
      60: Reference to variable: i
      60: Reference to array length
      60: Reference to variable: a
61: Block of statements
  61: Method call statement
      61: Call to static method: printi, in class Library
          61: Reference to array
          61: Reference to variable: a
  61: Method call statement
      62: Call to static method: print, in class Library
      62: String literal: " "
63: Assignment statement
  63: Reference to variable: i
      63: Mathematical binary operation: addition
          63: Reference to variable: i
          63: Integer literal: 1
65: Method call statement
  65: Call to static method: print, in class Library
  65: String literal: "\n"
68: Declaration of static method: main
  68: Primitive data type: void
  68: Parameter: args
  68: Primitive data type: 1-dimensional array of string
69: Declaration of local variable: n
  69: Primitive data type: int
  71: If statement
      71: Logical binary operation: inequality
          71: Reference to array length
          71: Reference to variable: args
          71: Integer literal: 1
72: Block of statements
  72: Method call statement
      72: Call to static method: println, in class Library
      72: String literal: "Unspecified array length"
  73: Method call statement
      73: Call to static method: exit, in class Library
      73: Integer literal: 1
76: Assignment statement
  76: Reference to variable: n
  76: Call to static method: stoi, in class Library
  76: Reference to array
    76: Reference to variable: args
Quicksort.ic.ast

76: Integer literal: 0
76: Integer literal: 0
77: If statement
77: Logical binary operation: less than or equal to
77: Reference to variable: n
77: Integer literal: 0
77: Block of statements
78: Method call statement
78: Call to static method: println, in class Library
78: String literal: "Invalid array length"
79: Method call statement
79: Call to static method: exit, in class Library
79: Integer literal: 1
81: Declaration of local variable: s, with initial value
81: User-defined data type: Quicksort
81: Instantiation of class: Quicksort
82: Assignment statement
82: Reference to variable: a, in external scope
82: Reference to variable: s
82: Array allocation
82: Primitive data type: int
82: Reference to variable: n
84: Method call statement
84: Call to virtual method: initArray, in external scope
84: Reference to variable: s
85: Method call statement
85: Call to virtual method: printArray, in external scope
85: Reference to variable: s
86: Method call statement
86: Call to virtual method: quicksort, in external scope
86: Reference to variable: s
86: Integer literal: 0
86: Mathematical binary operation: subtraction
86: Reference to variable: n
86: Integer literal: 1
87: Method call statement
87: Call to virtual method: printArray, in external scope
87: Reference to variable: s