results.md

# BSTinsert

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Metric | JavaScript | Swift | C | Kotlin | Java | Dart |
| Execution time (ms) | 10.71848 | 17.62807 | 4.341858 | 24.55823 | 3.871760 | 2.613 |
| Max RSS Memory(kb) | 29716 | 116972 | 1980 | 54080 | 86096 | 14144 |
| Minor (frame) pf | 7006 | 11092 | 139 | 7834 | 15650 | 2120 |
| Voluntary con. switches | 66 | 17 | 0 | 100 | 557 | 2 |
| Involuntary con. switches | 45 | 18 | 1 | 491 | 1817 | 6 |

# BSTremove

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Metric | JavaScript | Swift | C | Kotlin | Java | Dart |
| Execution time (ms) | 10.42632 | 40.65501 | 1.812547 | 4.007227 | 3.999418 | 2.174 |
| Max RSS Memory(kb) | 29744 | 117604 | 2024 | 53992 | 84476 | 14028 |
| Minor (frame) pf | 7093 | 11239 | 140 | 7843 | 15652 | 2115 |
| Voluntary con. switches | 20 | 27 | 0 | 144 | 555 | 3 |
| Involuntary con. switches | 36 | 13 | 1 | 564 | 1598 | 7 |

# countingSort

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Metric | JavaScript | Swift | C | Kotlin | Java | Dart | C++ |
| Execution time (ms) | 9.467502 | 5.427956 | 3.968643 | 4.224506 | 7.862966 | 1.787 | 0.614714 |
| Max RSS Memory(kb) | 31208 | 114160 | 5556 | 51524 | 84400 | 14548 | 3984 |
| Minor (frame) pf | 7415 | 10397 | 1046 | 7006 | 15083 | 2242 | 234 |
| Voluntary con. switches | 17 | 17 | 0 | 88 | 568 | 2 | 0 |
| Involuntary con. switches | 40 | 10 | 1 | 464 | 1767 | 7 | 1 |

# gradientBitmapCalculator

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Metric | JavaScript | Swift | C | Kotlin | Java | Dart | Go |
| Execution time (ms) | 17.30909 | 47.00601 | 2.430093 | 75.40983 | 22.53357 | 43.138 | 3.727684 |
| Max RSS Memory(kb) | 36684 | 111152 | 2676 | 39720 | 86956 | 31300 | 2800 |
| Minor (frame) pf | 8823 | 10562 | 306 | 4007 | 15031 | 6878 | 434 |
| Voluntary con. switches | 17 | 8 | 0 | 53 | 415 | 17 | 1 |
| Involuntary con. switches | 28 | 13 | 1 | 330 | 1689 | 40 | 36 |

# insertionSort

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Metric | JavaScript | Swift | C | Kotlin | Java | Dart | C++ |
| Execution time (ms) | 93.49915 | 319.8100 | 23.11305 | 32.58287 | 47.93063 | 198.835 | 15.0661 |
| Max RSS Memory(kb) | 29208 | 113564 | 1672 | 51824 | 84972 | 13896 | 3388 |
| Minor (frame) pf | 6881 | 10325 | 72 | 7052 | 14988 | 2052 | 134 |
| Voluntary con. switches | 27 | 11 | 1 | 134 | 600 | 2 | 0 |
| Involuntary con. switches | 46 | 17 | 1 | 528 | 1733 | 6 | 1 |

# mergeSort

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Metric | JavaScript | Swift | C | Kotlin | Java | Dart | C++ |
| Execution time (ms) | 25.59029 | 14.16599 | 1.276887 | 25.01620 | 3.798803 | 8.389 | 1.7238 |
| Max RSS Memory(kb) | 32196 | 115040 | 1800 | 54984 | 85200 | 16596 | 3592 |
| Minor (frame) pf | 7473 | 10656 | 82 | 8045 | 14509 | 2671 | 145 |
| Voluntary con. switches | 21 | 13 | 0 | 133 | 568 | 3 | 0 |
| Involuntary con. switches | 55 | 18 | 1 | 516 | 1811 | 6 | 1 |

# breadthFirstSearch

|  |  |  |  |
| --- | --- | --- | --- |
| Metric | C | Kotlin | Java |
| Execution time (ms) | 43.78145 | 33.71516 | 17.88835 |
| Max RSS Memory(kb) | 32916 | 85368 | 85676 |
| Minor (frame) pf | 7885 | 15645 | 14614 |
| Voluntary con. switches | 2 | 112 | 526 |
| Involuntary con. switches | 1 | 599 | 1481 |

# depthFirstSearch

|  |  |  |  |
| --- | --- | --- | --- |
| Metric | C | Kotlin | Java |
| Execution time (ms) | 2.389306 | 48694.17 | 71.96575 |
| Max RSS Memory(kb) | 17200 | 247496 | 86084 |
| Minor (frame) pf | 3973 | 60340 | 14721 |
| Voluntary con. switches | 0 | 2640 | 387 |
| Involuntary con. switches | 1 | 6352 | 1422 |

# Execution modes

|  |  |
| --- | --- |
| Language | Mode |
| JavaScript | Node.js (execution runtime and V8 JIT compiler) |
| Swift | Swift compiler |
| C | GCC compiler |
| C++ | G++ compiler |
| Kotlin | kotlinc compiler and Java Runtime Environment |
| Java | Java Runtime Environment |
| Dart | dart2native compiler |
| Go | Go compiler |