CS 111 Algorithms Design and Analysis

Programming Assignment

ANALYSIS:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N | Insertion Sort | Merge Sort | Quick Sort | Heap Sort |
| 10 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1000 | 0.0 | 0.0 | 0.0 | 0.0 |
| 10000 | 0.288 | 0.04 | 0.0 | 0.4 |

Table 1: Average running time for an input array that is random

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N | Insertion Sort | Merge Sort | Quick Sort | Heap Sort |
| 10 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1000 | 0.0 | 0.0 | 0.0 | 0.0 |
| 10000 | 0.0 | 0.04 | 1.75 | 0.04 |

Table 2: Average running time for an input array that is sorted