YunHo Law(Louis)

CS 260 Assign01

Andrew Scholer

Write up

2A)

|  |  |
| --- | --- |
| Size | Time |
| 100 | 0.0000002 |
| 1000 | 0.000002 |
| 10000 | 0.00002 |
| 100000 | 0.002 |

2B) O(n)

2C) 0.02s because it is O(n) so, it should takes 10 times longer.

4A)

|  |  |
| --- | --- |
| Size | Time |
| 100 | 0.001 |
| 1000 | 0.003 |
| 10000 | 0.037 |
| 100000 | 0.607 |

4B) 100000/0.607 = 1000000/time time =~ 6.07s

6A) int countLastNameSorted(Person\* array, int size)

Int numberOfName = binaryFindLastByLastName - binaryFindFirstByLastName;

Return numberOfName

6B) O(1)

6C)

|  |  |
| --- | --- |
| Size | Time |
| 100 | 0.001 |
| 1000 | 0.001 |
| 10000 | 0.001 |
| 100000 | 0.001 |

6D) 0.001 because it is O(1). It should be the same time.