HIGH LOAD FIRST FIT – int\*

Highlighted cells in **purple** indicate change in result for the first repeated test.

Highlighted cells in **orange** indicate change in result for the second repeated test.

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **High Load,** a total of **50000 allocs and deallocs** were executed and for every period of 5000 allocs/deallocs the RSS and Time were recorded.

Interval = 5000

50000 / 5000 = 10 intervals

Numbers pointed by int\* memory addresses range from 0 -> 50000

In use at exit = **2924344 bytes** in **100004 blocks**

Total heap usage = **100020 allocs**, **16 frees**, **3448624 bytes allocated**

## Run 1

Total time taken= **4074 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1944 | 0 | 1 | **4504** | 22 | 1 | **8136** | 4073 | 1 |
| 1944 | 2 | 2 | **4768** | 424 | 2 | **8184** | 4073 | 2 |
| 1944 | 4 | 3 | **5296** | 825 | 3 | **8184** | 4073 | 3 |
| 2128 | 6 | 4 | **5560** | 1227 | 4 | **8184** | 4073 | 4 |
| 2392 | 9 | 5 | **5824** | 1629 | 5 | **8184** | 4073 | 5 |
| 2656 | 11 | 6 | **6360** | 2040 | 6 | **8184** | 4073 | 6 |
| 3184 | 13 | 7 | **6624** | 2448 | 7 | **8184** | 4073 | 7 |
| 3448 | 15 | 8 | **7100** | 2851 | 8 | **8184** | 4074 | 8 |
| 3712 | 18 | 9 | **7300** | 3258 | 9 | **8184** | 4074 | 9 |
| 4240 | 20 | 10 | **7652** | 3665 | 10 | **8184** | 4074 | 10 |

## Run 2

Total time taken= **4187 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1944 | 0 | 1 | **4508** | 23 | 1 | **8144** | 4186 | 1 |
| 1944 | 3 | 2 | **4772** | 456 | 2 | **8188** | 4187 | 2 |
| 1944 | 5 | 3 | **5300** | 878 | 3 | **8188** | 4187 | 3 |
| 2132 | 7 | 4 | **5564** | 1280 | 4 | **8188** | 4187 | 4 |
| 2396 | 9 | 5 | **5828** | 1692 | 5 | **8188** | 4187 | 5 |
| 2660 | 12 | 6 | **6308** | 2109 | 6 | **8188** | 4187 | 6 |
| 3188 | 14 | 7 | **6604** | 2536 | 7 | **8188** | 4187 | 7 |
| 3452 | 16 | 8 | **7088** | 2958 | 8 | **8188** | 4187 | 8 |
| 3716 | 18 | 9 | **7304** | 3370 | 9 | **8188** | 4187 | 9 |
| 4244 | 21 | 10 | **7656** | 3777 | 10 | **8188** | 4187 | 10 |

## Run 3

Total time taken= **4173 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1944 | 0 | 1 | **4508** | 22 | 1 | **8140** | 4172 | 1 |
| 1944 | 3 | 2 | **4772** | 432 | 2 | **8188** | 4172 | 2 |
| 1944 | 5 | 3 | **5300** | 846 | 3 | **8188** | 4172 | 3 |
| 2132 | 7 | 4 | **5564** | 1260 | 4 | **8188** | 4172 | 4 |
| 2396 | 9 | 5 | **5828** | 1675 | 5 | **8188** | 4173 | 5 |
| 2660 | 11 | 6 | **6320** | 2089 | 6 | **8188** | 4173 | 6 |
| 3188 | 13 | 7 | **6612** | 2505 | 7 | **8188** | 4173 | 7 |
| 3452 | 16 | 8 | **7092** | 2920 | 8 | **8188** | 4173 | 8 |
| 3716 | 18 | 9 | **7304** | 3337 | 9 | **8188** | 4173 | 9 |
| 4244 | 20 | 10 | **7656** | 3755 | 10 | **8188** | 4173 | 10 |

HIGH LOAD BEST FIT – int\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **High Load,** a total of **50000 allocs and deallocs** were executed and for every period of 5000 allocs/deallocs the RSS and Time were recorded.

Interval = 5000

50000 / 5000 = 10 intervals

Numbers pointed by int\* memory addresses range from 0 -> 50000

In use at exit = **2724352 bytes** in **91671 blocks**

Total heap usage = **91687 allocs**, **16 frees**, **3248632 bytes allocated**

## Run 1

Total time taken= **19919 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1944 | 0 | 1 | **4508** | 24 | 1 | **7184** | 19919 | 1 |
| 1944 | 3 | 2 | **4948** | 2102 | 2 | **7184** | 19919 | 2 |
| 1944 | 5 | 3 | **5240** | 4104 | 3 | **7376** | 19919 | 3 |
| 2132 | 7 | 4 | **5428** | 5970 | 4 | **7376** | 19919 | 4 |
| 2396 | 10 | 5 | **5652** | 7732 | 5 | **7376** | 19919 | 5 |
| 2660 | 12 | 6 | **6152** | 9388 | 6 | **7376** | 19919 | 6 |
| 3188 | 14 | 7 | **6348** | 11666 | 7 | **7376** | 19919 | 7 |
| 3452 | 16 | 8 | **6672** | 13776 | 8 | **7376** | 19919 | 8 |
| 3716 | 19 | 9 | **6700** | 15735 | 9 | **7376** | 19919 | 9 |
| 4244 | 21 | 10 | **6920** | 17798 | 10 | **7376** | 19919 | 10 |

## Run 2

Total time taken= **19843 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1944 | 0 | 1 | **4508** | 22 | 1 | **7184** | 19843 | 1 |
| 1944 | 2 | 2 | **4952** | 2095 | 2 | **7184** | 19843 | 2 |
| 1944 | 5 | 3 | **5244** | 4064 | 3 | **7376** | 19843 | 3 |
| 2132 | 7 | 4 | **5420** | 5926 | 4 | **7376** | 19843 | 4 |
| 2396 | 9 | 5 | **5652** | 7682 | 5 | **7376** | 19843 | 5 |
| 2660 | 11 | 6 | **6152** | 9333 | 6 | **7376** | 19843 | 6 |
| 3188 | 13 | 7 | **6344** | 11590 | 7 | **7376** | 19843 | 7 |
| 3452 | 15 | 8 | **6672** | 13691 | 8 | **7376** | 19843 | 8 |
| 3716 | 17 | 9 | **6708** | 15641 | 9 | **7376** | 19843 | 9 |
| 4244 | 20 | 10 | **6920** | 17684 | 10 | **7376** | 19843 | 10 |

## Run 3

Total time taken= **20419 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1944 | 0 | 1 | **4508** | 22 | 1 | **7348** | 20418 | 1 |
| 1944 | 2 | 2 | **4940** | 2168 | 2 | **7348** | 20418 | 2 |
| 1944 | 4 | 3 | **5228** | 4197 | 3 | **7348** | 20418 | 3 |
| 2132 | 7 | 4 | **5536** | 6112 | 4 | **7348** | 20418 | 4 |
| 2396 | 9 | 5 | **5788** | 7919 | 5 | **7348** | 20418 | 5 |
| 2660 | 11 | 6 | **6184** | 9615 | 6 | **7348** | 20419 | 6 |
| 3188 | 13 | 7 | **6376** | 11949 | 7 | **7376** | 20419 | 7 |
| 3452 | 15 | 8 | **6692** | 14117 | 8 | **7376** | 20419 | 8 |
| 3716 | 18 | 9 | **6692** | 16133 | 9 | **7376** | 20419 | 9 |
| 4244 | 20 | 10 | **6920** | 18250 | 10 | **7376** | 20419 | 10 |

HIGH LOAD WORST FIT – int\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **High Load,** a total of **50000 allocs and deallocs** were executed and for every period of 5000 allocs/deallocs the RSS and Time were recorded.

Interval = 5000

50000 / 5000 = 10 intervals

Numbers pointed by int\* memory addresses range from 0 -> 50000

In use at exit = **2924344 bytes** in **100004 blocks**

Total heap usage = **100020 allocs**, **16 frees**, **3448624 bytes allocated**

## Run 1

Total time taken= **22019 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1944 | 0 | 1 | **4508** | 23 | 1 | **8716** | 22018 | 1 |
| 1944 | 2 | 2 | **5036** | 1986 | 2 | **8716** | 22018 | 2 |
| 1944 | 5 | 3 | **5376** | 3752 | 3 | **8716** | 22018 | 3 |
| 2132 | 7 | 4 | **5744** | 5905 | 4 | **8868** | 22018 | 4 |
| 2396 | 9 | 5 | **6352** | 8227 | 5 | **8868** | 22018 | 5 |
| 2660 | 11 | 6 | **6736** | 10548 | 6 | **8868** | 22018 | 6 |
| 3188 | 14 | 7 | **7244** | 12866 | 7 | **8868** | 22018 | 7 |
| 3452 | 16 | 8 | **7636** | 15131 | 8 | **8868** | 22018 | 8 |
| 3716 | 18 | 9 | **7940** | 17511 | 9 | **8868** | 22019 | 9 |
| 4244 | 20 | 10 | **8452** | 19826 | 10 | **8868** | 22019 | 10 |

## Run 2

Total time taken= **21742 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1944 | 0 | 1 | **4504** | 22 | 1 | **8712** | 21741 | 1 |
| 1944 | 2 | 2 | **5032** | 1974 | 2 | **8712** | 21741 | 2 |
| 1944 | 4 | 3 | **5372** | 3729 | 3 | **8712** | 21741 | 3 |
| 2128 | 6 | 4 | **5736** | 5870 | 4 | **8864** | 21741 | 4 |
| 2392 | 9 | 5 | **6348** | 8154 | 5 | **8864** | 21741 | 5 |
| 2656 | 11 | 6 | **6740** | 10435 | 6 | **8864** | 21741 | 6 |
| 3184 | 13 | 7 | **7248** | 12734 | 7 | **8864** | 21742 | 7 |
| 3448 | 15 | 8 | **7636** | 14982 | 8 | **8864** | 21742 | 8 |
| 3712 | 17 | 9 | **7936** | 17299 | 9 | **8864** | 21742 | 9 |
| 4240 | 20 | 10 | **8448** | 19555 | 10 | **8864** | 21742 | 10 |

## Run 3

Total time taken= **21821 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1944 | 0 | 1 | **4508** | 23 | 1 | **8712** | 21820 | 1 |
| 1944 | 3 | 2 | **5036** | 1984 | 2 | **8712** | 21820 | 2 |
| 1944 | 5 | 3 | **5372** | 3740 | 3 | **8712** | 21820 | 3 |
| 2132 | 7 | 4 | **5736** | 5882 | 4 | **8868** | 21821 | 4 |
| 2396 | 9 | 5 | **6352** | 8178 | 5 | **8868** | 21821 | 5 |
| 2660 | 12 | 6 | **6736** | 10461 | 6 | **8868** | 21821 | 6 |
| 3188 | 14 | 7 | **7240** | 12764 | 7 | **8868** | 21821 | 7 |
| 3452 | 16 | 8 | **7636** | 15023 | 8 | **8868** | 21821 | 8 |
| 3716 | 18 | 9 | **7936** | 17348 | 9 | **8868** | 21821 | 9 |
| 4244 | 20 | 10 | **8448** | 19630 | 10 | **8868** | 21821 | 10 |

HIGH LOAD FIRST FIT – double\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **High Load,** a total of **50000 allocs and deallocs** were executed and for every period of 5000 allocs/deallocs the RSS and Time were recorded.

Interval = 5000

50000 / 5000 = 10 intervals

Numbers pointed by double\* memory addresses range from 0 -> 50000 with 0.1, 0.3, 0.6, 0.8, 0.9 decimal values.

In use at exit = **2724352 bytes** in **91671 blocks**

Total heap usage = **91687 allocs**, **16 frees**, **3248632 bytes allocated**

## Run 1

Total time taken= **11589 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1944 | 0 | 1 | **4508** | 24 | 1 | **7788** | 11589 | 1 |
| 1944 | 3 | 2 | **4772** | 521 | 2 | **7932** | 11589 | 2 |
| 1944 | 5 | 3 | **5036** | 1193 | 3 | **7932** | 11589 | 3 |
| 2132 | 7 | 4 | **5460** | 2038 | 4 | **7932** | 11589 | 4 |
| 2396 | 9 | 5 | **5672** | 3023 | 5 | **7932** | 11589 | 5 |
| 2660 | 12 | 6 | **6008** | 4168 | 6 | **7932** | 11589 | 6 |
| 3188 | 14 | 7 | **6360** | 5455 | 7 | **7932** | 11589 | 7 |
| 3452 | 17 | 8 | **6904** | 6846 | 8 | **7932** | 11589 | 8 |
| 3716 | 19 | 9 | **7116** | 8335 | 9 | **7932** | 11589 | 9 |
| 4244 | 21 | 10 | **7476** | 9936 | 10 | **7932** | 11589 | 10 |

## Run 2

Total time taken= **11452 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1944 | 0 | 1 | **4508** | 22 | 1 | **7772** | 11451 | 1 |
| 1944 | 2 | 2 | **4772** | 499 | 2 | **7932** | 11451 | 2 |
| 1944 | 5 | 3 | **5036** | 1144 | 3 | **7932** | 11451 | 3 |
| 2132 | 7 | 4 | **5300** | 1957 | 4 | **7932** | 11451 | 4 |
| 2396 | 9 | 5 | **5672** | 2939 | 5 | **7932** | 11451 | 5 |
| 2660 | 11 | 6 | **6036** | 4081 | 6 | **7932** | 11451 | 6 |
| 3188 | 13 | 7 | **6328** | 5351 | 7 | **7932** | 11451 | 7 |
| 3452 | 15 | 8 | **6864** | 6733 | 8 | **7932** | 11452 | 8 |
| 3716 | 18 | 9 | **7116** | 8218 | 9 | **7932** | 11452 | 9 |
| 4244 | 20 | 10 | **7488** | 9793 | 10 | **7932** | 11452 | 10 |

## Run 3

Total time taken= **11448 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1944 | 0 | 1 | **4508** | 22 | 1 | **7932** | 11447 | 1 |
| 1944 | 2 | 2 | **4772** | 500 | 2 | **7932** | 11447 | 2 |
| 1944 | 4 | 3 | **5036** | 1145 | 3 | **7932** | 11447 | 3 |
| 2132 | 6 | 4 | **5300** | 1959 | 4 | **7932** | 11447 | 4 |
| 2396 | 8 | 5 | **5672** | 2937 | 5 | **7932** | 11447 | 5 |
| 2660 | 11 | 6 | **6032** | 4072 | 6 | **7932** | 11447 | 6 |
| 3188 | 13 | 7 | **6324** | 5343 | 7 | **7932** | 11447 | 7 |
| 3452 | 15 | 8 | **6852** | 6727 | 8 | **7932** | 11447 | 8 |
| 3716 | 17 | 9 | **7116** | 8216 | 9 | **7932** | 11448 | 9 |
| 4244 | 19 | 10 | **7488** | 9795 | 10 | **7932** | 11448 | 10 |

HIGH LOAD BEST FIT – double\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **High Load,** a total of **50000 allocs and deallocs** were executed and for every period of 5000 allocs/deallocs the RSS and Time were recorded.

Interval = 5000

50000 / 5000 = 10 intervals

Numbers pointed by double\* memory addresses range from 0 -> 50000 with 0.1, 0.3, 0.6, 0.8, 0.9 decimal values.

In use at exit = **2724352 bytes** in **91671 blocks**

Total heap usage = **91687 allocs**, **16 frees**, **3248632 bytes allocated**

## Run 1

Total time taken= **20011 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4508** | 23 | 1 | **7776** | 20010 | 1 |
| 1948 | 3 | 2 | **4508** | 1521 | 2 | **7776** | 20010 | 2 |
| 1948 | 5 | 3 | **4808** | 2837 | 3 | **7776** | 20010 | 3 |
| 2132 | 7 | 4 | **5052** | 4399 | 4 | **7776** | 20010 | 4 |
| 2396 | 10 | 5 | **5460** | 6329 | 5 | **7776** | 20010 | 5 |
| 2660 | 12 | 6 | **5860** | 8392 | 6 | **7776** | 20010 | 6 |
| 3188 | 14 | 7 | **6204** | 10554 | 7 | **7808** | 20010 | 7 |
| 3452 | 16 | 8 | **6604** | 12772 | 8 | **7808** | 20010 | 8 |
| 3716 | 18 | 9 | **7020** | 15087 | 9 | **7808** | 20010 | 9 |
| 4244 | 21 | 10 | **7272** | 17495 | 10 | **7808** | 20011 | 10 |

## Run 2

Total time taken= **20134 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4508** | 24 | 1 | **7720** | 20133 | 1 |
| 1948 | 3 | 2 | **4508** | 1544 | 2 | **7720** | 20133 | 2 |
| 1948 | 5 | 3 | **4808** | 2845 | 3 | **7720** | 20133 | 3 |
| 2132 | 8 | 4 | **5052** | 4410 | 4 | **7720** | 20133 | 4 |
| 2396 | 10 | 5 | **5456** | 6367 | 5 | **7720** | 20133 | 5 |
| 2660 | 12 | 6 | **5740** | 8430 | 6 | **7808** | 20133 | 6 |
| 3188 | 15 | 7 | **6264** | 10586 | 7 | **7808** | 20133 | 7 |
| 3452 | 17 | 8 | **6632** | 12828 | 8 | **7808** | 20133 | 8 |
| 3716 | 19 | 9 | **6952** | 15156 | 9 | **7808** | 20134 | 9 |
| 4244 | 22 | 10 | **7192** | 17573 | 10 | **7808** | 20134 | 10 |

## Run 3

Total time taken= **19850 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4508** | 22 | 1 | **7768** | 19850 | 1 |
| 1948 | 2 | 2 | **4508** | 1492 | 2 | **7768** | 19850 | 2 |
| 1948 | 4 | 3 | **4808** | 2770 | 3 | **7768** | 19850 | 3 |
| 2132 | 7 | 4 | **5072** | 4312 | 4 | **7768** | 19850 | 4 |
| 2396 | 9 | 5 | **5476** | 6241 | 5 | **7768** | 19850 | 5 |
| 2660 | 11 | 6 | **5848** | 8289 | 6 | **7768** | 19850 | 6 |
| 3188 | 13 | 7 | **6168** | 10411 | 7 | **7808** | 19850 | 7 |
| 3452 | 15 | 8 | **6728** | 12625 | 8 | **7808** | 19850 | 8 |
| 3716 | 18 | 9 | **7020** | 14975 | 9 | **7808** | 19850 | 9 |
| 4244 | 20 | 10 | **7260** | 17369 | 10 | **7808** | 19850 | 10 |

HIGH LOAD WORST FIT – double\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **High Load,** a total of **50000 allocs and deallocs** were executed and for every period of 5000 allocs/deallocs the RSS and Time were recorded.

Interval = 5000

50000 / 5000 = 10 intervals

Numbers pointed by double\* memory addresses range from 0 -> 50000 with 0.1, 0.3, 0.6, 0.8, 0.9 decimal values.

In use at exit = **2924344 bytes** in **100004 blocks**

Total heap usage = **100020 allocs**, **16 frees**, **3448624 bytes allocated**

## Run 1

Total time taken= **19958 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4508** | 23 | 1 | **8188** | 19957 | 1 |
| 1948 | 2 | 2 | **5036** | 1622 | 2 | **8188** | 19957 | 2 |
| 1948 | 4 | 3 | **5332** | 3130 | 3 | **8408** | 19957 | 3 |
| 2132 | 7 | 4 | **5700** | 5096 | 4 | **8408** | 19957 | 4 |
| 2396 | 9 | 5 | **6196** | 7214 | 5 | **8408** | 19957 | 5 |
| 2660 | 11 | 6 | **6440** | 9198 | 6 | **8408** | 19957 | 6 |
| 3188 | 14 | 7 | **6804** | 11416 | 7 | **8408** | 19958 | 7 |
| 3452 | 16 | 8 | **7416** | 13565 | 8 | **8408** | 19958 | 8 |
| 3716 | 18 | 9 | **7680** | 15615 | 9 | **8408** | 19958 | 9 |
| 4244 | 20 | 10 | **7924** | 17745 | 10 | **8408** | 19958 | 10 |

## Run 2

Total time taken= **20448 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4508** | 24 | 1 | **8220** | 20447 | 1 |
| 1948 | 3 | 2 | **5036** | 1680 | 2 | **8220** | 20447 | 2 |
| 1948 | 5 | 3 | **5344** | 3214 | 3 | **8408** | 20447 | 3 |
| 2132 | 7 | 4 | **5692** | 5230 | 4 | **8408** | 20447 | 4 |
| 2396 | 10 | 5 | **6192** | 7400 | 5 | **8408** | 20447 | 5 |
| 2660 | 12 | 6 | **6692** | 9422 | 6 | **8408** | 20447 | 6 |
| 3188 | 14 | 7 | **7036** | 11710 | 7 | **8408** | 20447 | 7 |
| 3452 | 17 | 8 | **7412** | 13955 | 8 | **8408** | 20447 | 8 |
| 3716 | 19 | 9 | **7708** | 16039 | 9 | **8408** | 20448 | 9 |
| 4244 | 21 | 10 | **7956** | 18187 | 10 | **8408** | 20448 | 10 |

## Run 3

Total time taken= **20032 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4508** | 22 | 1 | **8180** | 20031 | 1 |
| 1948 | 2 | 2 | **5036** | 1620 | 2 | **8408** | 20031 | 2 |
| 1948 | 4 | 3 | **5332** | 3120 | 3 | **8408** | 20031 | 3 |
| 2132 | 6 | 4 | **5700** | 5082 | 4 | **8408** | 20031 | 4 |
| 2396 | 8 | 5 | **6196** | 7201 | 5 | **8408** | 20031 | 5 |
| 2660 | 11 | 6 | **6436** | 9162 | 6 | **8408** | 20032 | 6 |
| 3188 | 12 | 7 | **6808** | 11382 | 7 | **8408** | 20031 | 7 |
| 3452 | 15 | 8 | **7416** | 13538 | 8 | **8408** | 20031 | 8 |
| 3716 | 17 | 9 | **7684** | 15595 | 9 | **8408** | 20031 | 9 |
| 4244 | 20 | 10 | **7916** | 17813 | 10 | **8408** | 20031 | 10 |

HIGH LOAD FIRST FIT – char\*\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **High Load,** a total of **50000 allocs and deallocs** were executed and for every period of 5000 allocs/deallocs the RSS and Time were recorded.

Interval = 5000

50000 / 5000 = 10 intervals

char\* strings sourced from *Collins Scrabble Words (2015).txt* input file

In use at exit = **2724352 bytes** in **91671 blocks**

Total heap usage= **141741 allocs**, **50070 frees**, **5012435 bytes allocated**

## Run 1

Total time taken= **11493 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4512** | 24 | 1 | **7968** | 11492 | 1 |
| 1948 | 2 | 2 | **4776** | 509 | 2 | **7968** | 11492 | 2 |
| 1948 | 5 | 3 | **5040** | 1159 | 3 | **7968** | 11493 | 3 |
| 2136 | 7 | 4 | **5304** | 1976 | 4 | **7968** | 11493 | 4 |
| 2400 | 9 | 5 | **5740** | 2961 | 5 | **7968** | 11493 | 5 |
| 2664 | 12 | 6 | **6100** | 4103 | 6 | **7968** | 11493 | 6 |
| 3192 | 14 | 7 | **6400** | 5377 | 7 | **8004** | 11493 | 7 |
| 3456 | 16 | 8 | **6924** | 6760 | 8 | **8004** | 11493 | 8 |
| 3720 | 18 | 9 | **7188** | 8255 | 9 | **8004** | 11493 | 9 |
| 4248 | 21 | 10 | **7600** | 9833 | 10 | **8004** | 11493 | 10 |

## Run 2

Total time taken= **11523 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4512** | 24 | 1 | **7868** | 11522 | 1 |
| 1948 | 3 | 2 | **4776** | 506 | 2 | **8004** | 11522 | 2 |
| 1948 | 5 | 3 | **5040** | 1154 | 3 | **8004** | 11522 | 3 |
| 2136 | 7 | 4 | **5304** | 1972 | 4 | **8004** | 11522 | 4 |
| 2400 | 9 | 5 | **5740** | 2960 | 5 | **8004** | 11523 | 5 |
| 2664 | 12 | 6 | **6100** | 4108 | 6 | **8004** | 11523 | 6 |
| 3192 | 14 | 7 | **6400** | 5390 | 7 | **8004** | 11523 | 7 |
| 3456 | 16 | 8 | **6928** | 6778 | 8 | **8004** | 11523 | 8 |
| 3720 | 18 | 9 | **7156** | 8266 | 9 | **8004** | 11523 | 9 |
| 4248 | 20 | 10 | **7640** | 9846 | 10 | **8004** | 11523 | 10 |

## Run 3

Total time taken= **11549 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4512** | 23 | 1 | **7880** | 11548 | 1 |
| 1948 | 2 | 2 | **4776** | 513 | 2 | **7880** | 11548 | 2 |
| 1948 | 4 | 3 | **5040** | 1166 | 3 | **8004** | 11548 | 3 |
| 2136 | 7 | 4 | **5304** | 1997 | 4 | **8004** | 11548 | 4 |
| 2400 | 9 | 5 | **5740** | 2984 | 5 | **8004** | 11548 | 5 |
| 2664 | 11 | 6 | **6104** | 4124 | 6 | **8004** | 11549 | 6 |
| 3192 | 13 | 7 | **6404** | 5399 | 7 | **8004** | 11549 | 7 |
| 3456 | 15 | 8 | **6932** | 6817 | 8 | **8004** | 11549 | 8 |
| 3720 | 18 | 9 | **7164** | 8300 | 9 | **8004** | 11549 | 9 |
| 4248 | 20 | 10 | **7480** | 9873 | 10 | **8004** | 11549 | 10 |

HIGH LOAD BEST FIT – char\*\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **High Load,** a total of **50000 allocs and deallocs** were executed and for every period of 5000 allocs/deallocs the RSS and Time were recorded.

Interval = 5000

50000 / 5000 = 10 intervals

char\* strings sourced from *Collins Scrabble Words (2015).txt* input file

In use at exit = **2724352 bytes** in **91671 blocks**

Total heap usage= **141741 allocs**, **50070 frees**, **5012435 bytes allocated**

## Run 1

Total time taken= **19697 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4512** | 27 | 1 | **7748** | 19697 | 1 |
| 1948 | 3 | 2 | **4776** | 1525 | 2 | **7748** | 19697 | 2 |
| 1948 | 5 | 3 | **4876** | 2815 | 3 | **7748** | 19697 | 3 |
| 2136 | 8 | 4 | **5132** | 4350 | 4 | **7748** | 19697 | 4 |
| 2400 | 10 | 5 | **5536** | 6272 | 5 | **7876** | 19697 | 5 |
| 2664 | 13 | 6 | **5808** | 8298 | 6 | **7876** | 19697 | 6 |
| 3192 | 15 | 7 | **6244** | 10404 | 7 | **7876** | 19697 | 7 |
| 3456 | 18 | 8 | **6804** | 12587 | 8 | **7876** | 19697 | 8 |
| 3720 | 20 | 9 | **6968** | 14860 | 9 | **7876** | 19697 | 9 |
| 4248 | 23 | 10 | **7484** | 17224 | 10 | **7876** | 19697 | 10 |

## Run 2

Total time taken= **20007 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4508** | 23 | 1 | **7792** | 20006 | 1 |
| 1948 | 2 | 2 | **4772** | 1510 | 2 | **7792** | 20006 | 2 |
| 1948 | 4 | 3 | **4872** | 2813 | 3 | **7792** | 20006 | 3 |
| 2132 | 6 | 4 | **5128** | 4386 | 4 | **7792** | 20006 | 4 |
| 2396 | 9 | 5 | **5524** | 6335 | 5 | **7792** | 20006 | 5 |
| 2660 | 11 | 6 | **5788** | 8404 | 6 | **7872** | 20006 | 6 |
| 3188 | 13 | 7 | **6308** | 10554 | 7 | **7872** | 20007 | 7 |
| 3452 | 15 | 8 | **6696** | 12782 | 8 | **7872** | 20007 | 8 |
| 3716 | 17 | 9 | **7084** | 15100 | 9 | **7872** | 20007 | 9 |
| 4244 | 20 | 10 | **7340** | 17502 | 10 | **7872** | 20007 | 10 |

## Run 3

Total time taken= **20104 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4512** | 23 | 1 | **7792** | 20104 | 1 |
| 1948 | 2 | 2 | **4776** | 1542 | 2 | **7792** | 20104 | 2 |
| 1948 | 4 | 3 | **4876** | 2851 | 3 | **7792** | 20104 | 3 |
| 2136 | 6 | 4 | **5120** | 4428 | 4 | **7792** | 20104 | 4 |
| 2400 | 8 | 5 | **5520** | 6386 | 5 | **7792** | 20104 | 5 |
| 2664 | 10 | 6 | **5792** | 8461 | 6 | **7876** | 20104 | 6 |
| 3192 | 13 | 7 | **6320** | 10612 | 7 | **7876** | 20104 | 7 |
| 3456 | 15 | 8 | **6704** | 12843 | 8 | **7876** | 20104 | 8 |
| 3720 | 17 | 9 | **7012** | 15162 | 9 | **7876** | 20104 | 9 |
| 4248 | 19 | 10 | **7264** | 17579 | 10 | **7876** | 20104 | 10 |

HIGH LOAD WORST FIT – char\*\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **High Load,** a total of **50000 allocs and deallocs** were executed and for every period of 5000 allocs/deallocs the RSS and Time were recorded.

Interval = 5000

50000 / 5000 = 10 intervals

char\* strings sourced from *Collins Scrabble Words (2015).txt* input file

In use at exit = **2924344 bytes** in **100004 blocks**

Total heap usage= **150074 allocs**, **50070 frees**, **5212427 bytes allocated**

## Run 1

Total time taken= **20555 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4512** | 25 | 1 | **8268** | 20554 | 1 |
| 1948 | 2 | 2 | **5040** | 1643 | 2 | **8268** | 20554 | 2 |
| 1948 | 5 | 3 | **5548** | 3177 | 3 | **8476** | 20554 | 3 |
| 2136 | 7 | 4 | **5932** | 5240 | 4 | **8476** | 20554 | 4 |
| 2400 | 10 | 5 | **6240** | 7414 | 5 | **8476** | 20554 | 5 |
| 2664 | 12 | 6 | **6712** | 9453 | 6 | **8476** | 20554 | 6 |
| 3192 | 14 | 7 | **7116** | 11733 | 7 | **8476** | 20554 | 7 |
| 3456 | 17 | 8 | **7484** | 13952 | 8 | **8476** | 20555 | 8 |
| 3720 | 19 | 9 | **7748** | 16079 | 9 | **8476** | 20555 | 9 |
| 4248 | 22 | 10 | **8004** | 18279 | 10 | **8476** | 20555 | 10 |

## Run 2

Total time taken= **20819 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4512** | 24 | 1 | **8264** | 20817 | 1 |
| 1948 | 2 | 2 | **5040** | 1659 | 2 | **8264** | 20817 | 2 |
| 1948 | 4 | 3 | **5552** | 3203 | 3 | **8476** | 20818 | 3 |
| 2136 | 7 | 4 | **5932** | 5215 | 4 | **8476** | 20818 | 4 |
| 2400 | 9 | 5 | **6240** | 7424 | 5 | **8476** | 20818 | 5 |
| 2664 | 11 | 6 | **6680** | 9436 | 6 | **8476** | 20818 | 6 |
| 3192 | 13 | 7 | **7016** | 11764 | 7 | **8476** | 20818 | 7 |
| 3456 | 16 | 8 | **7428** | 13962 | 8 | **8476** | 20818 | 8 |
| 3720 | 18 | 9 | **7748** | 16097 | 9 | **8476** | 20819 | 9 |
| 4248 | 20 | 10 | **8000** | 18336 | 10 | **8476** | 20819 | 10 |

## Run 3

Total time taken= **20282 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **4512** | 23 | 1 | **8268** | 20281 | 1 |
| 1948 | 2 | 2 | **5040** | 1652 | 2 | **8268** | 20281 | 2 |
| 1948 | 4 | 3 | **5552** | 3182 | 3 | **8476** | 20281 | 3 |
| 2136 | 6 | 4 | **5928** | 5175 | 4 | **8476** | 20281 | 4 |
| 2400 | 8 | 5 | **6244** | 7346 | 5 | **8476** | 20281 | 5 |
| 2664 | 11 | 6 | **6684** | 9355 | 6 | **8476** | 20282 | 6 |
| 3192 | 13 | 7 | **7024** | 11614 | 7 | **8476** | 20282 | 7 |
| 3456 | 15 | 8 | **7432** | 13795 | 8 | **8476** | 20282 | 8 |
| 3720 | 17 | 9 | **7756** | 15893 | 9 | **8476** | 20282 | 9 |
| 4248 | 20 | 10 | **8004** | 18044 | 10 | **8476** | 20282 | 10 |

MEDIUM LOAD FIRST FIT – int\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Medium Load,** a total of **20000 allocs and deallocs** were executed and for every period of 2000 allocs/deallocs the RSS and Time were recorded.

Interval = 2000

20000 / 2000 = 10 intervals

Numbers pointed by int\* memory addresses range from 0 -> 20000

In use at exit = **1222200 bytes** in **40004 blocks**

Total heap usage = **40019 allocs**, **15 frees**, **1484336 bytes allocated**

## Run 1

Total time taken= **681 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 10 | 1 | **3752** | 680 | 1 |
| 1948 | 1 | 2 | **2660** | 77 | 2 | **3752** | 680 | 2 |
| 1948 | 2 | 3 | **2660** | 143 | 3 | **3752** | 680 | 3 |
| 1948 | 3 | 4 | **2924** | 210 | 4 | **3752** | 681 | 4 |
| 1948 | 4 | 5 | **2924** | 280 | 5 | **3752** | 681 | 5 |
| 1948 | 5 | 6 | **3188** | 347 | 6 | **3752** | 681 | 6 |
| 1948 | 6 | 7 | **3188** | 414 | 7 | **3752** | 681 | 7 |
| 2132 | 7 | 8 | **3452** | 481 | 8 | **3752** | 681 | 8 |
| 2132 | 8 | 9 | **3716** | 548 | 9 | **3752** | 681 | 9 |
| 2396 | 9 | 10 | **3752** | 614 | 10 | **3752** | 681 | 10 |

## Run 2

Total time taken= **673 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 10 | 1 | **3752** | 673 | 1 |
| 1948 | 1 | 2 | **2660** | 77 | 2 | **3752** | 673 | 2 |
| 1948 | 2 | 3 | **2660** | 143 | 3 | **3752** | 673 | 3 |
| 1948 | 3 | 4 | **2924** | 210 | 4 | **3752** | 673 | 4 |
| 1948 | 4 | 5 | **2924** | 276 | 5 | **3752** | 673 | 5 |
| 1948 | 5 | 6 | **3188** | 342 | 6 | **3752** | 673 | 6 |
| 1948 | 6 | 7 | **3188** | 409 | 7 | **3752** | 673 | 7 |
| 2132 | 7 | 8 | **3452** | 475 | 8 | **3752** | 673 | 8 |
| 2132 | 8 | 9 | **3716** | 541 | 9 | **3752** | 673 | 9 |
| 2396 | 9 | 10 | **3752** | 607 | 10 | **3752** | 673 | 10 |

## Run 3

Total time taken= **677 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **3752** | 677 | 1 |
| 1948 | 1 | 2 | **2660** | 76 | 2 | **3752** | 677 | 2 |
| 1948 | 2 | 3 | **2660** | 142 | 3 | **3752** | 677 | 3 |
| 1948 | 3 | 4 | **2924** | 209 | 4 | **3752** | 677 | 4 |
| 1948 | 4 | 5 | **2924** | 277 | 5 | **3752** | 677 | 5 |
| 1948 | 5 | 6 | **3188** | 343 | 6 | **3752** | 677 | 6 |
| 1948 | 6 | 7 | **3188** | 411 | 7 | **3752** | 677 | 7 |
| 2132 | 6 | 8 | **3452** | 477 | 8 | **3752** | 677 | 8 |
| 2132 | 7 | 9 | **3716** | 544 | 9 | **3752** | 677 | 9 |
| 2396 | 8 | 10 | **3752** | 611 | 10 | **3752** | 678 | 10 |

MEDIUM LOAD BEST FIT – int\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Medium Load,** a total of **20000 allocs and deallocs** were executed and for every period of 2000 allocs/deallocs the RSS and Time were recorded.

Interval = 2000

20000 / 2000 = 10 intervals

Numbers pointed by int\* memory addresses range from 0 -> 20000

In use at exit = **1142208 bytes** in **36671 blocks**

Total heap usage = **36686 allocs**, **15 frees**, **1404344 bytes allocated**

## Run 1

Total time taken= **3153 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **3516** | 3153 | 1 |
| 1948 | 1 | 2 | **2660** | 341 | 2 | **3516** | 3153 | 2 |
| 1948 | 2 | 3 | **2660** | 655 | 3 | **3516** | 3153 | 3 |
| 1948 | 3 | 4 | **2924** | 951 | 4 | **3516** | 3153 | 4 |
| 1948 | 4 | 5 | **2924** | 1230 | 5 | **3516** | 3153 | 5 |
| 1948 | 5 | 6 | **3188** | 1492 | 6 | **3516** | 3153 | 6 |
| 1948 | 6 | 7 | **3188** | 1846 | 7 | **3688** | 3153 | 7 |
| 2132 | 6 | 8 | **3332** | 2179 | 8 | **3688** | 3153 | 8 |
| 2132 | 7 | 9 | **3332** | 2489 | 9 | **3688** | 3153 | 9 |
| 2396 | 8 | 10 | **3516** | 2814 | 10 | **3688** | 3153 | 10 |

## Run 2

Total time taken= **3186 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **3516** | 3186 | 1 |
| 1948 | 1 | 2 | **2660** | 340 | 2 | **3516** | 3186 | 2 |
| 1948 | 2 | 3 | **2660** | 657 | 3 | **3516** | 3186 | 3 |
| 1948 | 3 | 4 | **2924** | 957 | 4 | **3516** | 3186 | 4 |
| 1948 | 4 | 5 | **2924** | 1236 | 5 | **3516** | 3186 | 5 |
| 1948 | 4 | 6 | **3188** | 1501 | 6 | **3516** | 3186 | 6 |
| 1948 | 5 | 7 | **3188** | 1860 | 7 | **3688** | 3186 | 7 |
| 2132 | 6 | 8 | **3336** | 2200 | 8 | **3688** | 3186 | 8 |
| 2132 | 7 | 9 | **3336** | 2511 | 9 | **3688** | 3186 | 9 |
| 2396 | 8 | 10 | **3516** | 2840 | 10 | **3688** | 3186 | 10 |

## Run 3

Total time taken= **3194 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **3516** | 3194 | 1 |
| 1948 | 1 | 2 | **2660** | 343 | 2 | **3516** | 3194 | 2 |
| 1948 | 2 | 3 | **2660** | 665 | 3 | **3516** | 3194 | 3 |
| 1948 | 2 | 4 | **2924** | 966 | 4 | **3516** | 3194 | 4 |
| 1948 | 3 | 5 | **2924** | 1247 | 5 | **3516** | 3194 | 5 |
| 1948 | 4 | 6 | **3188** | 1510 | 6 | **3516** | 3194 | 6 |
| 1948 | 5 | 7 | **3188** | 1866 | 7 | **3688** | 3194 | 7 |
| 2132 | 6 | 8 | **3332** | 2201 | 8 | **3688** | 3194 | 8 |
| 2132 | 7 | 9 | **3332** | 2516 | 9 | **3688** | 3194 | 9 |
| 2396 | 8 | 10 | **3516** | 2851 | 10 | **3688** | 3194 | 10 |

MEDIUM LOAD WORST FIT – int\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Medium Load,** a total of **20000 allocs and deallocs** were executed and for every period of 2000 allocs/deallocs the RSS and Time were recorded.

Interval = 2000

20000 / 2000 = 10 intervals

Numbers pointed by int\* memory addresses range from 0 -> 20000

In use at exit = **1222200 bytes** in **40004 blocks**

Total heap usage = **40019 allocs**, **15 frees**, **1484336 bytes allocated**

## Run 1

Total time taken= **3460 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **4264** | 3460 | 1 |
| 1948 | 1 | 2 | **2660** | 320 | 2 | **4264** | 3460 | 2 |
| 1948 | 2 | 3 | **2924** | 599 | 3 | **4264** | 3460 | 3 |
| 1948 | 3 | 4 | **2924** | 939 | 4 | **4264** | 3460 | 4 |
| 1948 | 4 | 5 | **3188** | 1302 | 5 | **4288** | 3460 | 5 |
| 1948 | 5 | 6 | **3452** | 1664 | 6 | **4288** | 3460 | 6 |
| 1948 | 6 | 7 | **3624** | 2030 | 7 | **4288** | 3460 | 7 |
| 2132 | 6 | 8 | **3772** | 2388 | 8 | **4288** | 3460 | 8 |
| 2132 | 7 | 9 | **3772** | 2756 | 9 | **4288** | 3460 | 9 |
| 2396 | 8 | 10 | **4020** | 3113 | 10 | **4288** | 3460 | 10 |

## Run 2

Total time taken= **3591 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2392** | 9 | 1 | **4260** | 3590 | 1 |
| 1948 | 1 | 2 | **2656** | 336 | 2 | **4260** | 3590 | 2 |
| 1948 | 2 | 3 | **2920** | 632 | 3 | **4260** | 3590 | 3 |
| 1948 | 3 | 4 | **2920** | 992 | 4 | **4260** | 3590 | 4 |
| 1948 | 4 | 5 | **3184** | 1370 | 5 | **4284** | 3590 | 5 |
| 1948 | 4 | 6 | **3448** | 1743 | 6 | **4284** | 3591 | 6 |
| 1948 | 5 | 7 | **3580** | 2121 | 7 | **4284** | 3591 | 7 |
| 2128 | 6 | 8 | **3768** | 2489 | 8 | **4284** | 3591 | 8 |
| 2128 | 7 | 9 | **3768** | 2867 | 9 | **4284** | 3591 | 9 |
| 2392 | 8 | 10 | **4016** | 3234 | 10 | **4284** | 3591 | 10 |

## Run 3

Total time taken= **3499 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **4264** | 3499 | 1 |
| 1948 | 1 | 2 | **2660** | 326 | 2 | **4264** | 3499 | 2 |
| 1948 | 2 | 3 | **2924** | 612 | 3 | **4264** | 3499 | 3 |
| 1948 | 3 | 4 | **2924** | 954 | 4 | **4264** | 3499 | 4 |
| 1948 | 4 | 5 | **3188** | 1318 | 5 | **4288** | 3499 | 5 |
| 1948 | 5 | 6 | **3452** | 1683 | 6 | **4288** | 3499 | 6 |
| 1948 | 6 | 7 | **3616** | 2049 | 7 | **4288** | 3499 | 7 |
| 2132 | 6 | 8 | **3772** | 2410 | 8 | **4288** | 3499 | 8 |
| 2132 | 7 | 9 | **3772** | 2779 | 9 | **4288** | 3499 | 9 |
| 2396 | 8 | 10 | **4020** | 3139 | 10 | **4288** | 3499 | 10 |

MEDIUM LOAD FIRST FIT – double\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Medium Load,** a total of **20000 allocs and deallocs** were executed and for every period of 2000 allocs/deallocs the RSS and Time were recorded.

Interval = 2000

20000 / 2000 = 10 intervals

Numbers pointed by double\* memory addresses range from 0 -> 20000 with 0.1, 0.3, 0.6, 0.8, 0.9 decimal values.

In use at exit = **1142208 bytes** in **36671 blocks**

Total heap usage = **36686 allocs**, **15 frees**, **1404344 bytes allocated**

## Run 1

Total time taken= **1834 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2392** | 10 | 1 | **3712** | 1834 | 1 |
| 1948 | 1 | 2 | **2656** | 91 | 2 | **3712** | 1834 | 2 |
| 1948 | 2 | 3 | **2656** | 197 | 3 | **3712** | 1834 | 3 |
| 1948 | 3 | 4 | **2920** | 326 | 4 | **3712** | 1834 | 4 |
| 1948 | 4 | 5 | **2920** | 480 | 5 | **3712** | 1834 | 5 |
| 1948 | 5 | 6 | **3184** | 660 | 6 | **3712** | 1834 | 6 |
| 1948 | 6 | 7 | **3184** | 866 | 7 | **3712** | 1834 | 7 |
| 2128 | 7 | 8 | **3448** | 1086 | 8 | **3712** | 1834 | 8 |
| 2128 | 8 | 9 | **3448** | 1320 | 9 | **3712** | 1834 | 9 |
| 2392 | 9 | 10 | **3712** | 1571 | 10 | **3712** | 1834 | 10 |

## Run 2

Total time taken= **1898 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **3716** | 1897 | 1 |
| 1948 | 1 | 2 | **2660** | 90 | 2 | **3716** | 1897 | 2 |
| 1948 | 2 | 3 | **2660** | 198 | 3 | **3716** | 1897 | 3 |
| 1948 | 2 | 4 | **2924** | 335 | 4 | **3716** | 1897 | 4 |
| 1948 | 3 | 5 | **2924** | 497 | 5 | **3716** | 1897 | 5 |
| 1948 | 4 | 6 | **3188** | 684 | 6 | **3716** | 1898 | 6 |
| 1948 | 5 | 7 | **3188** | 893 | 7 | **3716** | 1898 | 7 |
| 2132 | 6 | 8 | **3452** | 1120 | 8 | **3716** | 1898 | 8 |
| 2132 | 7 | 9 | **3452** | 1364 | 9 | **3716** | 1898 | 9 |
| 2396 | 8 | 10 | **3716** | 1624 | 10 | **3716** | 1898 | 10 |

## Run 3

Total time taken= **1892 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **3716** | 1892 | 1 |
| 1948 | 1 | 2 | **2660** | 88 | 2 | **3716** | 1892 | 2 |
| 1948 | 2 | 3 | **2660** | 195 | 3 | **3716** | 1892 | 3 |
| 1948 | 2 | 4 | **2924** | 328 | 4 | **3716** | 1892 | 4 |
| 1948 | 3 | 5 | **2924** | 488 | 5 | **3716** | 1892 | 5 |
| 1948 | 4 | 6 | **3188** | 675 | 6 | **3716** | 1892 | 6 |
| 1948 | 5 | 7 | **3188** | 885 | 7 | **3716** | 1892 | 7 |
| 2132 | 6 | 8 | **3452** | 1113 | 8 | **3716** | 1892 | 8 |
| 2132 | 7 | 9 | **3452** | 1357 | 9 | **3716** | 1892 | 9 |
| 2396 | 8 | 10 | **3716** | 1617 | 10 | **3716** | 1892 | 10 |

MEDIUM LOAD BEST FIT – double\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Medium Load,** a total of **20000 allocs and deallocs** were executed and for every period of 2000 allocs/deallocs the RSS and Time were recorded.

Interval = 2000

20000 / 2000 = 10 intervals

Numbers pointed by double\* memory addresses range from 0 -> 20000 with 0.1, 0.3, 0.6, 0.8, 0.9 decimal values.

In use at exit = **1142208 bytes** in **36671 blocks**

Total heap usage = **36686 allocs**, **15 frees**, **1404344 bytes allocated**

## Run 1

Total time taken= **3170 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **3848** | 3170 | 1 |
| 1948 | 1 | 2 | **2396** | 242 | 2 | **3848** | 3170 | 2 |
| 1948 | 2 | 3 | **2660** | 446 | 3 | **3848** | 3170 | 3 |
| 1948 | 3 | 4 | **2660** | 696 | 4 | **3848** | 3170 | 4 |
| 1948 | 4 | 5 | **2924** | 1003 | 5 | **3848** | 3170 | 5 |
| 1948 | 4 | 6 | **2924** | 1328 | 6 | **3848** | 3170 | 6 |
| 1948 | 5 | 7 | **3188** | 1667 | 7 | **3848** | 3170 | 7 |
| 2132 | 6 | 8 | **3392** | 2019 | 8 | **3848** | 3170 | 8 |
| 2132 | 7 | 9 | **3444** | 2387 | 9 | **3848** | 3170 | 9 |
| 2396 | 8 | 10 | **3648** | 2771 | 10 | **3848** | 3170 | 10 |

## Run 2

Total time taken= **3264 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **3848** | 3264 | 1 |
| 1948 | 1 | 2 | **2396** | 241 | 2 | **3848** | 3264 | 2 |
| 1948 | 1 | 3 | **2660** | 445 | 3 | **3848** | 3264 | 3 |
| 1948 | 2 | 4 | **2660** | 690 | 4 | **3848** | 3264 | 4 |
| 1948 | 3 | 5 | **2924** | 1024 | 5 | **3848** | 3264 | 5 |
| 1948 | 4 | 6 | **2924** | 1380 | 6 | **3848** | 3264 | 6 |
| 1948 | 5 | 7 | **3188** | 1752 | 7 | **3848** | 3264 | 7 |
| 2132 | 6 | 8 | **3352** | 2119 | 8 | **3848** | 3264 | 8 |
| 2132 | 7 | 9 | **3484** | 2488 | 9 | **3848** | 3264 | 9 |
| 2396 | 8 | 10 | **3668** | 2868 | 10 | **3848** | 3264 | 10 |

## Run 3

Total time taken= **3192 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **3848** | 3191 | 1 |
| 1948 | 1 | 2 | **2396** | 244 | 2 | **3848** | 3192 | 2 |
| 1948 | 2 | 3 | **2660** | 455 | 3 | **3848** | 3192 | 3 |
| 1948 | 3 | 4 | **2660** | 711 | 4 | **3848** | 3192 | 4 |
| 1948 | 4 | 5 | **2924** | 1026 | 5 | **3848** | 3192 | 5 |
| 1948 | 5 | 6 | **2924** | 1351 | 6 | **3848** | 3192 | 6 |
| 1948 | 6 | 7 | **3188** | 1690 | 7 | **3848** | 3192 | 7 |
| 2132 | 7 | 8 | **3380** | 2043 | 8 | **3848** | 3192 | 8 |
| 2132 | 7 | 9 | **3452** | 2410 | 9 | **3848** | 3192 | 9 |
| 2396 | 8 | 10 | **3652** | 2793 | 10 | **3848** | 3192 | 10 |

MEDIUM LOAD WORST FIT – double\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Medium Load,** a total of **20000 allocs and deallocs** were executed and for every period of 2000 allocs/deallocs the RSS and Time were recorded.

Interval = 2000

20000 / 2000 = 10 intervals

Numbers pointed by double\* memory addresses range from 0 -> 20000 with 0.1, 0.3, 0.6, 0.8, 0.9 decimal values.

In use at exit = **1222200 bytes** in **40004 blocks**

Total heap usage = **40019 allocs**, **15 frees**, **1484336 bytes allocated**

## Run 1

Total time taken= **3339 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 11 | 1 | **3952** | 3338 | 1 |
| 1948 | 1 | 2 | **2660** | 278 | 2 | **3952** | 3338 | 2 |
| 1948 | 2 | 3 | **2924** | 531 | 3 | **3952** | 3338 | 3 |
| 1948 | 3 | 4 | **2924** | 859 | 4 | **4104** | 3338 | 4 |
| 1948 | 4 | 5 | **3188** | 1213 | 5 | **4104** | 3338 | 5 |
| 1948 | 5 | 6 | **3188** | 1542 | 6 | **4104** | 3338 | 6 |
| 1948 | 7 | 7 | **3452** | 1913 | 7 | **4104** | 3338 | 7 |
| 2132 | 8 | 8 | **3588** | 2272 | 8 | **4104** | 3338 | 8 |
| 2132 | 9 | 9 | **3768** | 2615 | 9 | **4104** | 3338 | 9 |
| 2396 | 10 | 10 | **3952** | 2969 | 10 | **4104** | 3339 | 10 |

## Run 2

Total time taken= **3273 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **3952** | 3272 | 1 |
| 1948 | 1 | 2 | **2660** | 276 | 2 | **3952** | 3272 | 2 |
| 1948 | 2 | 3 | **2924** | 522 | 3 | **3952** | 3272 | 3 |
| 1948 | 3 | 4 | **2924** | 844 | 4 | **4104** | 3272 | 4 |
| 1948 | 4 | 5 | **3188** | 1191 | 5 | **4104** | 3273 | 5 |
| 1948 | 5 | 6 | **3188** | 1511 | 6 | **4104** | 3273 | 6 |
| 1948 | 6 | 7 | **3452** | 1875 | 7 | **4104** | 3273 | 7 |
| 2132 | 6 | 8 | **3604** | 2227 | 8 | **4104** | 3273 | 8 |
| 2132 | 7 | 9 | **3772** | 2562 | 9 | **4104** | 3273 | 9 |
| 2396 | 8 | 10 | **3952** | 2910 | 10 | **4104** | 3273 | 10 |

## Run 3

Total time taken= **3276 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2396** | 9 | 1 | **3948** | 3275 | 1 |
| 1948 | 1 | 2 | **2660** | 263 | 2 | **3948** | 3275 | 2 |
| 1948 | 2 | 3 | **2924** | 530 | 3 | **3948** | 3275 | 3 |
| 1948 | 3 | 4 | **2924** | 871 | 4 | **4104** | 3275 | 4 |
| 1948 | 3 | 5 | **3188** | 1225 | 5 | **4104** | 3275 | 5 |
| 1948 | 4 | 6 | **3188** | 1550 | 6 | **4104** | 3276 | 6 |
| 1948 | 5 | 7 | **3452** | 1913 | 7 | **4104** | 3276 | 7 |
| 2132 | 6 | 8 | **3596** | 2257 | 8 | **4104** | 3276 | 8 |
| 2132 | 7 | 9 | **3760** | 2582 | 9 | **4104** | 3276 | 9 |
| 2396 | 8 | 10 | **3948** | 2922 | 10 | **4104** | 3276 | 10 |

MEDIUM LOAD FIRST FIT – char\*\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Medium Load,** a total of **20000 allocs and deallocs** were executed and for every period of 2000 allocs/deallocs the RSS and Time were recorded.

Interval = 2000

20000 / 2000 = 10 intervals

char\* strings sourced from *Collins Scrabble Words (2015).txt* input file

In use at exit = **1142208 bytes** in **36671 blocks**

Total heap usage= **56710 allocs**, **20039 frees**, **2115845 bytes allocated**

## Run 1

Total time taken= **1856 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2400** | 10 | 1 | **3724** | 1856 | 1 |
| 1948 | 1 | 2 | **2664** | 92 | 2 | **3724** | 1856 | 2 |
| 1948 | 2 | 3 | **2664** | 199 | 3 | **3724** | 1856 | 3 |
| 1948 | 3 | 4 | **2928** | 330 | 4 | **3724** | 1856 | 4 |
| 1948 | 3 | 5 | **2928** | 487 | 5 | **3724** | 1856 | 5 |
| 1948 | 4 | 6 | **3192** | 670 | 6 | **3724** | 1856 | 6 |
| 1948 | 5 | 7 | **3192** | 876 | 7 | **3724** | 1856 | 7 |
| 2136 | 6 | 8 | **3456** | 1101 | 8 | **3724** | 1856 | 8 |
| 2136 | 7 | 9 | **3456** | 1339 | 9 | **3724** | 1856 | 9 |
| 2400 | 8 | 10 | **3724** | 1591 | 10 | **3724** | 1856 | 10 |

## Run 2

Total time taken= **1945 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2400** | 10 | 1 | **3724** | 1945 | 1 |
| 1948 | 1 | 2 | **2664** | 93 | 2 | **3724** | 1945 | 2 |
| 1948 | 2 | 3 | **2664** | 202 | 3 | **3724** | 1945 | 3 |
| 1948 | 3 | 4 | **2928** | 339 | 4 | **3724** | 1945 | 4 |
| 1948 | 4 | 5 | **2928** | 505 | 5 | **3724** | 1945 | 5 |
| 1948 | 5 | 6 | **3192** | 698 | 6 | **3724** | 1945 | 6 |
| 1948 | 6 | 7 | **3192** | 917 | 7 | **3724** | 1945 | 7 |
| 2136 | 7 | 8 | **3456** | 1153 | 8 | **3724** | 1945 | 8 |
| 2136 | 8 | 9 | **3456** | 1404 | 9 | **3724** | 1945 | 9 |
| 2400 | 8 | 10 | **3724** | 1669 | 10 | **3724** | 1945 | 10 |

## Run 3

Total time taken= **1940 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2400** | 11 | 1 | **3724** | 1939 | 1 |
| 1948 | 1 | 2 | **2664** | 94 | 2 | **3724** | 1939 | 2 |
| 1948 | 2 | 3 | **2664** | 204 | 3 | **3724** | 1939 | 3 |
| 1948 | 3 | 4 | **2928** | 342 | 4 | **3724** | 1939 | 4 |
| 1948 | 4 | 5 | **2928** | 508 | 5 | **3724** | 1939 | 5 |
| 1948 | 5 | 6 | **3192** | 703 | 6 | **3724** | 1939 | 6 |
| 1948 | 6 | 7 | **3192** | 920 | 7 | **3724** | 1939 | 7 |
| 2136 | 7 | 8 | **3456** | 1155 | 8 | **3724** | 1939 | 8 |
| 2136 | 8 | 9 | **3456** | 1407 | 9 | **3724** | 1939 | 9 |
| 2400 | 9 | 10 | **3724** | 1670 | 10 | **3724** | 1940 | 10 |

MEDIUM LOAD BEST FIT – char\*\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Medium Load,** a total of **20000 allocs and deallocs** were executed and for every period of 2000 allocs/deallocs the RSS and Time were recorded.

Interval = 2000

20000 / 2000 = 10 intervals

char\* strings sourced from *Collins Scrabble Words (2015).txt* input file

In use at exit = **1142208 bytes** in **36671 blocks**

Total heap usage= **56710 allocs**, **20039 frees**, **2115845 bytes allocated**

## Run 1

Total time taken= **3378 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2400** | 12 | 1 | **3912** | 3378 | 1 |
| 1948 | 1 | 2 | **2664** | 280 | 2 | **3912** | 3378 | 2 |
| 1948 | 2 | 3 | **2664** | 515 | 3 | **3912** | 3378 | 3 |
| 1948 | 3 | 4 | **2664** | 780 | 4 | **3912** | 3378 | 4 |
| 1948 | 4 | 5 | **2928** | 1101 | 5 | **3912** | 3378 | 5 |
| 1948 | 5 | 6 | **2928** | 1440 | 6 | **3912** | 3378 | 6 |
| 1948 | 7 | 7 | **3192** | 1795 | 7 | **3912** | 3378 | 7 |
| 2136 | 8 | 8 | **3400** | 2166 | 8 | **3912** | 3378 | 8 |
| 2136 | 9 | 9 | **3492** | 2553 | 9 | **3912** | 3378 | 9 |
| 2400 | 10 | 10 | **3704** | 2962 | 10 | **3912** | 3378 | 10 |

## Run 2

Total time taken= **3208 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2400** | 9 | 1 | **3852** | 3208 | 1 |
| 1948 | 1 | 2 | **2664** | 244 | 2 | **3852** | 3208 | 2 |
| 1948 | 1 | 3 | **2664** | 448 | 3 | **3852** | 3208 | 3 |
| 1948 | 2 | 4 | **2664** | 694 | 4 | **3852** | 3208 | 4 |
| 1948 | 3 | 5 | **2928** | 1002 | 5 | **3852** | 3208 | 5 |
| 1948 | 4 | 6 | **2928** | 1332 | 6 | **3852** | 3208 | 6 |
| 1948 | 5 | 7 | **3192** | 1685 | 7 | **3852** | 3208 | 7 |
| 2136 | 6 | 8 | **3456** | 2050 | 8 | **3852** | 3208 | 8 |
| 2136 | 7 | 9 | **3456** | 2422 | 9 | **3852** | 3208 | 9 |
| 2400 | 8 | 10 | **3720** | 2806 | 10 | **3852** | 3208 | 10 |

## Run 3

Total time taken= **3413 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2400** | 11 | 1 | **3912** | 3413 | 1 |
| 1948 | 1 | 2 | **2664** | 289 | 2 | **3912** | 3413 | 2 |
| 1948 | 2 | 3 | **2664** | 504 | 3 | **3912** | 3413 | 3 |
| 1948 | 2 | 4 | **2664** | 762 | 4 | **3912** | 3413 | 4 |
| 1948 | 3 | 5 | **2928** | 1085 | 5 | **3912** | 3413 | 5 |
| 1948 | 4 | 6 | **2928** | 1431 | 6 | **3912** | 3413 | 6 |
| 1948 | 5 | 7 | **3192** | 1805 | 7 | **3912** | 3413 | 7 |
| 2136 | 6 | 8 | **3392** | 2191 | 8 | **3912** | 3413 | 8 |
| 2136 | 7 | 9 | **3500** | 2587 | 9 | **3912** | 3413 | 9 |
| 2400 | 8 | 10 | **3708** | 2991 | 10 | **3912** | 3413 | 10 |

MEDIUM LOAD WORST FIT – char\*\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Medium Load,** a total of **20000 allocs and deallocs** were executed and for every period of 2000 allocs/deallocs the RSS and Time were recorded.

Interval = 2000

20000 / 2000 = 10 intervals

char\* strings sourced from *Collins Scrabble Words (2015).txt* input file

In use at exit = **1222200 bytes** in **40004 blocks**

Total heap usage= **60043 allocs**, **20039 frees**, **2195837 bytes allocated**

## Run 1

Total time taken= **3383 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2400** | 11 | 1 | **3976** | 3383 | 1 |
| 1948 | 1 | 2 | **2664** | 279 | 2 | **3976** | 3383 | 2 |
| 1948 | 2 | 3 | **2928** | 532 | 3 | **3976** | 3383 | 3 |
| 1948 | 3 | 4 | **2928** | 860 | 4 | **4172** | 3383 | 4 |
| 1948 | 4 | 5 | **3192** | 1211 | 5 | **4172** | 3383 | 5 |
| 1948 | 5 | 6 | **3456** | 1539 | 6 | **4172** | 3383 | 6 |
| 1948 | 6 | 7 | **3456** | 1925 | 7 | **4172** | 3383 | 7 |
| 2136 | 7 | 8 | **3764** | 2304 | 8 | **4172** | 3383 | 8 |
| 2136 | 8 | 9 | **3764** | 2653 | 9 | **4172** | 3383 | 9 |
| 2400 | 9 | 10 | **3976** | 3011 | 10 | **4172** | 3383 | 10 |

## Run 2

Total time taken= **3268 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2400** | 11 | 1 | **3976** | 3267 | 1 |
| 1948 | 1 | 2 | **2664** | 281 | 2 | **3976** | 3267 | 2 |
| 1948 | 2 | 3 | **2928** | 535 | 3 | **3976** | 3267 | 3 |
| 1948 | 3 | 4 | **2928** | 867 | 4 | **4172** | 3267 | 4 |
| 1948 | 4 | 5 | **3192** | 1224 | 5 | **4172** | 3267 | 5 |
| 1948 | 5 | 6 | **3456** | 1536 | 6 | **4172** | 3267 | 6 |
| 1948 | 6 | 7 | **3456** | 1886 | 7 | **4172** | 3267 | 7 |
| 2136 | 7 | 8 | **3764** | 2227 | 8 | **4172** | 3267 | 8 |
| 2136 | 8 | 9 | **3764** | 2555 | 9 | **4172** | 3268 | 9 |
| 2400 | 9 | 10 | **3976** | 2901 | 10 | **4172** | 3268 | 10 |

## Run 3

Total time taken= **3351 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **2400** | 10 | 1 | **3976** | 3351 | 1 |
| 1948 | 1 | 2 | **2664** | 281 | 2 | **3976** | 3351 | 2 |
| 1948 | 2 | 3 | **2928** | 536 | 3 | **3976** | 3351 | 3 |
| 1948 | 3 | 4 | **2928** | 870 | 4 | **4172** | 3351 | 4 |
| 1948 | 4 | 5 | **3192** | 1230 | 5 | **4172** | 3351 | 5 |
| 1948 | 5 | 6 | **3456** | 1560 | 6 | **4172** | 3351 | 6 |
| 1948 | 6 | 7 | **3456** | 1930 | 7 | **4172** | 3351 | 7 |
| 2136 | 6 | 8 | **3764** | 2289 | 8 | **4172** | 3351 | 8 |
| 2136 | 7 | 9 | **3764** | 2631 | 9 | **4172** | 3351 | 9 |
| 2400 | 8 | 10 | **3976** | 2983 | 10 | **4172** | 3351 | 10 |

LOW LOAD FIRST FIT – int\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Low Load,** a total of **7000 allocs and deallocs** were executed and for every period of 700 allocs/deallocs the RSS and Time were recorded.

Interval = 700

7000 / 700 = 10 intervals

Numbers pointed by int\* memory addresses range from 0 -> 7000

In use at exit = **401592 bytes** in **14004 blocks**

Total heap usage = **14017 allocs**, **13 frees**, **467120 bytes allocated**

## Run 1

Total time taken= **85 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **1948** | 3 | 1 | **2128** | 85 | 1 |
| 1948 | 0 | 2 | **1948** | 11 | 2 | **2128** | 85 | 2 |
| 1948 | 0 | 3 | **1948** | 19 | 3 | **2128** | 85 | 3 |
| 1948 | 1 | 4 | **1948** | 27 | 4 | **2128** | 85 | 4 |
| 1948 | 1 | 5 | **1948** | 36 | 5 | **2128** | 85 | 5 |
| 1948 | 1 | 6 | **1948** | 44 | 6 | **2128** | 85 | 6 |
| 1948 | 2 | 7 | **1948** | 52 | 7 | **2128** | 85 | 7 |
| 1948 | 2 | 8 | **1948** | 60 | 8 | **2128** | 85 | 8 |
| 1948 | 2 | 9 | **1948** | 68 | 9 | **2128** | 85 | 9 |
| 1948 | 3 | 10 | **2128** | 77 | 10 | **2128** | 85 | 10 |

## Run 2

Total time taken= **90 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **1948** | 3 | 1 | **2132** | 90 | 1 |
| 1948 | 0 | 2 | **1948** | 12 | 2 | **2132** | 90 | 2 |
| 1948 | 0 | 3 | **1948** | 20 | 3 | **2132** | 90 | 3 |
| 1948 | 1 | 4 | **1948** | 29 | 4 | **2132** | 90 | 4 |
| 1948 | 1 | 5 | **1948** | 37 | 5 | **2132** | 90 | 5 |
| 1948 | 1 | 6 | **1948** | 46 | 6 | **2132** | 90 | 6 |
| 1948 | 2 | 7 | **1948** | 55 | 7 | **2132** | 90 | 7 |
| 1948 | 2 | 8 | **1948** | 63 | 8 | **2132** | 90 | 8 |
| 1948 | 2 | 9 | **1948** | 72 | 9 | **2132** | 90 | 9 |
| 1948 | 3 | 10 | **2132** | 81 | 10 | **2132** | 90 | 10 |

## Run 3

Total time taken= **88 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **1948** | 4 | 1 | **2132** | 87 | 1 |
| 1948 | 1 | 2 | **1948** | 12 | 2 | **2132** | 87 | 2 |
| 1948 | 1 | 3 | **1948** | 21 | 3 | **2132** | 88 | 3 |
| 1948 | 1 | 4 | **1948** | 29 | 4 | **2132** | 88 | 4 |
| 1948 | 2 | 5 | **1948** | 37 | 5 | **2132** | 88 | 5 |
| 1948 | 2 | 6 | **1948** | 46 | 6 | **2132** | 88 | 6 |
| 1948 | 2 | 7 | **1948** | 54 | 7 | **2132** | 88 | 7 |
| 1948 | 3 | 8 | **1948** | 63 | 8 | **2132** | 88 | 8 |
| 1948 | 3 | 9 | **1948** | 71 | 9 | **2132** | 88 | 9 |
| 1948 | 3 | 10 | **2132** | 79 | 10 | **2132** | 88 | 10 |

LOW LOAD BEST FIT – int\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Low Load,** a total of **7000 allocs and deallocs** were executed and for every period of 700 allocs/deallocs the RSS and Time were recorded.

Interval = 700

7000 / 700 = 10 intervals

Numbers pointed by int\* memory addresses range from 0 -> 7000

In use at exit = **373584 bytes** in **12837 blocks**

Total heap usage = **12850 allocs**, **13 frees**, **439112 bytes allocated**

## Run 1

Total time taken= **408 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **1948** | 3 | 1 | **1948** | 408 | 1 |
| 1948 | 0 | 2 | **1948** | 45 | 2 | **1948** | 408 | 2 |
| 1948 | 1 | 3 | **1948** | 85 | 3 | **1948** | 408 | 3 |
| 1948 | 1 | 4 | **1948** | 123 | 4 | **1948** | 408 | 4 |
| 1948 | 1 | 5 | **1948** | 159 | 5 | **1948** | 408 | 5 |
| 1948 | 2 | 6 | **1948** | 193 | 6 | **1948** | 408 | 6 |
| 1948 | 2 | 7 | **1948** | 238 | 7 | **1948** | 408 | 7 |
| 1948 | 2 | 8 | **1948** | 280 | 8 | **1948** | 408 | 8 |
| 1948 | 3 | 9 | **1948** | 321 | 9 | **1948** | 408 | 9 |
| 1948 | 3 | 10 | **1948** | 364 | 10 | **1948** | 408 | 10 |

## Run 2

Total time taken= **423 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **1948** | 4 | 1 | **1948** | 423 | 1 |
| 1948 | 1 | 2 | **1948** | 49 | 2 | **1948** | 423 | 2 |
| 1948 | 1 | 3 | **1948** | 91 | 3 | **1948** | 423 | 3 |
| 1948 | 2 | 4 | **1948** | 131 | 4 | **1948** | 423 | 4 |
| 1948 | 2 | 5 | **1948** | 168 | 5 | **1948** | 423 | 5 |
| 1948 | 2 | 6 | **1948** | 203 | 6 | **1948** | 423 | 6 |
| 1948 | 3 | 7 | **1948** | 249 | 7 | **1948** | 423 | 7 |
| 1948 | 3 | 8 | **1948** | 294 | 8 | **1948** | 423 | 8 |
| 1948 | 4 | 9 | **1948** | 336 | 9 | **1948** | 423 | 9 |
| 1948 | 4 | 10 | **1948** | 379 | 10 | **1948** | 423 | 10 |

## Run 3

Total time taken= **412 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **1948** | 3 | 1 | **1948** | 412 | 1 |
| 1948 | 0 | 2 | **1948** | 45 | 2 | **1948** | 412 | 2 |
| 1948 | 0 | 3 | **1948** | 84 | 3 | **1948** | 412 | 3 |
| 1948 | 0 | 4 | **1948** | 122 | 4 | **1948** | 412 | 4 |
| 1948 | 1 | 5 | **1948** | 158 | 5 | **1948** | 412 | 5 |
| 1948 | 1 | 6 | **1948** | 193 | 6 | **1948** | 412 | 6 |
| 1948 | 1 | 7 | **1948** | 242 | 7 | **1948** | 412 | 7 |
| 1948 | 2 | 8 | **1948** | 287 | 8 | **1948** | 412 | 8 |
| 1948 | 2 | 9 | **1948** | 327 | 9 | **1948** | 412 | 9 |
| 1948 | 2 | 10 | **1948** | 369 | 10 | **1948** | 412 | 10 |

LOW LOAD WORST FIT – int\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Low Load,** a total of **7000 allocs and deallocs** were executed and for every period of 700 allocs/deallocs the RSS and Time were recorded.

Interval = 700

7000 / 700 = 10 intervals

Numbers pointed by int\* memory addresses range from 0 -> 7000

In use at exit = **401592 bytes** in **14004 blocks**

Total heap usage = **14017 allocs**, **13 frees**, **467120 bytes allocated**

## Run 1

Total time taken= **458 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **1948** | 3 | 1 | **2132** | 458 | 1 |
| 1948 | 0 | 2 | **1948** | 42 | 2 | **2132** | 458 | 2 |
| 1948 | 0 | 3 | **1948** | 78 | 3 | **2132** | 458 | 3 |
| 1948 | 1 | 4 | **1948** | 121 | 4 | **2132** | 458 | 4 |
| 1948 | 1 | 5 | **1948** | 171 | 5 | **2132** | 458 | 5 |
| 1948 | 1 | 6 | **1948** | 222 | 6 | **2132** | 458 | 6 |
| 1948 | 1 | 7 | **1948** | 274 | 7 | **2132** | 458 | 7 |
| 1948 | 2 | 8 | **2132** | 322 | 8 | **2132** | 458 | 8 |
| 1948 | 2 | 9 | **2132** | 369 | 9 | **2132** | 458 | 9 |
| 1948 | 2 | 10 | **2132** | 414 | 10 | **2132** | 458 | 10 |

## Run 2

Total time taken= **448 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **1948** | 4 | 1 | **2128** | 448 | 1 |
| 1948 | 1 | 2 | **1948** | 43 | 2 | **2128** | 448 | 2 |
| 1948 | 1 | 3 | **1948** | 79 | 3 | **2128** | 448 | 3 |
| 1948 | 1 | 4 | **1948** | 122 | 4 | **2128** | 448 | 4 |
| 1948 | 2 | 5 | **1948** | 168 | 5 | **2128** | 448 | 5 |
| 1948 | 2 | 6 | **1948** | 215 | 6 | **2128** | 448 | 6 |
| 1948 | 2 | 7 | **1948** | 262 | 7 | **2128** | 448 | 7 |
| 1948 | 3 | 8 | **2128** | 309 | 8 | **2128** | 448 | 8 |
| 1948 | 3 | 9 | **2128** | 357 | 9 | **2128** | 448 | 9 |
| 1948 | 3 | 10 | **2128** | 403 | 10 | **2128** | 448 | 10 |

## Run 3

Total time taken= **447 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **1948** | 4 | 1 | **2132** | 447 | 1 |
| 1948 | 1 | 2 | **1948** | 44 | 2 | **2132** | 447 | 2 |
| 1948 | 1 | 3 | **1948** | 80 | 3 | **2132** | 447 | 3 |
| 1948 | 1 | 4 | **1948** | 123 | 4 | **2132** | 447 | 4 |
| 1948 | 2 | 5 | **1948** | 169 | 5 | **2132** | 447 | 5 |
| 1948 | 2 | 6 | **1948** | 216 | 6 | **2132** | 447 | 6 |
| 1948 | 2 | 7 | **1948** | 264 | 7 | **2132** | 447 | 7 |
| 1948 | 3 | 8 | **2132** | 310 | 8 | **2132** | 447 | 8 |
| 1948 | 3 | 9 | **2132** | 358 | 9 | **2132** | 447 | 9 |
| 1948 | 3 | 10 | **2132** | 403 | 10 | **2132** | 447 | 10 |

LOW LOAD FIRST FIT – double\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Low Load,** a total of **7000 allocs and deallocs** were executed and for every period of 700 allocs/deallocs the RSS and Time were recorded.

Interval = 7000

7000 / 700 = 10 intervals

Numbers pointed by double\* memory addresses range from 0 -> 7000 with 0.1, 0.3, 0.6, 0.8, 0.9 decimal values.

In use at exit = **373584 bytes** in **12837 blocks**

Total heap usage = **12850 allocs**, **13 frees**, **439112 bytes allocated**

## Run 1

Total time taken= **229 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **1948** | 3 | 1 | **2132** | 229 | 1 |
| 1948 | 0 | 2 | **1948** | 12 | 2 | **2132** | 229 | 2 |
| 1948 | 1 | 3 | **1948** | 25 | 3 | **2132** | 229 | 3 |
| 1948 | 1 | 4 | **1948** | 40 | 4 | **2132** | 229 | 4 |
| 1948 | 1 | 5 | **1948** | 59 | 5 | **2132** | 229 | 5 |
| 1948 | 2 | 6 | **1948** | 81 | 6 | **2132** | 229 | 6 |
| 1948 | 2 | 7 | **1948** | 107 | 7 | **2132** | 229 | 7 |
| 1948 | 2 | 8 | **1948** | 134 | 8 | **2132** | 229 | 8 |
| 1948 | 3 | 9 | **1948** | 164 | 9 | **2132** | 229 | 9 |
| 1948 | 3 | 10 | **1948** | 195 | 10 | **2132** | 229 | 10 |

## Run 2

Total time taken= **233 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **1948** | 4 | 1 | **2132** | 233 | 1 |
| 1948 | 1 | 2 | **1948** | 13 | 2 | **2132** | 233 | 2 |
| 1948 | 1 | 3 | **1948** | 26 | 3 | **2132** | 233 | 3 |
| 1948 | 1 | 4 | **1948** | 42 | 4 | **2132** | 233 | 4 |
| 1948 | 2 | 5 | **1948** | 61 | 5 | **2132** | 233 | 5 |
| 1948 | 2 | 6 | **1948** | 84 | 6 | **2132** | 233 | 6 |
| 1948 | 2 | 7 | **1948** | 110 | 7 | **2132** | 233 | 7 |
| 1948 | 3 | 8 | **1948** | 137 | 8 | **2132** | 233 | 8 |
| 1948 | 3 | 9 | **1948** | 168 | 9 | **2132** | 233 | 9 |
| 1948 | 3 | 10 | **1948** | 199 | 10 | **2132** | 233 | 10 |

## Run 3

Total time taken= **230 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1948 | 0 | 1 | **1948** | 3 | 1 | **2132** | 230 | 1 |
| 1948 | 0 | 2 | **1948** | 12 | 2 | **2132** | 230 | 2 |
| 1948 | 0 | 3 | **1948** | 25 | 3 | **2132** | 230 | 3 |
| 1948 | 1 | 4 | **1948** | 41 | 4 | **2132** | 230 | 4 |
| 1948 | 1 | 5 | **1948** | 59 | 5 | **2132** | 230 | 5 |
| 1948 | 1 | 6 | **1948** | 82 | 6 | **2132** | 230 | 6 |
| 1948 | 2 | 7 | **1948** | 107 | 7 | **2132** | 230 | 7 |
| 1948 | 2 | 8 | **1948** | 135 | 8 | **2132** | 230 | 8 |
| 1948 | 2 | 9 | **1948** | 165 | 9 | **2132** | 230 | 9 |
| 1948 | 3 | 10 | **1948** | 197 | 10 | **2132** | 230 | 10 |

LOW LOAD BEST FIT – double\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Low Load,** a total of **7000 allocs and deallocs** were executed and for every period of 700 allocs/deallocs the RSS and Time were recorded.

Interval = 7000

7000 / 700 = 10 intervals

Numbers pointed by double\* memory addresses range from 0 -> 7000 with 0.1, 0.3, 0.6, 0.8, 0.9 decimal values.

In use at exit = **373584 bytes** in **12837 blocks**

Total heap usage = **12850 allocs**, **13 frees**, **439112 bytes allocated**

## Run 1

Total time taken= **403 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 4 | 1 | **2132** | 403 | 1 |
| 1952 | 0 | 2 | **1952** | 34 | 2 | **2132** | 403 | 2 |
| 1952 | 1 | 3 | **1952** | 59 | 3 | **2132** | 403 | 3 |
| 1952 | 1 | 4 | **1952** | 91 | 4 | **2132** | 403 | 4 |
| 1952 | 1 | 5 | **1952** | 130 | 5 | **2132** | 403 | 5 |
| 1952 | 2 | 6 | **1952** | 171 | 6 | **2132** | 403 | 6 |
| 1952 | 2 | 7 | **1952** | 214 | 7 | **2132** | 403 | 7 |
| 1952 | 2 | 8 | **1952** | 258 | 8 | **2132** | 403 | 8 |
| 1952 | 3 | 9 | **1952** | 305 | 9 | **2132** | 403 | 9 |
| 1952 | 3 | 10 | **1952** | 352 | 10 | **2132** | 403 | 10 |

## Run 2

Total time taken= **388 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 4 | 1 | **2128** | 388 | 1 |
| 1952 | 1 | 2 | **1952** | 32 | 2 | **2128** | 388 | 2 |
| 1952 | 1 | 3 | **1952** | 56 | 3 | **2128** | 388 | 3 |
| 1952 | 1 | 4 | **1952** | 86 | 4 | **2128** | 388 | 4 |
| 1952 | 2 | 5 | **1952** | 124 | 5 | **2128** | 388 | 5 |
| 1952 | 2 | 6 | **1952** | 163 | 6 | **2128** | 388 | 6 |
| 1952 | 2 | 7 | **1952** | 205 | 7 | **2128** | 388 | 7 |
| 1952 | 3 | 8 | **1952** | 248 | 8 | **2128** | 388 | 8 |
| 1952 | 3 | 9 | **1952** | 293 | 9 | **2128** | 388 | 9 |
| 1952 | 3 | 10 | **1952** | 339 | 10 | **2128** | 388 | 10 |

## Run 3

Total time taken= **400 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 4 | 1 | **2132** | 400 | 1 |
| 1952 | 1 | 2 | **1952** | 32 | 2 | **2132** | 400 | 2 |
| 1952 | 1 | 3 | **1952** | 56 | 3 | **2132** | 400 | 3 |
| 1952 | 1 | 4 | **1952** | 86 | 4 | **2132** | 400 | 4 |
| 1952 | 2 | 5 | **1952** | 123 | 5 | **2132** | 400 | 5 |
| 1952 | 2 | 6 | **1952** | 163 | 6 | **2132** | 400 | 6 |
| 1952 | 2 | 7 | **1952** | 205 | 7 | **2132** | 400 | 7 |
| 1952 | 3 | 8 | **1952** | 252 | 8 | **2132** | 400 | 8 |
| 1952 | 3 | 9 | **1952** | 300 | 9 | **2132** | 400 | 9 |
| 1952 | 3 | 10 | **1952** | 349 | 10 | **2132** | 400 | 10 |

LOW LOAD WORST FIT – double\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Low Load,** a total of **7000 allocs and deallocs** were executed and for every period of 700 allocs/deallocs the RSS and Time were recorded.

Interval = 7000

7000 / 700 = 10 intervals

Numbers pointed by double\* memory addresses range from 0 -> 7000 with 0.1, 0.3, 0.6, 0.8, 0.9 decimal values.

In use at exit = **401592 bytes** in **14004 blocks**

Total heap usage = **14017 allocs**, **13 frees**, **467120 bytes allocated**

## Run 1

Total time taken= **387 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 3 | 1 | **2132** | 387 | 1 |
| 1952 | 0 | 2 | **1952** | 34 | 2 | **2132** | 387 | 2 |
| 1952 | 0 | 3 | **1952** | 63 | 3 | **2132** | 387 | 3 |
| 1952 | 1 | 4 | **1952** | 101 | 4 | **2132** | 387 | 4 |
| 1952 | 1 | 5 | **1952** | 142 | 5 | **2132** | 387 | 5 |
| 1952 | 1 | 6 | **1952** | 180 | 6 | **2132** | 387 | 6 |
| 1952 | 1 | 7 | **1952** | 223 | 7 | **2132** | 387 | 7 |
| 1952 | 2 | 8 | **1952** | 264 | 8 | **2132** | 387 | 8 |
| 1952 | 2 | 9 | **2132** | 304 | 9 | **2132** | 387 | 9 |
| 1952 | 2 | 10 | **2132** | 345 | 10 | **2132** | 387 | 10 |

## Run 2

Total time taken= **390 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 3 | 1 | **2132** | 390 | 1 |
| 1952 | 0 | 2 | **1952** | 35 | 2 | **2132** | 390 | 2 |
| 1952 | 1 | 3 | **1952** | 64 | 3 | **2132** | 390 | 3 |
| 1952 | 1 | 4 | **1952** | 102 | 4 | **2132** | 390 | 4 |
| 1952 | 1 | 5 | **1952** | 143 | 5 | **2132** | 390 | 5 |
| 1952 | 2 | 6 | **1952** | 181 | 6 | **2132** | 390 | 6 |
| 1952 | 2 | 7 | **1952** | 225 | 7 | **2132** | 390 | 7 |
| 1952 | 2 | 8 | **1952** | 266 | 8 | **2132** | 390 | 8 |
| 1952 | 3 | 9 | **2132** | 306 | 9 | **2132** | 390 | 9 |
| 1952 | 3 | 10 | **2132** | 347 | 10 | **2132** | 390 | 10 |

## Run 3

Total time taken= **386 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 3 | 1 | **2132** | 386 | 1 |
| 1952 | 1 | 2 | **1952** | 35 | 2 | **2132** | 386 | 2 |
| 1952 | 1 | 3 | **1952** | 64 | 3 | **2132** | 386 | 3 |
| 1952 | 1 | 4 | **1952** | 102 | 4 | **2132** | 386 | 4 |
| 1952 | 2 | 5 | **1952** | 143 | 5 | **2132** | 386 | 5 |
| 1952 | 2 | 6 | **1952** | 181 | 6 | **2132** | 386 | 6 |
| 1952 | 2 | 7 | **1952** | 224 | 7 | **2132** | 386 | 7 |
| 1952 | 2 | 8 | **1952** | 265 | 8 | **2132** | 386 | 8 |
| 1952 | 3 | 9 | **2132** | 304 | 9 | **2132** | 386 | 9 |
| 1952 | 3 | 10 | **2132** | 345 | 10 | **2132** | 386 | 10 |

LOW LOAD FIRST FIT – char\*\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Low Load,** a total of **7000 allocs and deallocs** were executed and for every period of 700 allocs/deallocs the RSS and Time were recorded.

Interval = 7000

7000 / 700 = 10 intervals

char\* strings sourced from *Collins Scrabble Words (2015).txt* input file

In use at exit = **373584 bytes** in **12837 blocks**

Total heap usage= **19861 allocs**, **7024 frees**, **693077 bytes allocated**

## Run 1

Total time taken= **239 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 4 | 1 | **2136** | 239 | 1 |
| 1952 | 1 | 2 | **1952** | 14 | 2 | **2136** | 239 | 2 |
| 1952 | 1 | 3 | **1952** | 27 | 3 | **2136** | 239 | 3 |
| 1952 | 1 | 4 | **1952** | 44 | 4 | **2136** | 239 | 4 |
| 1952 | 2 | 5 | **1952** | 64 | 5 | **2136** | 239 | 5 |
| 1952 | 2 | 6 | **1952** | 87 | 6 | **2136** | 239 | 6 |
| 1952 | 2 | 7 | **1952** | 113 | 7 | **2136** | 239 | 7 |
| 1952 | 3 | 8 | **1952** | 142 | 8 | **2136** | 239 | 8 |
| 1952 | 3 | 9 | **2136** | 172 | 9 | **2136** | 239 | 9 |
| 1952 | 3 | 10 | **2136** | 205 | 10 | **2136** | 239 | 10 |

## Run 2

Total time taken= **231 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 4 | 1 | **2136** | 231 | 1 |
| 1952 | 0 | 2 | **1952** | 14 | 2 | **2136** | 231 | 2 |
| 1952 | 1 | 3 | **1952** | 26 | 3 | **2136** | 231 | 3 |
| 1952 | 1 | 4 | **1952** | 42 | 4 | **2136** | 231 | 4 |
| 1952 | 1 | 5 | **1952** | 61 | 5 | **2136** | 231 | 5 |
| 1952 | 2 | 6 | **1952** | 84 | 6 | **2136** | 231 | 6 |
| 1952 | 2 | 7 | **1952** | 109 | 7 | **2136** | 231 | 7 |
| 1952 | 2 | 8 | **1952** | 137 | 8 | **2136** | 231 | 8 |
| 1952 | 3 | 9 | **2136** | 167 | 9 | **2136** | 231 | 9 |
| 1952 | 3 | 10 | **2136** | 198 | 10 | **2136** | 231 | 10 |

## Run 3

Total time taken= **236 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 4 | 1 | **2136** | 236 | 1 |
| 1952 | 0 | 2 | **1952** | 14 | 2 | **2136** | 236 | 2 |
| 1952 | 0 | 3 | **1952** | 27 | 3 | **2136** | 236 | 3 |
| 1952 | 1 | 4 | **1952** | 43 | 4 | **2136** | 236 | 4 |
| 1952 | 1 | 5 | **1952** | 63 | 5 | **2136** | 236 | 5 |
| 1952 | 1 | 6 | **1952** | 86 | 6 | **2136** | 236 | 6 |
| 1952 | 2 | 7 | **1952** | 113 | 7 | **2136** | 236 | 7 |
| 1952 | 2 | 8 | **1952** | 141 | 8 | **2136** | 236 | 8 |
| 1952 | 2 | 9 | **2136** | 171 | 9 | **2136** | 236 | 9 |
| 1952 | 3 | 10 | **2136** | 203 | 10 | **2136** | 236 | 10 |

LOW LOAD BEST FIT – char\*\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Low Load,** a total of **7000 allocs and deallocs** were executed and for every period of 700 allocs/deallocs the RSS and Time were recorded.

Interval = 7000

7000 / 700 = 10 intervals

char\* strings sourced from *Collins Scrabble Words (2015).txt* input file

In use at exit = **373584 bytes** in **12837 blocks**

Total heap usage= **19861 allocs**, **7024 frees**, **693077 bytes allocated**

## Run 1

Total time taken= **402 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 4 | 1 | **2136** | 402 | 1 |
| 1952 | 0 | 2 | **1952** | 33 | 2 | **2136** | 402 | 2 |
| 1952 | 1 | 3 | **1952** | 59 | 3 | **2136** | 402 | 3 |
| 1952 | 1 | 4 | **1952** | 89 | 4 | **2136** | 402 | 4 |
| 1952 | 1 | 5 | **1952** | 127 | 5 | **2136** | 402 | 5 |
| 1952 | 2 | 6 | **1952** | 168 | 6 | **2136** | 402 | 6 |
| 1952 | 2 | 7 | **1952** | 211 | 7 | **2136** | 402 | 7 |
| 1952 | 2 | 8 | **1952** | 256 | 8 | **2136** | 402 | 8 |
| 1952 | 3 | 9 | **1952** | 303 | 9 | **2136** | 402 | 9 |
| 1952 | 3 | 10 | **2136** | 351 | 10 | **2136** | 402 | 10 |

## Run 2

Total time taken= **405 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 4 | 1 | **2136** | 405 | 1 |
| 1952 | 0 | 2 | **1952** | 34 | 2 | **2136** | 405 | 2 |
| 1952 | 0 | 3 | **1952** | 60 | 3 | **2136** | 405 | 3 |
| 1952 | 1 | 4 | **1952** | 91 | 4 | **2136** | 405 | 4 |
| 1952 | 1 | 5 | **1952** | 129 | 5 | **2136** | 405 | 5 |
| 1952 | 1 | 6 | **1952** | 170 | 6 | **2136** | 405 | 6 |
| 1952 | 2 | 7 | **1952** | 215 | 7 | **2136** | 405 | 7 |
| 1952 | 2 | 8 | **1952** | 261 | 8 | **2136** | 405 | 8 |
| 1952 | 2 | 9 | **1952** | 307 | 9 | **2136** | 405 | 9 |
| 1952 | 3 | 10 | **2136** | 354 | 10 | **2136** | 405 | 10 |

## Run 3

Total time taken= **446 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 13 | 1 | **2136** | 446 | 1 |
| 1952 | 0 | 2 | **1952** | 47 | 2 | **2136** | 446 | 2 |
| 1952 | 0 | 3 | **1952** | 76 | 3 | **2136** | 446 | 3 |
| 1952 | 1 | 4 | **1952** | 113 | 4 | **2136** | 446 | 4 |
| 1952 | 1 | 5 | **1952** | 157 | 5 | **2136** | 446 | 5 |
| 1952 | 1 | 6 | **1952** | 204 | 6 | **2136** | 446 | 6 |
| 1952 | 2 | 7 | **1952** | 250 | 7 | **2136** | 446 | 7 |
| 1952 | 2 | 8 | **1952** | 298 | 8 | **2136** | 446 | 8 |
| 1952 | 2 | 9 | **1952** | 246 | 9 | **2136** | 446 | 9 |
| 1952 | 3 | 10 | **2136** | 394 | 10 | **2136** | 446 | 10 |

LOW LOAD WORST FIT – char\*\*

Sizes of free blocks varied from 5, 8, 13, 21, 34 bytes

RSS and Time collected across 10 intervals each during initial free block generation, allocation and deallocation respectively.

For **Low Load,** a total of **7000 allocs and deallocs** were executed and for every period of 700 allocs/deallocs the RSS and Time were recorded.

Interval = 7000

7000 / 700 = 10 intervals

char\* strings sourced from *Collins Scrabble Words (2015).txt* input file

In use at exit = **401592 bytes** in **14004 blocks**

Total heap usage= **21028 allocs**, **7024 frees**, **721085 bytes allocated**

## Run 1

Total time taken= **415 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 4 | 1 | **2136** | 415 | 1 |
| 1952 | 0 | 2 | **1952** | 37 | 2 | **2136** | 415 | 2 |
| 1952 | 1 | 3 | **1952** | 68 | 3 | **2136** | 415 | 3 |
| 1952 | 1 | 4 | **1952** | 109 | 4 | **2136** | 415 | 4 |
| 1952 | 1 | 5 | **1952** | 153 | 5 | **2136** | 415 | 5 |
| 1952 | 1 | 6 | **1952** | 193 | 6 | **2136** | 415 | 6 |
| 1952 | 2 | 7 | **2136** | 239 | 7 | **2136** | 415 | 7 |
| 1952 | 2 | 8 | **2136** | 283 | 8 | **2136** | 415 | 8 |
| 1952 | 2 | 9 | **2136** | 325 | 9 | **2136** | 415 | 9 |
| 1952 | 3 | 10 | **2136** | 369 | 10 | **2136** | 415 | 10 |

## Run 2

Total time taken= **411 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 4 | 1 | **2136** | 411 | 1 |
| 1952 | 1 | 2 | **1952** | 37 | 2 | **2136** | 411 | 2 |
| 1952 | 1 | 3 | **1952** | 68 | 3 | **2136** | 411 | 3 |
| 1952 | 1 | 4 | **1952** | 109 | 4 | **2136** | 411 | 4 |
| 1952 | 2 | 5 | **1952** | 152 | 5 | **2136** | 411 | 5 |
| 1952 | 2 | 6 | **1952** | 192 | 6 | **2136** | 411 | 6 |
| 1952 | 2 | 7 | **2136** | 238 | 7 | **2136** | 411 | 7 |
| 1952 | 3 | 8 | **2136** | 281 | 8 | **2136** | 411 | 8 |
| 1952 | 3 | 9 | **2136** | 322 | 9 | **2136** | 411 | 9 |
| 1952 | 3 | 10 | **2136** | 366 | 10 | **2136** | 411 | 10 |

## Run 3

Total time taken= **406 ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Free Block Generation RSS | Time (ms) | Interval | Allocation RSS | Time (ms) | Interval | Deallocation RSS | Time (ms) | Interval |
| 1952 | 0 | 1 | **1952** | 4 | 1 | **2136** | 406 | 1 |
| 1952 | 0 | 2 | **1952** | 36 | 2 | **2136** | 406 | 2 |
| 1952 | 0 | 3 | **1952** | 66 | 3 | **2136** | 406 | 3 |
| 1952 | 1 | 4 | **1952** | 106 | 4 | **2136** | 406 | 4 |
| 1952 | 1 | 5 | **1952** | 149 | 5 | **2136** | 406 | 5 |
| 1952 | 1 | 6 | **1952** | 189 | 6 | **2136** | 406 | 6 |
| 1952 | 2 | 7 | **2136** | 233 | 7 | **2136** | 406 | 7 |
| 1952 | 2 | 8 | **2136** | 277 | 8 | **2136** | 406 | 8 |
| 1952 | 2 | 9 | **2136** | 318 | 9 | **2136** | 406 | 9 |
| 1952 | 3 | 10 | **2136** | 361 | 10 | **2136** | 406 | 10 |