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CSC 130

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Performance Analysis

* Performance analysis document that will record, compare, and analyze the running times of manipulating four hash tables respectively.
* For each hash table that is initially empty, do the following:
* sequentially insert the array of random short integers into the hash table.
* randomly remove 1000 numbers from the hash table.
* find from the hash table each number of the original array from the last to the first.
* measure the elapsed time for the above three operations combined.

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| Trial #2 |  |
| Hash Table: | Time(sec) |
| Linked List | 0.002643185 |
| Linear | 0.005535307 |
| Quadratic | 0.00539309 |
| Double Hashing | 0.004945279 |

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| --- | --- |
| Trial #1 |  |
| Hash Table: | Time(sec) |
| Linked List | 0.001682482 |
| Linear | 0.005446109 |
| Quadratic | 0.003089633 |
| Double Hashing | 0.006430932 |

Array Sample Size: 8192

Table Size: 8209

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| Trial #3 |  |
| Hash Table: | Time(sec) |
| Linked List | 0.001985574 |
| Linear | 0.005707106 |
| Quadratic | 0.00324664 |
| Double Hashing | 0.006092797 |

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| Trial #4 |  |
| Hash Table: | Time(sec) |
| Linked List | 0.00210845 |
| Linear | 0.004691564 |
| Quadratic | 0.003248915 |
| Double Hashing | 0.007204365 |

* For this case, on average it seems like separate linked list is the fastest for the four trials.