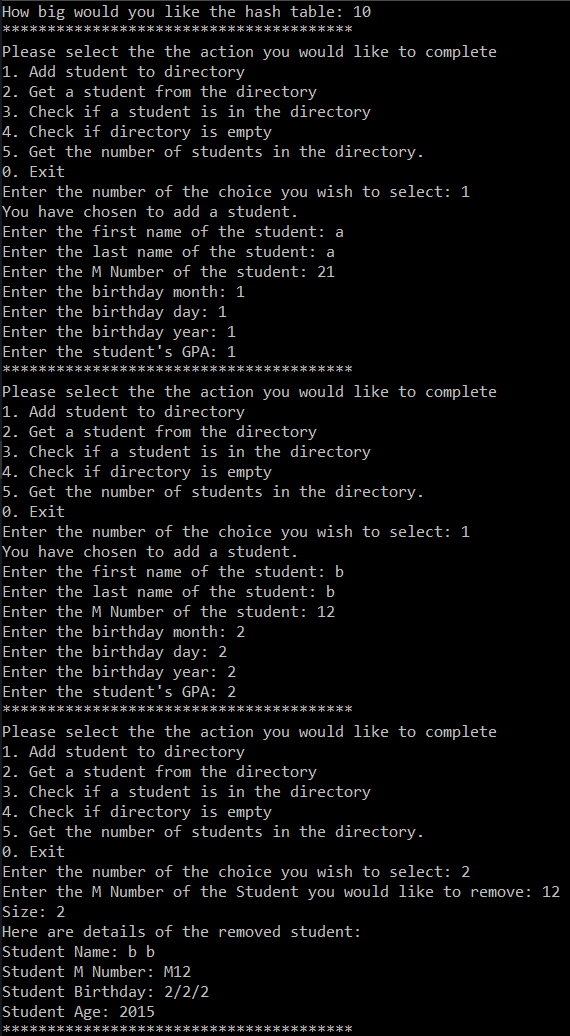
Hash tables are an important data structure used to organize a lot of data into one container. Using a key to map the different sets of data, a hash table can organize data based on hashed key given by the user. Another data structure used in this lab was the linked list data structure. A data structure that includes a piece of data and then a pointer to the next node in the list. Both of these data structures were combined in one lab to show the differences in performance of just linear probing through a hash table and using a linked list for chained linking. This shows how the use of these data structures can be used for the same thing, storing data, in different ways.

|  |  |  |  |
| --- | --- | --- | --- |
| 100 | 36 | 100 | 4 checks |
| 150 | 36 | 150 | 4 checks |
| 200 | 36 | 200 | 4 checks |
| 250 | 36 | 250 | 4 checks |
| Array Size ( Probing) | Performance | Array Size( Chained) | Performance |

\*This is searching for mNumber 10000040 for 50 random student

Task 3 Screenshot



Task 4 Screenshots

