

For this project, I decided to use a hash table containing Linked lists, so that I could use separate chaining as my collision resolution strategy. I did this because I thought searching through a linked list to find the proper entry would be easier than having to look further through the hash table. As my hashing function, I used $\text{ID number} \% \text{table size}$ because I knew it would result in keys that were fairly evenly distributed. Also, if the IDs of the eclipses happened to be less than the table size, then the key for that eclipse would simply be the ID number of the eclipse. I wanted the load factor for my hash table to be .75, because it should not be too full but also not waste too much space. To accomplish this I set the size of the table by adding $\frac{1}{4}$ of the requested size to the size of the table. The bucket size for my hash table is one, because it uses an array that can only store one item at each index.