All the input data were successfully inserted into linked list and a file named criminal record. At first all the input were written in to the file. After that all the input were inserted into linked list in a sorted way

First we created a class of criminal type. Criminal class as variables - id, name , age, gender etc. These variables were passed to the insert function as parameters.

Then insert function created nodes of linked list to store those variables.

Variables were stored into the linked list

In ascending order according to there id.

Inside search option there are 3 option.

Search by name

search by id

search by offenses

In those three function we can pass 2 types of parameters

Search by Id use integer type parameters and other two use string type parameters

Inside this 3 function there is a while loop by which we travers the whole linked list until it find the recurred data. So the run time complexity of this function is O(n)

When it finds the search data it prints the full record of the searching data.

To delete a data we have to pass the id as parameter into the delete data function . when it finds the id it deletes the whole record associated with the id. It will also delete the data from files. And sort the file into ascending order.

Time complexity best case is O(1) and worst case o(n).

In update data function, user has to pass the address of the node as parameters. First user has to find the address of the node he wants to update. Later he has to pass the address in to the data update function. Inside it used has options to choose any record he wants to update. So after performing update function it will update the node of the linked list as well as the file.

Linked list and the file will be updated in the ascending order.

Inside show option the whole linked list was traversed. While traversing we printed all the items inside the nodes.