Assignment 2 Reports

Quest 1

A deque class was implemented using an array. The class had various methods namely the isFull method to check if the deque is full or not. The isEmpty method to check if the methods is empty or not. A method to tell the number of elements in the deque was also implemented. add\_to\_back, remove\_front, remove\_back, add\_to\_front were implemented to add an element to the deque from behind, remove an element from the front of the deque, remove an element from behind the deque and also add an element to the front of the deque respectively. The adding process was quit challenging.

Quest 2

The quest of this program was to compare the runtimes of an interpolation search and that of binary search and also to prove that an interpolation search is faster than a binary search. Both programs were simulated at 100, 1000 and 5000 entries each and at each of the levels the runtimes were recorded as follows.

|  |  |  |
| --- | --- | --- |
|  | Binary Search | Interpolation Search |
| 100 | 0.0 | 0.0 |
| 1000 | 0.0 | 0.0 |
| 5000 | 0.0 | 0.0 |

The challenge encountered with this program was that the runtime kept coming back as 0.0. Every attempt to rectify this proved futile.