Exp No: 1

Date :

**Time Space Trade off Implementation**

1. Let S be an integer array of n elements perform two operations

* remove(i)-I is removed from S
* next(i)- returns the next larger element j, where j>i, jε S, if such j exists. Implement the same using linked list.

1. Make observations on the two methods and comment on time-space tradeoff.

**Aim:**

To do the time space trade-off of array and linked list operations

**Theoretical Background:**

What is time Space trade off?

What are we trying to do here?

Hint:Comparison between arrays and linked list –interms of its space taken and time utilised

Rand()

* How do we retrieve the time?
* Hint: time.h, clock\_t clock(void)
  + C library function clock\_t clock(void) returns the number of clock ticks elapsed since the program was launched.
  + To get the number of seconds used by the CPU, you will need to divide by CLOCKS\_PER\_SEC.

**Algorithm:**

…………………

**Conclusion:**

The Time Space Trade off Implementation of the data structures singly linked list and arrays has been done implementing its different operations

and it is noticed that ……….