**Assignment 2**

1. What does Searching mean? Explain the following Searching methods and find out the time complexity of each method:

* Linear Search
* Binary Search

1. Write an Algorithm of Bubble sort method .Also prove that complexity of this algorithm is O(N2) where N is number of elements in array.
2. Write a program to perform selection sort method.
3. Write an algorithm to find out sum of elements in given array where size of array is N. prove that time complexity of this algorithm is O(N).
4. Write an Algorithm to perform Insertion Sort Algorithm. Also prove that Time complexity of this algorithm in Best Case is O(n) and in Worst case is O(n2), where n is number of elements in array.
5. Find the complexity of the below program:

function(int n){

if (n==1)

return;

for (int i=1; i<=n; i++){

for (int j=1; j<=n; j++){

printf("\*"); break;

}

}

}