

# Data Structures and Algorithms

CSE2001

## Lab - 4 - Assignment - 1

Yashwanth Reddy

19BCE7362

Date- 8thJuly2021

**Problem :** Selection Sort Algorithm

```
class SelectionSort
{
    void sort(int arr[])
    {
        int n = arr.length;

        for (int i = 0; i < n-1; i++)
        {
            int min_idx = i;
            for (int j = i+1; j < n; j++)
                if (arr[j] < arr[min_idx])
                    min_idx = j;

            int temp = arr[min_idx];
            arr[min_idx] = arr[i];
            arr[i] = temp;
        }
    }

    void printArray(int arr[])
    {
        int n = arr.length;
```

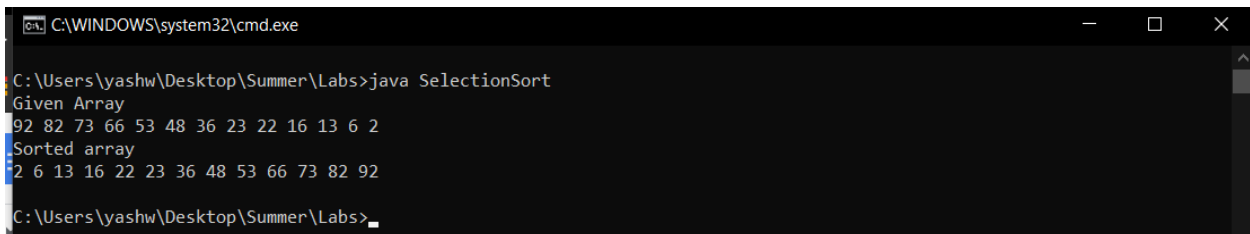
```

        for (int i=0; i<n; ++i)
            System.out.print(arr[i]+" ");
        System.out.println();
    }

    public static void main(String args[])
    {
        SelectionSort ob = new SelectionSort();
        int arr[] = {92,82,73,66,53,48,36,23,22,16,13,6,2};
        int n = arr.length;
        System.out.println("Given Array");
        for (int i = 0; i < n; i++)
            System.out.print(arr[i] + " ");
        System.out.println();
        ob.sort(arr);
        System.out.println("Sorted array");
        ob.printArray(arr);
    }
}

```

## Output



```

C:\WINDOWS\system32\cmd.exe
C:\Users\yashw\Desktop\Summer\Labs>java SelectionSort
Given Array
92 82 73 66 53 48 36 23 22 16 13 6 2
Sorted array
2 6 13 16 22 23 36 48 53 66 73 82 92
C:\Users\yashw\Desktop\Summer\Labs>

```