

## Assignment #1

### DAA

1. What do you mean by algorithm and its complexity? Explain the RAM model for analysis of Algorithm. Use RAM model to estimate the big-oh of the running time for following code segment.

```
for(i=0;i<n;i++){  
    small pos = i;  
    smallest = Array[small pos];  
    for(j=i+1; j<=n; j++){  
        if(Array[j]<smallest){  
            small pos = j;  
            smallest=Array[small pos];  
        }  
    }  
    Array[small pos]=Array[i];  
    Array[i] = smallest;  
}
```

2. Explain all the methods for solving recurrence relations with 3 examples each.

3. Discuss all the theoretical background with numerical example and implement the following in any high level language and explain its time complexity.

- Selection sort
- Insertion Sort
- Bubble sort