Assignment -1 (DAA)

1.1.Why algorithms analysis is needed? Explain .

1.2.Analyze the following algorithms using RAM model and express the time and space complexities using Big Oh notation.

a)

```
findSum(a,n){
sum= 0;
for (i= 0; i < n; i++)
      sum += a[i];
return sum;
}
```

b)

```
doThis(){
      for(i = n; i>=1; i=i/2){
            print("Good");
      }
}
```

1.3.What do you mean by amortized analysis of algorithm? Discuss in detail about aggregate method of amortized complexity analysis with suitable example.

1.4. Solve the following recurrence relation using recurrence tree method.

$T(n) = 3T(n/4) + cn^2$ for $n>1$

$= 1$ for $n=1$