ASSIGNMEN QUESTION DAY I

Q1. what is the time complexity of following code?

```
int i = 0;
for( int i = 0 ; i < n; i++)
{
    for( int j = n; j > i ; j--)
    {
        a = a + i + j ;
    }
}
```

Ans:- $O(n^2)$.

Q2. What is the time complexity of following code?

```
int count = 0;
for( int i = 1 ; i <= n ; i = i * 2 )
{
    for( int j = 1 ; j <= i ; j++)
    {
        count = count + 1;
    }
}
```

Ans: $O(n \log n)$.

Q.3. Find best case, average case & the worst case of Linear Search Algorithm.

Ans: Best case: $O(1)$

Average case: $O(n)$

Worst case: $O(n)$