**Day 1 Assignment submisssion**

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**Questions here**

**1.) Find the time complexity for the following scenarios**

**a.) for(i=1;i<=n;i++)**

**for(j=i;i<=n;j++)**

**printf("Hi");**

**Ans:**

**There a two loops , outer loop will iterate from (i=1 to i<=n) which is total N instructions that is O(N). Since, we have inner loop also which will iterate form j=i but the condition(i<=n) which is given in the iner loop will always be true. So, this inner loop will iterate infinitly .**

**"Hi" will print infinitly.**

**Hence, the time complexity will also become infinite from my point of view.**

**b.) for(i=1;i<=n;i\*=3)**

**for(j=1;i<=n;j++)**

**printf("Hello");**

**Ans:**

**Again, there are two loop inner and outer , so, the outer loop will iterate (from i=1 to i<=n) where i is incremented by 3 times of its previous value .So the time complexity becomes O(logn). Here also condition is (i<=n) is infinite in inner loop .**

**"Hello" will print infinitly.**