Assignment Day- 1:

**Question 1**

1.) Find the time complexity for the following scenarios

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

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

printf("Hi");

**Answer:** The outer loop will execute **n** times and the inner loop will also execute **n** times. “Hi” will be printed **n\*n** times, so the time complexity is **O(n^2)**.

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

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

printf("Hello");

**Answer:** The outer loop will execute **log(n)** times and the inner loop will execute **n** times. “Hello” will be printed **log(n)\*n** times, so the time complexity is **O(n\*log(n))**.