**Question 1**

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

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

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

**printf("Hi");**

**Ans.**

|  |  |
| --- | --- |
| **i** | **j** |
| 1 | n |
| 2 | n |
| 3 | n |
| …. | n |
| n | n |

Ans: O(n2)

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

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

**printf("Hello");**

**Ans.**

|  |  |
| --- | --- |
| **i** | **j** |
| 1 | n |
| 2 | n |
| 3 | n |
| …. | n |
| n | n |

Ans: O(n2)