**1.Find the time complexity of the following Pseudo Code :**

**Problem:**

for( i = 1 ; i <= n ; i = i\*2)

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

print(“Hello”)

**Solution:**

The answer is O(n).

How it works:

1+2+2\*\*2+…....+n

So, no if we want to reach last term in ‘m’ number of steps

We can give it as 2\*\*p = n

And p = logn

Now sum will be = 1. ((2\*\*p – 1)/(2-1))

Substitute p with logn

We get (2\*\*logn-1) which is equal to n-1 .

Now, (n-1) is nothing but O(n).