```
For( i=1 ; i<=n;  i = i*2 )
    For( j=1 ; j<=i ; j++)
    {
        print ("Hello");
    }
```

Assume n = 16.

then outer for loop will take roughly 4 steps to reach 16, so we can say that it will take O(Logn) time.

Inner for loop will execute i times for each iteration of outer for loop.

So total time it executes is:

1 + 2 + 4 + 8 + 16 = 31

and relation between 16 and 31 is 2x16-1

So we can say for any value of n, the inner for loop will execute for (2n-1) times in total.

So the time complexity becomes.

(2n-1) Logn

after ignoring all the constants we get O(nlogn)

So the time complexity of above algo is O(nlogn)