

Question 1:

What is the time complexity $T(n)$ for the following code snippet?

```
a = 1
b = 1
while(b <= n)
{
    a += 1
    b += 1
    cout<<"Hi";
}
```

//output

$T(n)=O(n)$ =linear time complexity

Question 2:

Write the output for the following recursive code snippet for $n = 3$:

```
#include <iostream>
using namespace std;
//if n=3
void fun(int n)
{
    if(n > 0)
    {
        cout<<n;
        fun(n - 1);
        cout<<n;
    }
}
int main()
{
    fun(3);
    return 0;
}
//output
321123
```

