Assignment - 1

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 => Ten times "Hi" is printed

$T(n) = O(n)$

because it runs (n) times.

Question - 2

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

```
void fun(int n)
{
    if (n > 0)
    {
        Cout << n;        -> 3 2 1
        fun (n-1)
        Cout << n;        -> 1 2 3
    }
}
```

for $n = 3$

output = 3 2 1 1 2 3