**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";

}

**Answer:**

The time complexity of the given snippet code is **T(n)=O(n)**, since the execution the code depends linearly on the value of **‘n’**.

For instance if value of n=10 then the time complexity of code would be O(10).

## Question 2

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

void fun(int n)

{

    if(n > 0)

    {

        cout<<n:

        fun(n - 1);

        cout<<n;

    }

}

**Output:**

**321123**

**Explanation:**

Here the first cout statement gets executed until the condition becomes false and prints the sequence ‘321’ and and the following sequence ‘123’ gets printed when stack unloads itself in order to back to calling function.