**Data Structure and Algorithms with C++**

**Day-1 Assignment**

Question:1

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

a=1

b=2

while(b<=n)

{

a+=1

b+=1

cout<<”hello”;

}

**Solution:**

T(n) = O(n)

Since it is increasing linearly.

**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;

}

}

//**Solution**:

#include <iostream>

using namespace std;

void fun (int n)

{

if (n > 0)

{

fun( n- 1);

cout<<n;

}

}

Int main()

{

fun(3);

return 0;

}

//**output:**

123

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