

Data structures and algorithms with c++:

Assignment 1:

1. What is the time complexity $T(n)$?

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

Solution: $T(n)=O(n)$

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:

3 2 1 1 2 3