Recursion

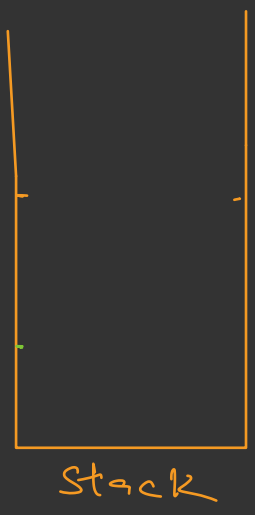
- Funtions
- Memory management (functions)

```
s  void Print(int n) {
    syso(n);
    Print2C);
}

s  void Print2C) {
    syso(Hi);
}

main() {
    int a = 5;
    syso(a);
    Print(4);
    Print2L);
    Syso("End Main")
}
```

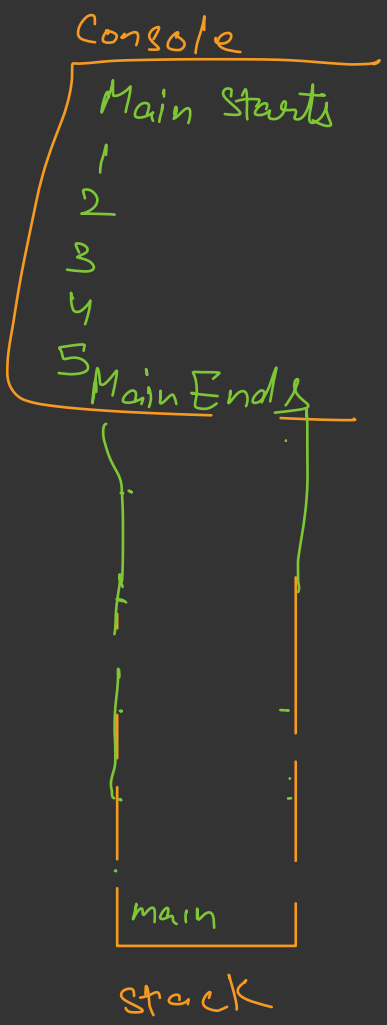
argument

Console

```
5
4
Hi
Hi
End Main
```



```
p s  void  print1(int n) {
        syso(n);
        print2(2)
}

p s void  print2(int n)
      syso(n)
      print3(3);
}
p s void  print3(int n)
      syso(n)
      print4(4)
}
p s void  print4(int n)
      syso(n)
      print5(5);
}
p s void  print5(int n)
    syso(n)
}

  main() {
    syso(Main Starts)
    print1(1);
    syso(Main Ends)
}
```



```
p    s    void print(int n){
        syso(n);
        print(n+1);
    }
    main(){
        syso("Main starts");
        print(1);
    }
```

Console

Main starts
1
2
3
4
5

if( ) {

break

P :

```
void printDecreasing(int n){
    if(n==0){
        Syso(n);
        return;
    }
    Syso(n);
    printDecreasing(n-1);
}
```

printDecreasing(5)

Recursion tree