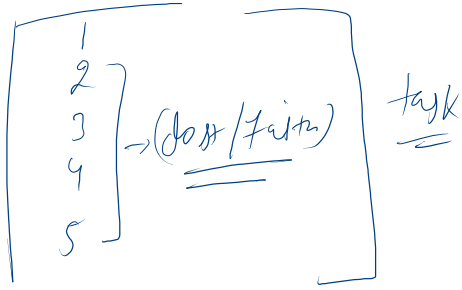
(9,5) → (1,5)

↓

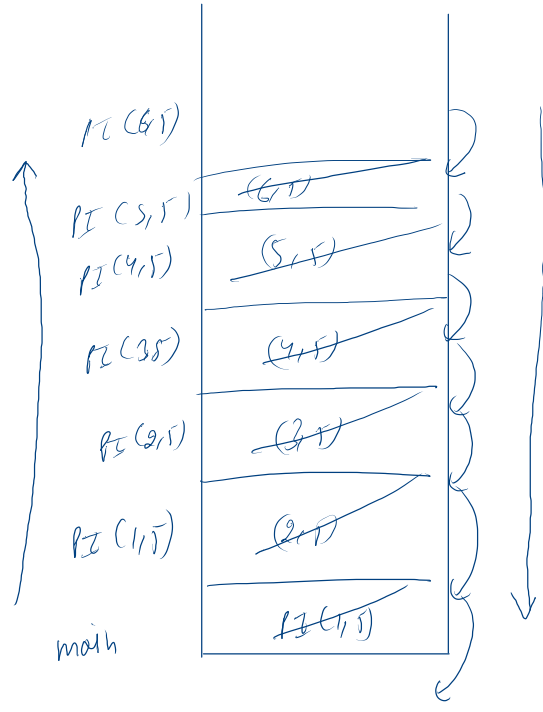
(2,5)

```java
public static void printIncreasing(int a, int b) {
    if (a > b) {
        return;
    }

    System.out.println(a);
    printIncreasing(a + 1, b);
}
```



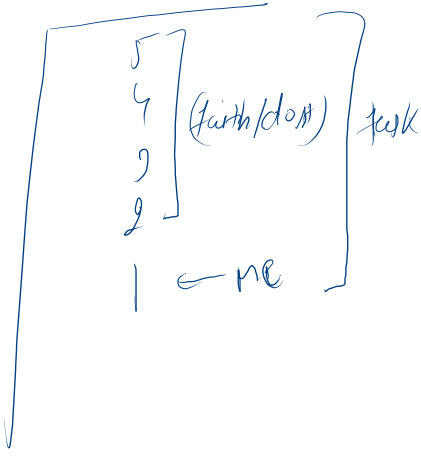
1
2
3
4
5

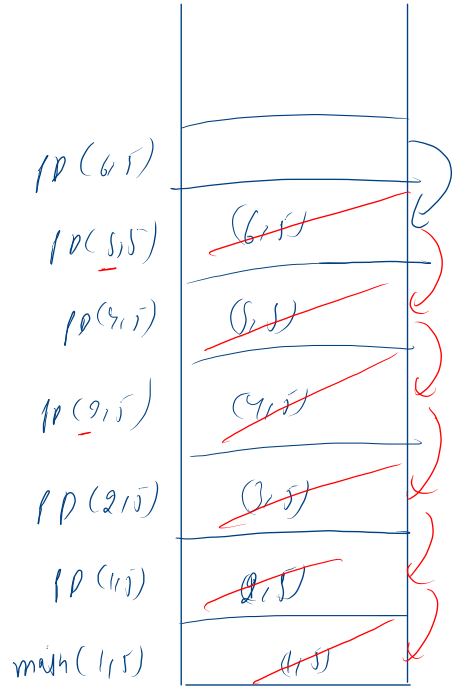


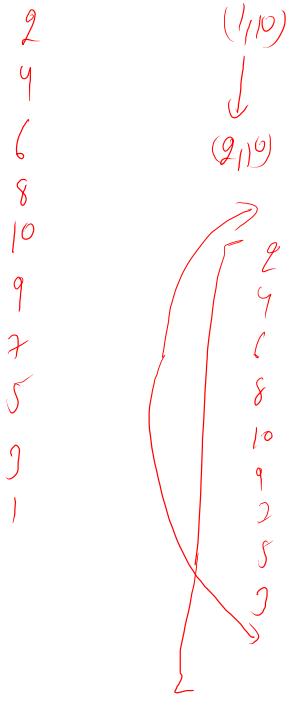
(6,6) → (1,5)
↓
(2,5)

```java
public static void printDecreasing(int a, int b) {
    if (a > b) {
        return;
    }

    printDecreasing(a + 1, b);
    System.out.println(a);
}
```

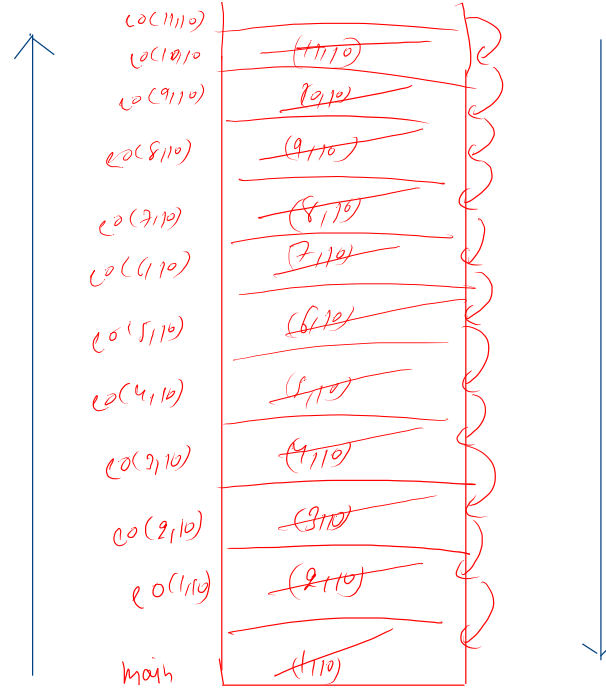






```java
public static void printEvenOdd(int a, int b) {
    if (a > b) {
        return;
    }

    if(a % 2 == 0) System.out.println(a);
    printEvenOdd(a + 1, b);
    if(a % 2 != 0) System.out.println(a);
}
```



fact(n) = fact(n-1) * n

n! = n * (n-1)!

```java
public static int factorial(int n){
    if(n == 0){
        return 1;
    }

    int smallAns = factorial(n - 1);
    return smallAns * n;
}
```

5! = (5 * 4 * 3 * 2 * 1)/5

4! = (4 * 3 * 2 * 1)/4

3! = (3 * 2 * 1)/3

2! = (2 * 1)/2

1! = (1)/1

0! = 1