

Print Increasing Decreasing

Expectation

pdi(4) = 4
3
2
1
1
2
3
4

Faith

pdi(3) = 3
2
1
1
2
3

Expectation meets Faith

pdi(4) = 4
pdi(3)
4

$$pdi(n) = \begin{matrix} n \\ pdi(n-1) \\ n \end{matrix}$$

```
psvm(s[j]a) {
```

```
Scanner s = new Scanner(System.in);
```

```
int n = s.nextInt();
```

```
pdi(n);
```

```
}  
psvm.pdi(int n) {
```

```
if (n == 0)  
return;
```

```
syso(n);
```

```
pdi(n-1);
```

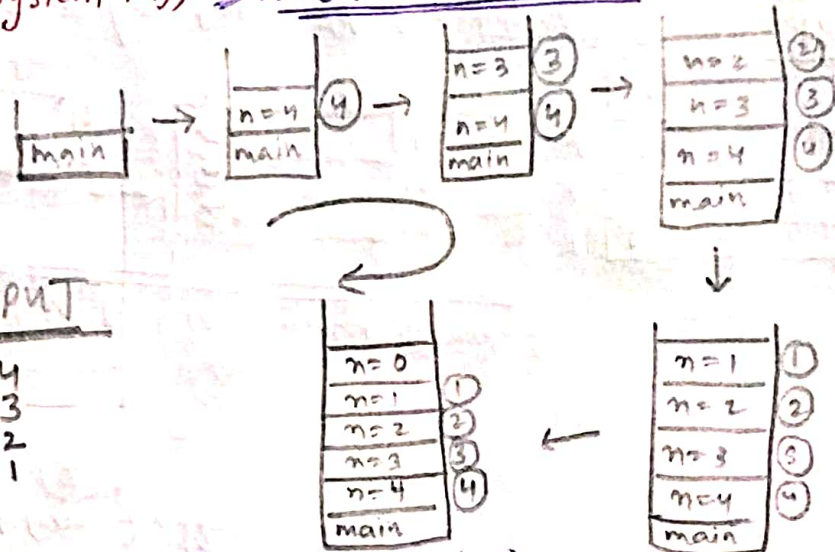
```
syso(n);
```

```
}  
When Stack moves Down (Print Increasing)
```

OUTPUT

4
3
2
1

when stack moves up (Print Decreasing)



OUTPUT

1
2
3
4

Stacking Process

Stack moves up (Till n=0)

Stack moves down (After n=0)

Time Complexity: $O(n)$ → linear due to recursive call

Space Complexity: $O(n)$