Java DSA Lecture 13

Thursday, December 1, 2022 8:05 PM

Print all digits from end

Problem | Submissions | Leaderboard | Discussions

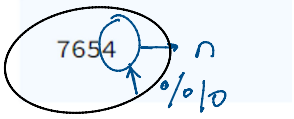
Take n as an integer input from the user, then you have to print the digits of the number starting from the end to the first digit of the number where each digit should be printed in a separate line.

Sample Input 0

7654

Sample Output 0

4
5
6
7



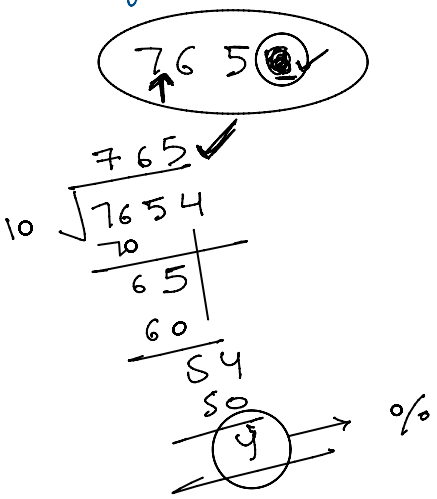
while (n > 0) { false

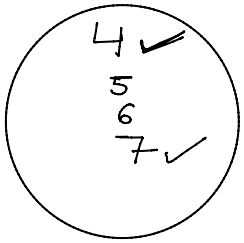
int ans = n % 10 → fetch the last digit

print (ans);

n = n / 10; → remove your last digit.

}





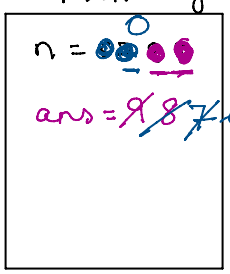

```
Scanner scn = new Scanner(System.in);
int n = scn.nextInt();
while(n > 0){
    int ans = n % 10;
    System.out.println(ans);
    n = n /10;

}
```

0 > 0 — false

6789 → 670 → 6 > 0

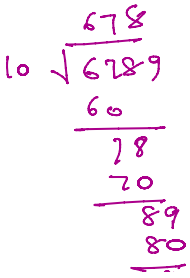
n → remainder

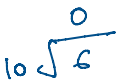
Memory

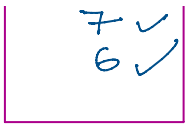


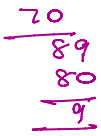
Output

9
8
7
6









GKSTR46 Number of Digits

Problem | Submissions | Leaderboard | Dis

Take an **integer N** as input.

Print the number of **digits** present in **N**.

Sample Input 0

523

Sample Output 0

3

```
Scanner scn = new Scanner(System.in);
int n = scn.nextInt();
int count = 0;
while(n > 0){
    n = n / 10;
    count++;
}
System.out.println(count);
```

Print total steps when n/2

Problem | Submissions | Leaderboard | Discussions

Take an integer input n and then keep on dividing n by 2, till the time n is greater than equal to 1.

Each time you divide n by 2, increment steps by 1.

Print the total number of steps in end.

Print the total number of steps in end.

```
Scanner scn = new Scanner(System.in);
int n = scn.nextInt();
int steps = 0;
while(n > 0){
    n = n / 2;
    steps++;
}
System.out.println(steps);
```

Sample Input 1

```
20
```

Sample Output 1

```
5
```

Print steps and update maximum

Problem | Submissions | Leaderboard | Discussions

Take n as input from the user. Then you will be given a list of n positive integers, each time you find a new maximumal value, you have to increment the steps by 1.

Take steps as 0 initially and maximum value as -100 in the starting.

In the end print the number of steps performed.

Sample Input 0

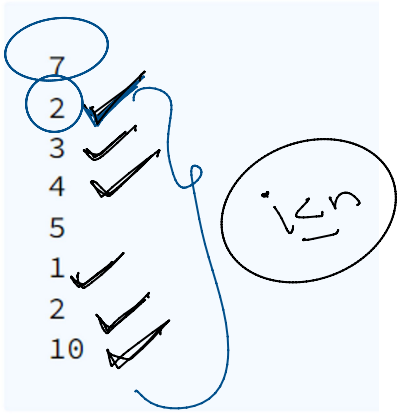
```
6
1
2
3
4
5
6
```

Sample Output 0

```
6
```

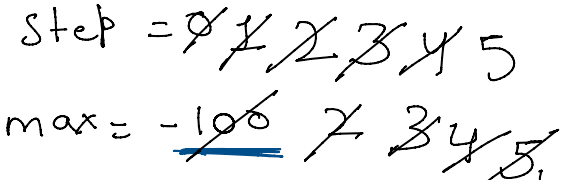
Sample Input 1

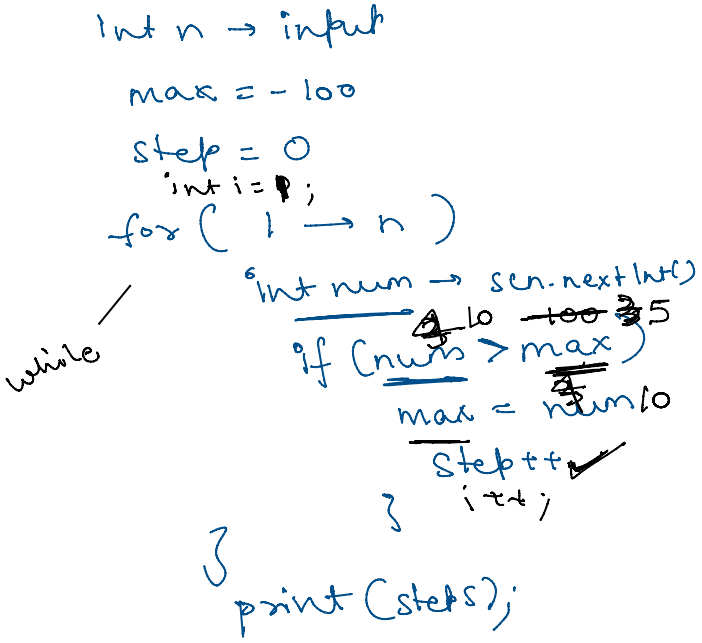
Sample Input 1



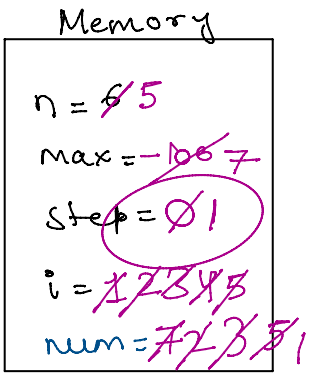
Sample Output 1

```
5
```

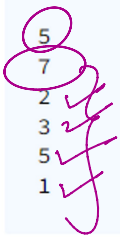





```
Scanner scn = new Scanner(System.in);
int  n = scn.nextInt();
int max = -100;
int step = 0;
int i = 1 ;
while( i<=n  ){
    int num = scn.nextInt();
    if(num > max){
        max = num;
        step++;
    }
    i++;
}
System.out.println(step);
```



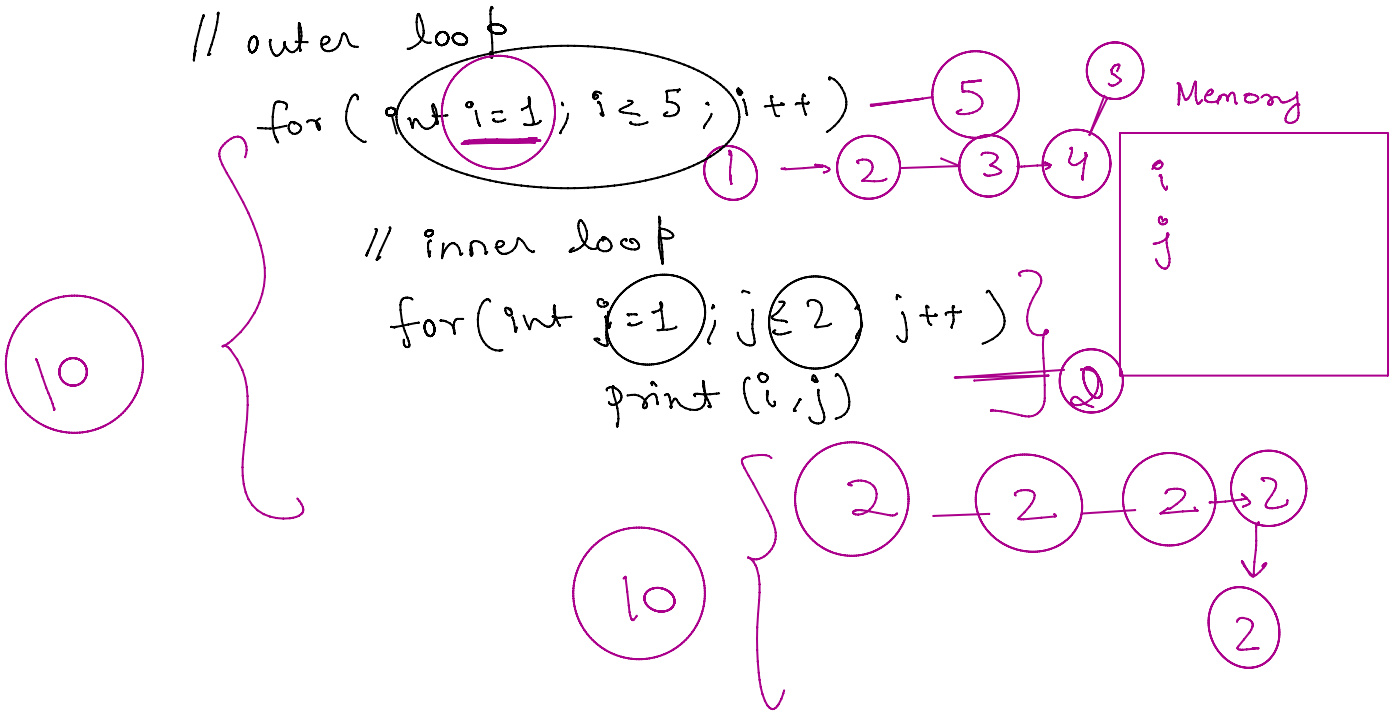
Sample Input 4



Sample Output 4

```
1
```

Nested for - loops

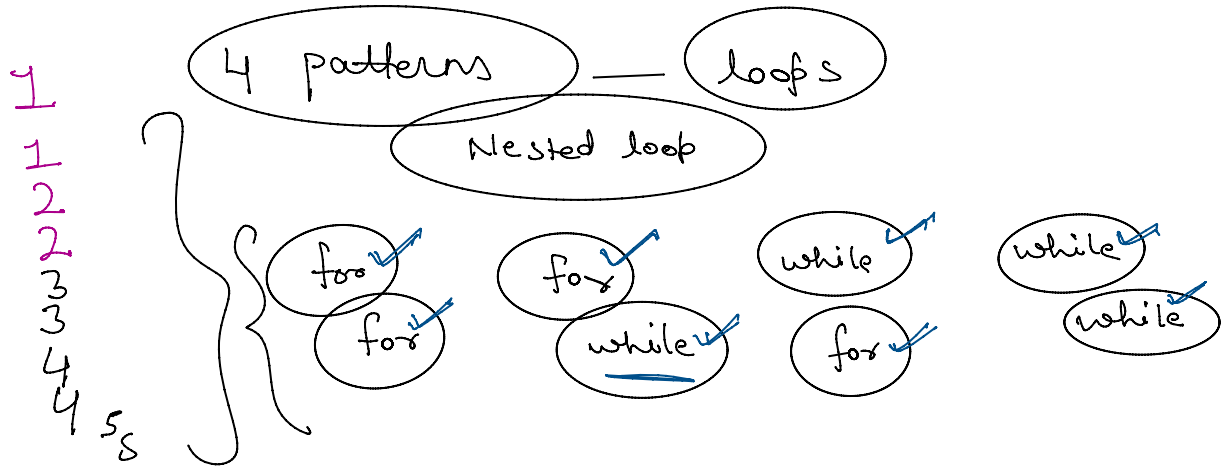



```
for(int i = 1 ; i<=5 ; i++){
    for(int j = 1 ; j<=2 ; j++){
        System.out.println(i);
    }
}
```

Memory

i = ~~1~~ ~~2~~ ~~3~~ ~~4~~ 5

j =



```java
public class Main {
    public static void main(String[] args) {
        int week = 3 ;
        int days = 7;
        for(int i = 1 ; i<= week ; i++){
            System.out.println("week: " + i);
            for(int j = 1 ; j<= days; j++){
                System.out.println(" Day : " + j);
            }
        }
    }
}
```

```
week: 1
 Day : 1
 Day : 2
 Day : 3
 Day : 4
 Day : 5
 Day : 6
 Day : 7
week: 2
 Day : 1
 Day : 2
 Day : 3
 Day : 4
 Day : 5
 Day : 6
 Day : 7
week: 3
 Day : 1
 Day : 2
 Day : 3
 Day : 4
 Day : 5
 Day : 6
 Day : 7
```

Pattern 1 - Print Stars in same line

Problem | Submissions | Leaderboard | Discussions

Take an integer input n and print n stars in the same straight line.

for (i - n)
print ("*");

```java
Scanner scn = new Scanner(System.in);
int n = scn.nextInt();
for(int i = 1 ; i <=n ; i++){
    System.out.print("*");
}
```

Sample Input 0

```
5
```

Sample Output 0

```
*****
```

Pattern 2 - Print n x 12 star rectangle

Sample Input 0

```
6
```

Pattern 2 - Print n x 12 star rectangle

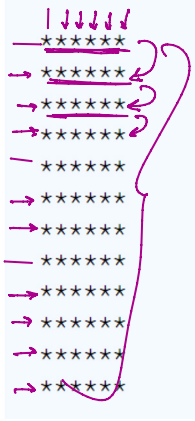
Problem | Submissions | Leaderboard | Discussions

Take n as an integer input and then print a star rectangle such that each line has n stars.

Also, there are 12 such lines.

```
Scanner scn = new Scanner(System.in);
int n = scn.nextInt();
for(int i = 1; i<=12 ; i++){ // row
    for(int j = 1; j<=n ; j++){ // col
        System.out.print("*");
    }
    System.out.println();
}
```

Sample Output 0



i = 12