

Topics to discuss

- Print last digit of an Integer number.
- Count the number of digit in a number
- Print sum of the digit of a number
- Its time & space complexity.

• Print last digit of an Integer Number

① Test case 1:

I/p : 1234

O/p : 4

$$a = 1234$$

$$\begin{array}{r} 10 \overline{) 1234} \quad (123 \\ \underline{12} \\ 234 \\ \underline{23} \\ 34 \\ \underline{30} \\ 4 \end{array}$$

```
static int solution(int a){
    int result;
    result = a % 10;
    return result;
}
```

② Test case 2:

I/p : 8150

O/p : 0

• Count the number of digits in a number

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① Test case 1

I/p : 1230

O/p : 4

② Test case 2

I/p : -1230

O/p : 4

③ Test case 3

I/p : 0123

O/p : 3

count = ~~0~~ 1 2 3 4

$$\textcircled{1} a = 1230/10 = 123.0 (\text{int}) \\ = 123$$

$$\textcircled{2} a = 123/10 = 12.3 (\text{int}) \\ = 12$$

$$\textcircled{3} a = 12/10 = 1.2 (\text{int}) \\ = 1$$

$$\textcircled{4} a = 1/10 = 0.1 (\text{int}) \\ = 0$$

```
static int solution(int a){  
    int count = 0;  
    while (a != 0){  
        a = a/10;  
        count = count + 1;  
    }  
    return count;  
}
```

• Print sum of digits of a number

① Test case 1

I/p : 1234
o/p : 10

$$\text{sum} = 0 + 4 + 3 + 2 + 1$$

$$\text{num} = 1234$$

$$\text{① rem} = 1234 \% 10 = \text{④}$$

$$\text{num} = 1234 / 10 = 123.4 \\ = 123$$

② Test case 2

I/p : 1230
o/p : 6

$$\text{② rem} = 123 \% 10 = \text{③}$$

$$\text{num} = 123 / 10 = 12.3 \\ = 12$$

③ Test case 3

I/p : 0123
o/p : 6

$$\text{③ rem} = 12 \% 10 = \text{②}$$

$$\text{num} = 12 / 10 = 1.2 = 1$$

$$\text{④ rem} = 1 \% 10 = \text{①}$$

$$\text{num} = 1 / 10 = 0.1 = 0$$

```
static int solution(int a){
    int sum = 0;
    while (num != 0) {
        int rem;
        rem = num % 10;
        sum = sum + rem;
        num = num / 10;
    }
    return sum;
}
```

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