

Code - https://www.scaler.com/topics/java/online-java-compiler/?snippet_slug=c200a2d028a713fd77d6



Agenda

- ① Introduce while loop
- ② solve 8 problems

Hema Priya's

Birthday

```
SOP ("Hello")  
SOP ("Hello")  
SOP ("Hello")  
SOP ("Hello")  
SOP ("Hello")
```

Iterations

logic to repeatedly do
a certain task until
condition is met

- ① while loop
- ② For loop

Syntax for while loop

// Initialization

while (condition) {

// task

update

}

```
int i=1;
```

```
while (i <= 5) {
```

```
    cout << "Hello";
```

```
    i = i+1;
```

```
}
```

Q6) Given an Integer N as Input. print its digits
constraints [-10000, 10000]

Example

Input = 6531

Output = 1 3 5 6

	Sequence	output
/10	6531	1
/10	653	3
/10	65	5
/10	6	6

last digit print

$n \% 10$

$$\begin{array}{r} 6531 \\ \hline 10 \end{array} \rightarrow 652$$

$int / int \rightarrow int$

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

```
while (n > 0) {
```

```
    System.out.print(n / 10 + " ");
```

```
    n = n / 10;
```

not
correct
because
of
constraints

n=0

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

```
while (n >= 0) {
```

```
    System.out.print(n / 10 + " ");
```

```
    n = n / 10;
```

Infinite
loop

Final Code

```
if (n == 0) {  
    SOP(0);  
}  
else {  
    if (n < 0) { n = n * -1; }  
    while (n > 0) {  
        system.out.print(n % 10 + " ");  
        n = n / 10;  
    }  
}
```

- 4 7 5 3

n	n % 10	n / 10
4753	4753 % 10 3	4753 / 10 475
475	5	47
47	7	4
4	4	0

Q7) Given Integer N as Input. print the sum of its digits

Input = 6531

Output = $6 + 5 + 3 + 1 = 15$

Constraints

$$0 \leq N \leq 10000$$

Solution

```
int n = sc.nextInt();
int sum = 0;

while (n > 0) {
    int temp = n % 10;
    sum = sum + temp;
    n = n / 10;
}

sop(sum);
```

Q 8) Given an Integer N as Input, reverse the Integer

Input = 6547

Output = 7456 ← Pnt DT

constraints

$$0 \leq N \leq 10^5$$

Sub problem

$r = 653$

$d = 1$

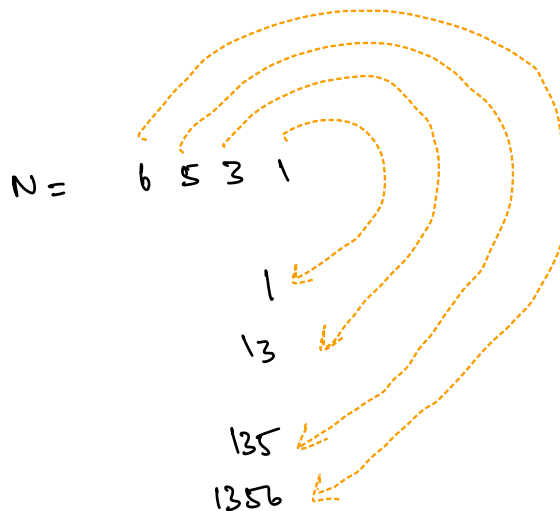
$n = [r][d]$

$= 6531$

$(r \times 10) + d$

$653 \times 10 + 1$

$= 6530 + 1 = 6531$



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

```
int rev = 0;
```

```
while (n > 0) {
```

```
    int d = n % 10;
```

```
    n = n / 10;
```

```
    rev = rev * 10 + d;
```

```
}
```