

code:

```
import java.util.*
```

```
public class ReversedInteges {
```

```
    public static void main (String[] args) {
```

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

```
        System.out.print ("Enter An Integer:");
```

```
        int x = sc.nextInt();
```

```
        int reversed = reverse(x);
```

```
        System.out.println ("Reversed Integes: " + reversed);
```

```
        sc.close();
```

```
    }
```


Reverse Integer:

Given a signed 32-bit integer x , return the number obtained by reversing the digits of x . If reversing x causes the value to go outside the signed 32-bit integer range $[-2^{31}, 2^{31}-1]$, return 0.

EX:

Input: $x = 123$

Output: 321

Input: $x = -123$

Output: -321

Logic:

- Initialize a variable $rev = 0$ to store reversed number.
- Extract digits one by one from given integer using
- $x \% 10$
- Before adding the digit to sum, check for overflow conditions
- Append the digit to sum using $sum = sum * 10 + \text{digit}$
- remove last digit from x using $x / 10$.
- Repeat until all digits are processed
- Return the reversed integer.
- Return 0 if overflow occurs