

Ques Reverse a n-digit no.

```
public static void main(String[] args) {  
    Scanner scn = new Scanner(System.in);  
    int n = scn.nextInt();  
    int num = 0;  
    // to generate my number  
    for (int i = 0; i < n; i++) {  
        → int digit = scn.nextInt();  
        → num = num * 10 + digit;  
    }  
    → System.out.println(num);  
    // to reverse the number  
    → int ans = solve(num);  
    System.out.println(ans);  
}  
  
public static int solve(int num) {  
    → int rev = 0;  
    while (num > 0) {  
        int rem = num % 10;  
        rev = rev * 10 + rem;  
        num = num / 10;  
    }  
    return rev;  
}
```

ans:

412
214

e.g., $n=3$ (4, 1, 2)
 ↑ ↑ ↑
 digit

num = 0

$$\text{num} = 0 * 10 + 4 = 4$$

$$\text{num} = 4 * 10 + 1 = 41$$

$$\text{num} = \underline{41} * 10 + 2 = \underline{412}$$

X

rev = 0

$$412 > 0 \checkmark \quad \text{rem} = 412 \% 10 = 2$$

$$\text{rev} = 0 * 10 + 2 = \underline{2}$$

$$41 > 0 \checkmark \quad \text{rem} = 41 \% 10 = 1$$

$$\text{rev} = 2 * 10 + 1 = 21$$

$$4 > 0 \checkmark \quad \text{rem} = 4 \% 10 = 4$$

$$\text{rev} = 21 * 10 + 4 = 214$$

$$0 > 0 \times$$

Ques

Check if a no. is armstrong

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int num = scn.nextInt();

    int count = noOfDigits(num);

    int ans = 0;
    int temp = num;
    while (num > 0) {
        int rem = num % 10;
        ans = ans + (int)Math.pow(rem, count);

        num = num / 10;
    }

    if (temp == ans) {
        System.out.println(true);
    } else {
        System.out.println(false);
    }
}

public static int noOfDigits(int num) {
    int count = 0;

    while (num > 0) {
        num = num / 10;
        count++;
    }

    return count;
}
```

Rotate 7-digit number to right by three

$$\text{num} = 2345\underline{678}$$

$$\text{int rem} = \text{num} \% 1000 = 678 \leftarrow$$

$$\text{num} = \text{num} / 1000 = 2345 \leftarrow$$

$$\text{int ans} = \text{rem} * 10000 + \text{num};$$

$$\begin{array}{r} 6780000 \\ 2345 \\ \hline \end{array}$$

$$6782345$$

Ques

Prime checker 2

$$n = 5$$

if will divide by 1 & n \Rightarrow prime

it will not divide by any no in between 1 & n \Rightarrow prime

$$\begin{array}{l} n \% 2 = \alpha \\ n \% 3 = \alpha \\ n \% 4 = \alpha \end{array} \left. \vphantom{\begin{array}{l} n \% 2 = \alpha \\ n \% 3 = \alpha \\ n \% 4 = \alpha \end{array}} \right\} \text{prime}$$

$$\begin{array}{l} n = 9 \leftarrow \text{not prime} \\ n \% 2 \quad \alpha \\ n \% 3 \quad \checkmark \\ n \% 4 \quad \alpha \\ n \% 5 \quad \alpha \\ n \% 6 \quad \alpha \\ n \% 7 \quad \alpha \\ n \% 8 \quad \alpha \end{array}$$

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
```

```
    if (n == 1) {
        System.out.println("No");
    } else {
        int count = 0;
        for (int i = 2; i < n; i++) {
            if (n % i == 0) {
                count++;
                break;
            }
        }
        if (count == 0)
            System.out.println("Yes");
        else
            System.out.println("No");
    }
}
```

$$n = 15$$

$$C = 0$$

$$n \% 2 == 0 \quad \alpha$$

$$n \% 3 == 0 \quad \checkmark$$

$$C = 1$$

!

$$n = 5 \quad C = 0$$

$$\Rightarrow n \% 2 == 0 \quad \alpha$$

$$\Rightarrow n \% 3 == 0 \quad \alpha$$

$$\Rightarrow n \% 4 == 0 \quad \alpha$$

$$C = 0$$

$$n = 7 \quad C = 0$$

$$n \% 2 == 0 \quad \alpha$$

$$n \% 3 == 0 \quad \alpha$$

$$n \% 4 == 0 \quad \alpha$$

$$n \% 5 == 0 \quad \alpha$$

$$n \% 6 == 0 \quad \alpha$$

$$C = 0$$