

Reverse n-digit number

Problem

Submissions

Leaderboard

Discussions

Take a number n greater than or equal to zero as an integer input.

Then you will be given n digits as integer inputs and you have to form a number from it. Print the number formed.

Then you have to reverse the digits of this number. And then print the final reversed number in the next line.

Sample Input 0

3
2
5
6

Sample Output 0

2356

652

1st part is similar to previous question ✓

2nd part is similar to reverse a 3 digit.

sum = 0

{ sum = sum + 10 * rem } ✓

2
5
6

2
5
6

Sum = 652

```
/* Enter your code here. Read input from
Scanner scn = new Scanner(System.in);
int n = scn.nextInt(); — 43210
int num = 0;
while(n > 0){ 256 + 10
    num = num * 10 + scn.nextInt(); 256 + 1 = 2561 ✓
    n--;
}
System.out.println(num); ✓
int rnum = 0;
while(num > 0){ 2561
    int rem = num % 10; ✓ 2561
    rnum = rnum * 10 + rem; 1 * 10 + 6
    num = num / 10; — 16 * 10 + 5
}
System.out.println(rnum); ✓ 165 * 10 + 2
```

Sample Input 1

4
2
5
6
1

num = 42561

rnum = 1652

Sample Output 1

2561
1652

* ternary Operator

if ($n > 10$)
{ = }

$n > 10$? true : false

```

    {
    =
    |
    else {
    =
    }

```

test condition

• "Armstrong Number"

$$\{ abcd\dots = a^n + b^n + c^n + d^n \dots \}$$

- sum of the digits raised to the power no. of digits is equal to original digit.

$$\begin{aligned}
 153 &\rightarrow 3 \text{ digit} = 1^3 + 5^3 + 3^3 \\
 &= 1 + 125 + 27 = 153 \checkmark \text{A.no.}
 \end{aligned}$$

Write a function to check if an Armstrong number or not

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Take n as an integer input.

Then write a function that takes in this n as an integer parameter and returns if n is an Armstrong number or not.

In the end, print "true" or "false" accordingly.

Note: An armstrong number is a number which is equal to the sum of the cube of its digits.

Eg: $1634 \rightarrow 4$

$$\begin{aligned}
 &1^4 + 6^4 + 3^4 + 4^4 \\
 &= 1 + 1296 + 81 + 256 \\
 &= 1634
 \end{aligned}$$

$\text{Sum} = 0 \checkmark \% \quad \text{Note: } 1634 = 1^4 + 6^4 + 3^4 + 4^4$

$$\begin{array}{r}
 2 \ 1 \\
 1296 \\
 256 \\
 81 \\
 \hline
 1634
 \end{array}$$

$\text{sum} + \text{rem} * \text{rem} \Rightarrow$

$\text{one} \rightarrow abcd = a^4 + b^4 + c^4 + d^4$

Armstrong \Rightarrow $abcd^4 = a^4 + b^4 + c^4 + d^4$

$153 \rightarrow 1^3 + 5^3 + 3^3 = 1 + 125 + 27 = 153 \checkmark$

$154 \rightarrow 1^3 + 5^3 + 4^3 = 1 + 125 + 64 = 190 \times$

$$\begin{aligned} \text{Sum} &= 0; \\ \text{rem} &= 4 \\ \text{sum} &= \text{sum} + \text{rem} * \text{rem} * \text{rem} \\ n &= n / 10 \\ \text{from} & \end{aligned}$$

$$\begin{aligned} n &- \\ \text{backup} & \end{aligned}$$

```

Scanner scn = new Scanner(System.in);
int n = scn.nextInt();  $\rightarrow 153$ 
int num = n;
int sum = 0;
while(n > 0) {
    int rem = n % 10;  $\rightarrow 5$ 
    sum = sum + rem * rem * rem;  $\rightarrow 125$ 
    n = n / 10;  $\rightarrow 15$ 
}
if(sum == num){  $\checkmark$ 
    System.out.println("true");
} else{
    System.out.println("false");
}

```

$$\begin{aligned} &153 \rightarrow 6 \\ &\downarrow \\ &\boxed{\begin{aligned} \text{num} &= 153 \\ \text{sum} &= 125 \\ &152 \\ &153 \end{aligned}} \\ &\cdot \\ &\text{Math.pow}(\text{rem}, \text{count}) \end{aligned}$$

$$\begin{aligned} &27 + 5 * 5 * 5 \\ &27 + 125 = 152 \\ &152 + 1 * 1 * 1 \\ &= 153 \checkmark \end{aligned}$$

Print Armstrong in a range

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Sample Input 0

1
200

Sample Output 0

1
153

Take x and y as integer inputs.

Print all the Armstrong numbers in separate line which lie in the range x to y (both x and y inclusive)

Use the function isArmstrong() which checks if a number is an Armstrong number or not and returns true or false accordingly.

