

Java Program to check Armstrong Number

An **Armstrong** number is a positive m-digit number that is equal to the sum of the m^{th} powers of their digits.

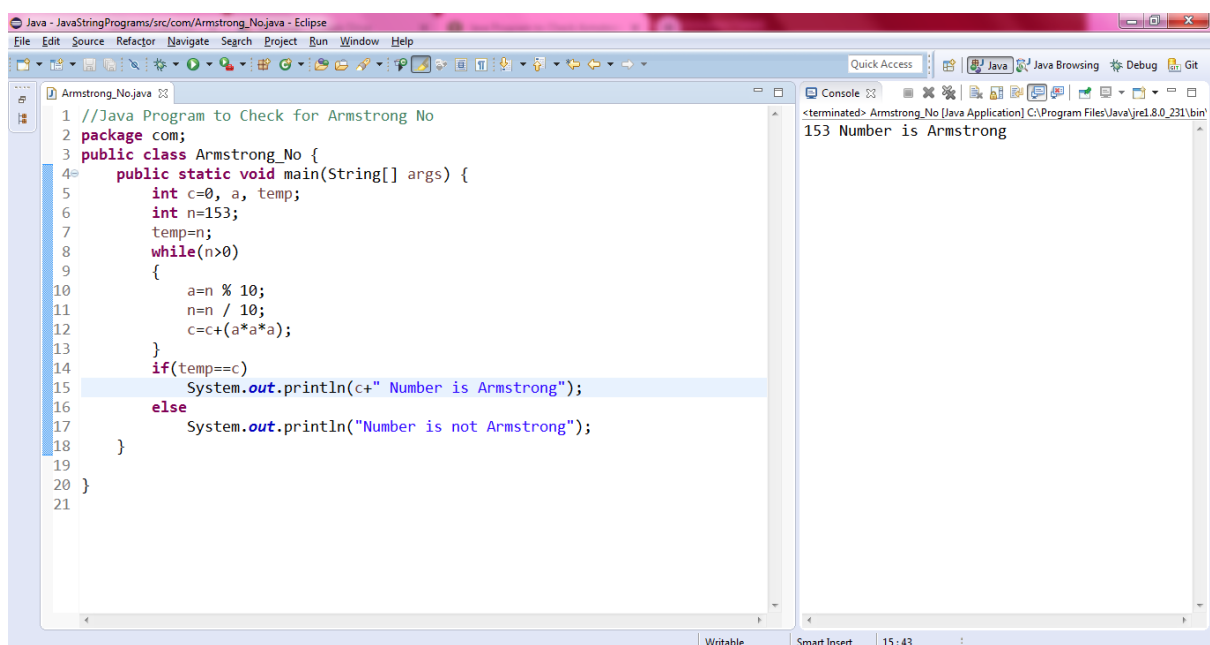
Armstrong Number Example

153: $1^3 + 5^3 + 3^3 = 1 + 125 + 27 = 153$

125: $1^3 + 2^3 + 5^3 = 1 + 8 + 125 = 134$ (Not an Armstrong Number)

//Java Program to Check for Armstrong No

```
package com;
public class Armstrong_No {
    public static void main(String[] args) {
        int c=0, a, temp;
        int n=153;
        temp=n;
        while(n>0)
        {
            a=n % 10;
            n=n / 10;
            c=c+(a*a*a);
        }
        if(temp==c)
            System.out.println(c+" Number is Armstrong");
        else
            System.out.println("Number is not Armstrong");
    }
}
```



Logic

		a	n	c
temp=n temp=153	n > 0	a=n%10	n=n/10	c=c+(a*a*a)
	153 > 0 True	a=153 % 10=3	n=153 / 10=15	c=0+(3*3*3)=27
	15 > 0 True	a=15 % 10=5	n=15 / 10=1	c=27+(5*5*5)=152
	1 > 0 True	a=1 % 10=1	n=1 / 10=0	c=152+(1*1*1)=153
	0 > 0 False			
temp==c				
153==153 True				
No is Armstrong				

Java Program to check Palindrome Number

Palindrome number in java: A **palindrome number** is a number that is same after reverse.
For example 545, 151, 34543, 343, 171, 48984 are the palindrome numbers.

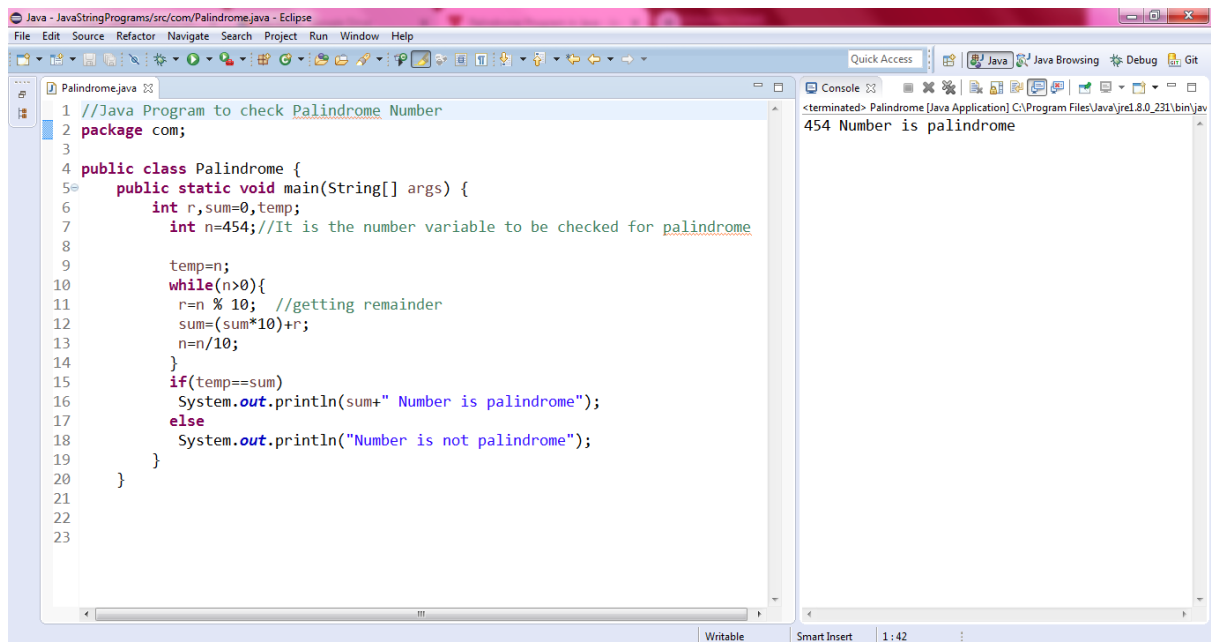
Logic

- Get the number to check for palindrome
- Hold the number in temporary variable
- Reverse the number
- Compare the temporary number with reversed number
- If both numbers are same, print "palindrome number"
- Else print "not palindrome number"

```
//Java Program to check Palindrome Number
package com;

public class Palindrome {
    public static void main(String[] args) {
        int r,sum=0,temp;
        int n=454;//It is the number variable to be checked for
        palindrome

        temp=n;
        while(n>0){
            r=n % 10; //getting remainder
            sum=(sum*10)+r;
            n=n/10;
        }
        if(temp==sum)
            System.out.println(sum+" Number is palindrome");
        else
            System.out.println("Number is not palindrome");
    }
}
```



The screenshot shows the Eclipse IDE with the following components:

- Editor:** Displays the Java code for `Palindrome.java`. The code is as follows:


```
1 //Java Program to check Palindrome Number
2 package com;
3
4 public class Palindrome {
5     public static void main(String[] args) {
6         int r,sum=0,temp;
7         int n=454;//It is the number variable to be checked for palindrome
8
9         temp=n;
10        while(n>0){
11            r=n % 10; //getting remainder
12            sum=(sum*10)+r;
13            n=n/10;
14        }
15        if(temp==sum)
16            System.out.println(sum+" Number is palindrome");
17        else
18            System.out.println("Number is not palindrome");
19    }
20 }
21
22
23
```
- Console:** Shows the output of the program:


```
<terminated> Palindrome [Java Application] C:\Program Files\Java\jre1.8.0_231\bin\jav
454 Number is palindrome
```
- Bottom Bar:** Displays 'Writable', 'Smart Insert', and the time '1:42'.

Logic

temp=n tem=454	n>0	r=n%10	sum=sum*10+r	n=n/10
	454>0 True	r=454%10=4	sum=0*10+4=4	n=454/10=45
	45>0 True	r=45%10=5	sum=4*10+5=45	n=45/10=4
	4>0 True	r=4%10=4	sum=45*10+4=454	n=4/10=0
	0>0 False			
temp==sum				
454 = 454 True				
Palindrome no				