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.

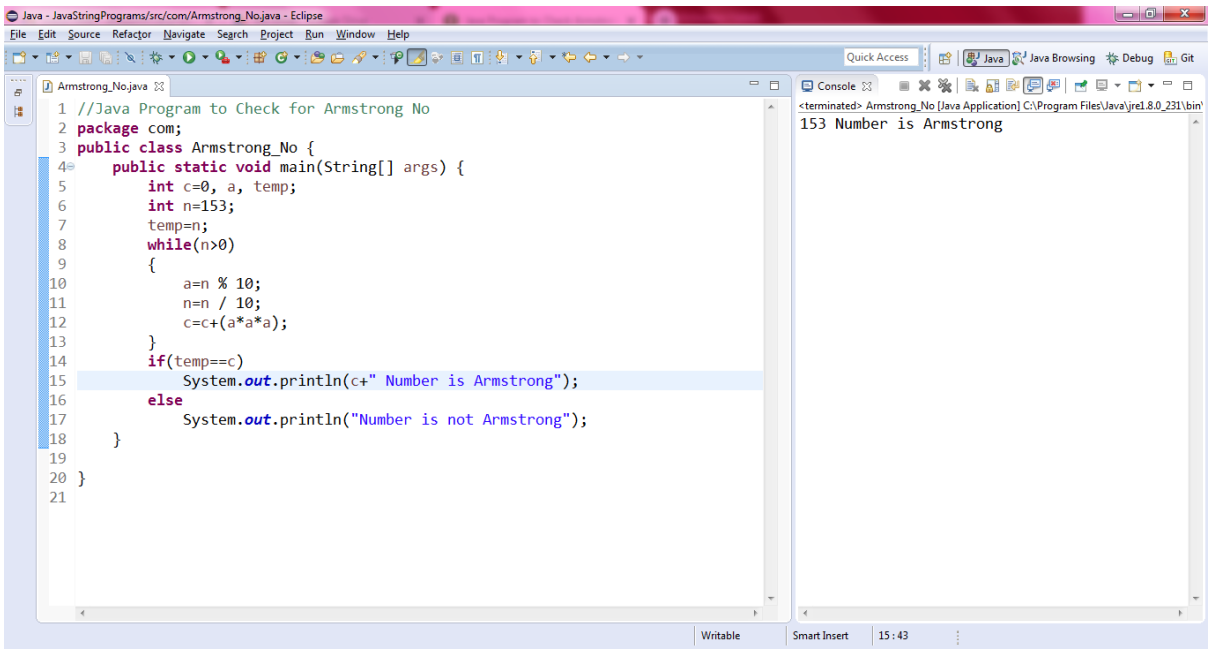
Armstrong Number Example

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.

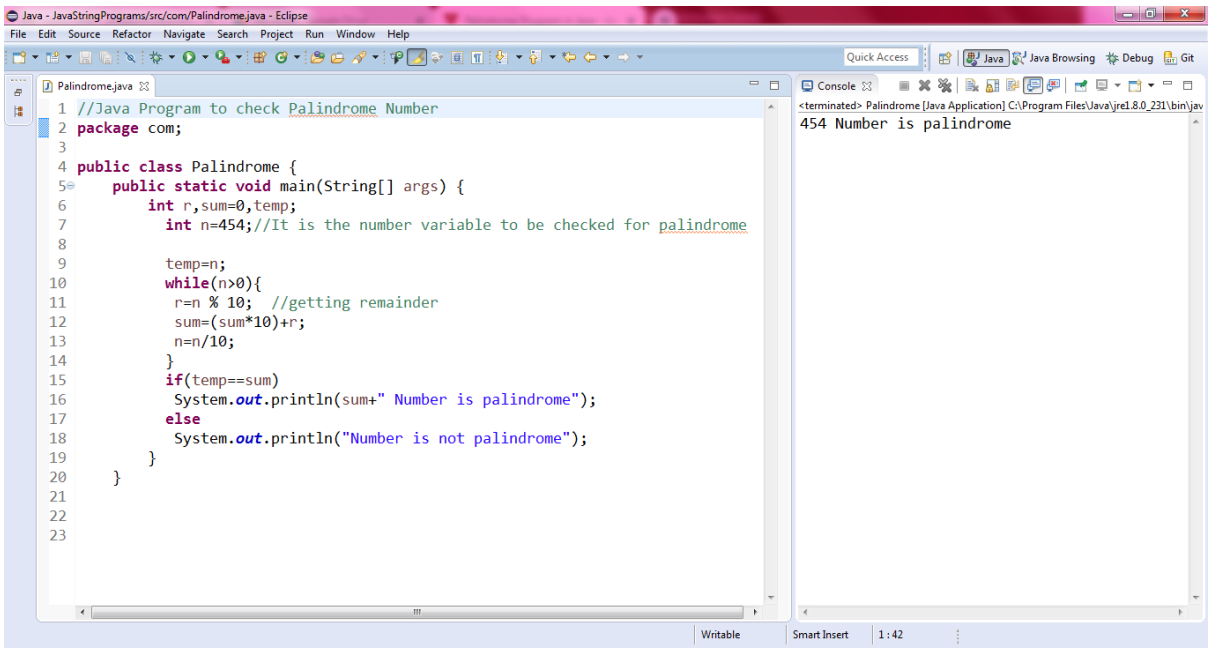
Logic

- 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
//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");
		}
	}
```



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				