```
1
import java.util.Scanner;
import java.lang.Math;

public class Armstrong {
	static boolean isArmstrong(int n)
	{
		int temp, digits=0, last=0, sum=0;
		temp=n;
		while(temp>0)
		{
			temp=temp/10;
			digits++;
		}
		temp = n;
		while(temp>0)
		{
			last=temp%10;
			sum+=(Math.pow(last, digits));
			temp=temp/10;
		}
		if(n==sum)
			return true;
		else
			return false;
	}

	public static void main(String[] args) {
		{
			int num;
			Scanner sc= new Scanner(System.in);
			System.out.println("Enter the number");
			num=sc.nextInt();
			if(isArmstrong(num))
			{
				System.out.println("The number is an Armstrong
number");
			}
			else
			{
				System.out.println("The number is not an Armstrong
number");
			}
		}

	}

}
Enter the number
 153
The number is an Armstrong number
```

```
Enter the number

152
The number is not an Armstrong number
```

2

```
package printarmstrong;

import java.util.Scanner;
import java.lang.Math;

public class printarmstrong {
	static boolean isArmstrong(int n)
	{
		int temp, digits=0, last=0, sum=0;
		temp=n;
		while(temp>0)
		{
			temp=temp/10;
			digits++;
		}
		temp = n;
		while(temp>0)
		{
			last=temp%10;
			sum+=(Math.pow(last, digits));
			temp=temp/10;
		}
		if(n==sum)
			return true;
		else
			return false;
	}

	public static void main(String[] args) {
		{
			int num;
			Scanner sc= new Scanner(System.in);
			System.out.println("Enter the limit");
			num=sc.nextInt();
			System.out.println("Armstrong numbers upto" +num+
"are:");
			for (int i=100; i<num; i++)

				if(isArmstrong(i))
					System.out.print(i+ ",");
			}
	}

}
```

```
Enter the limit

999
Armstrong numbers upto999are:
153,370,371,407,
```

3

```java
package interest;

import java.util.Scanner;
import java.lang.Math;

public class interest {

	public static void main(String[] args) {
		double value, rate, time, si, ci;
		Scanner sc= new Scanner(System.in);
		System.out.println("Enter the value");
		value=sc.nextDouble();
		System.out.println("Enter the rate of interest");
		rate=sc.nextDouble();
		System.out.println("Enter the time period");
		time=sc.nextDouble();

		si= value*rate*time;
		System.out.println("The simple interest is:" +si);
		ci= value* Math.pow((1.0+rate),time)-value;
		System.out.println("The compund interest is:" +ci);
	}

}
```

```
Enter the value

60000
Enter the rate of interest

5.5
Enter the time period
5
The simple interest is:1650000.0
The compund interest is:6.96114375E8
```

4

```java
package result;

import java.util.Scanner;

public class result {

	public static void main(String[] args) {
		int s1,s2,s3;
		Scanner sc= new Scanner(System.in);
		System.out.println("Enter the marks for subject 1");
		s1=sc.nextInt();
		System.out.println("Enter the marks for subject 2");
		s2=sc.nextInt();
		System.out.println("Enter the marks for subject 3");
		s3=sc.nextInt();

		System.out.print("The result is ");
		if(s1>60 && s2>60 && s3>60)
		{
			System.out.print("Passed");
		}
		else if((s1>60 && s2>60)||(s2>60 && s3>60)||(s3>60 && s1>60))
		{
			System.out.print("Promoted");
		}
		else if((s1<60 && s2<60 && s3<60)||(s1>60 || s2>60 || s3>60))
		{
			System.out.print("Failed");
		}
	}

}
```

```
Enter the marks for subject 1

75
Enter the marks for subject 2
61
Enter the marks for subject 3
45
The result is Promoted
```

5

```java
package tax;

import java.util.Scanner;

public class tax {

	public static void main(String[] args) {
		long amount;
		Scanner sc= new Scanner(System.in);
		System.out.println("Enter the ctc");
		amount=sc.nextLong();

		System.out.print("Tax payable is");
		if(amount>=0 && amount<=180000)
		{
			System.out.print("Nil");
		}
		else if(amount>=181001 && amount<=300000)
		{
			System.out.print("10%");
		}
		else if(amount>=300001 && amount<=500000)
		{
			System.out.print("20%");
		}
		else if(amount>=500001 && amount<=1000000)
		{
			System.out.print("30%");
		}
	}

}
```

```
Enter the ctc
380000
Tax payable is20%
```

6

```
package validation;

import java.util.Scanner;

public class validation {

	public static void main(String[] args) {
		int attempt=0;
		while(attempt<3)
		{
			String username= "Rutuja";
			String password= "12345";
			Scanner sc= new Scanner(System.in);
			System.out.println("Enter your username");
			String givenusername =sc.nextLine();
			System.out.println("Enter the password");
			String pass =sc.nextLine();

			if(givenusername.equals(username)&&pass.equals(password))
			{
				System.out.print("Welcome " +username);
				break;
			}
			else
			{
				attempt=attempt+1;
			}
		}
		if (attempt==3)
			System.out.println("Contact Admin");
	}

}
```

```
Enter your username
Rutuja
Enter the password
12345
Welcome Rutuja
```

```
Enter your username
rutuja
Enter the password
12345
Enter your username
Rutuja
Enter the password
12346
Enter your username
rutujaa
Enter the password
12345
Contact Admin
```

7

```
package search;

import java.util.Scanner;

public class search
{
  public static void main(String args[])
  {
    int c, n, searchval, array[];
    Scanner in = new Scanner(System.in);

    System.out.println("Enter number of elements in the array");
    n = in.nextInt();
    array = new int[n];
    System.out.println("Enter those " + n + " elements");

    for (c = 0; c < n; c++)
      array[c] = in.nextInt();

    System.out.println("Enter value to be searched");
    searchval = in.nextInt();

    for (c = 0; c < n; c++)
    {
      if (array[c] == searchval)
      {
         System.out.println(searchval + " is present at location " + (c + 1) +
".");
          break;
      }
   }
   if (c == n)
      System.out.println(searchval + " is not present in the array.");
  }
}
```

```
Enter number of elements in the array
15
Enter those 15 elements
5 12 14 6 78 19 1 23 26 35 37 7 52 86 47
Enter value to be searched
19
19 is present at location 6.
```

8

```
package bubble;

public class bubble {
    static void bubbleSort(int[] arr) {
        int n = arr.length;
        int temp = 0;
         for(int i=0; i < n; i++){
                 for(int j=1; j < (n-i); j++){
                          if(arr[j-1] > arr[j]){
                                 temp = arr[j-1];
                                 arr[j-1] = arr[j];
                                 arr[j] = temp;
                         }

                 }
         }

    }
    public static void main(String[] args) {
                int arr[] ={5,12,14,6,78,19,1,23,26,35,37,7,52,86,47};

                System.out.println("Array Before Bubble Sort");
                for(int i=0; i < arr.length; i++){
                        System.out.print(arr[i] + " ");
                }
                System.out.println();

                bubbleSort(arr);

                System.out.println("Array After Bubble Sort");
                for(int i=0; i < arr.length; i++){
                        System.out.print(arr[i] + " ");
                }

        }
}
```

```
Array Before Bubble Sort
5 12 14 6 78 19 1 23 26 35 37 7 52 86 47
Array After Bubble Sort
1 5 6 7 12 14 19 23 26 35 37 47 52 78 86
```

9

```
package student;

import java.util.Scanner;

public class student {

	public static void main(String[] args) {
		int [][] marks= new int [3][3];
		int total=0;
		double average=0;
		Scanner input = new Scanner(System.in);
		System.out.println("Enter your marks");
		for (int i=0; i<marks.length; i++)
		{
			for(int j=0; j<marks[i].length; j++)
			{
				marks[i][j]=input.nextInt();
				total=total+marks[i][j];
			}
		}
		average= total/9;
		System.out.println("Total is " +total+ " and average is " +average
);
	}

}
```

```
Enter your marks
70 80 90
40 50 60
40 70 90
Total is 590 and average is 65.0
```