import java.util.Scanner;

import java.lang.Math;

public class Armstrong {

public static void main(String[] args) {

int n, temp, rem, res = 0, i = 0;

System.out.println("Enter the number: ");

Scanner scanner = new Scanner(System.in);

n = scanner.nextInt();

temp = n;

for(; temp!= 0; temp/= 10)

{

i++;

}

temp = n;

for(; temp!= 0; temp/= 10)

{

rem = temp % 10;

res += Math.pow(rem, i);

}

//validating

if(res == n)

{

System.out.println(n + " is an ArmStrong number.");

}

else

{

System.out.println(n + " is not an ArmStrong number.");

}

}

}

Output:

Enter the number:

153

153 is an ArmStrong number.

import java.util.Scanner;

import java.lang.Math;

public class Armstrong\_range {

public static void main(String[] args) {

//condiser a loop to initiate the range of numbers

for(int n = 100; n < 1000; n++)

{

int temp, rem, res = 0, i = 0;

temp = n;

for(; temp!= 0; temp/= 10)

{

i++;

}

temp = n;

for(; temp!= 0; temp/= 10)

{

rem = temp % 10;

res += Math.pow(rem, i);

}

if(res == n)

{

System.out.println(n + " is an ArmStrong number.");

}

}

}

}

Output:

153 is an ArmStrong number.

370 is an ArmStrong number.

371 is an ArmStrong number.

407 is an ArmStrong number.

import java.util.Scanner;

import java.lang.Math;

public class SC\_Intrest {

public static void main(String[] args) {

double rate, amount, years, simple, compound;

Scanner scanner = new Scanner(System.in);

System.out.println("Enter the amount : ");

amount = scanner.nextDouble();

System.out.println("Enter the rate : ");

rate = scanner.nextDouble();

System.out.println("Enter no. of years : ");

years = scanner.nextDouble();

simple = (rate \* years \* amount)/ 100;

compound = amount \* Math.pow(1 + rate/100, years) - amount;

System.out.println("Simple Interest : "+simple);

System.out.println("compound Interest : "+compound);

}

}

Output:

Enter the amount :

10000

Enter the rate :

7

Enter no. of years :

12

Simple Interest : 8400.0

compound Interest : 12521.915889608248

import java.util.Scanner;

public class Condition\_Class {

public static void main(String[] args) {

double sub1, sub2, sub3;

Scanner scanner = new Scanner(System.in);

System.out.println("Enter marks in subject 1: ");

sub1 = scanner.nextDouble();

System.out.println("Enter marks in subject 2: ");

sub2 = scanner.nextDouble();

System.out.println("Enter marks in subject 3: ");

sub3 = scanner.nextDouble();

if(sub1 > 60 && sub2 > 60 && sub3 > 60)

{

System.out.println("Passed");

}

else if((sub1 >60 && sub2 >60) || (sub2 >60 && sub3 >60) || (sub1 >60 && sub3 >60))

{

System.out.println("Promoted");

}

else

{

System.out.println("Failed");

}

}

}

Output:

Enter marks in subject 1:

76

Enter marks in subject 2:

11

Enter marks in subject 3:

13

Failed

import java.util.Scanner;

public class Income\_Tax {

public static void main(String[] args) {

double tax = 0, CTC;

Scanner scanner = new Scanner(System.in);

System.out.println("Enter income : ");

CTC = scanner.nextDouble();

if(CTC <= 180000)

{

tax = 0;

}

else if(CTC > 180000 && CTC <= 300000)

{

tax = (CTC/100)\*10;

System.out.println("Income tax payable is : " + tax);

}

else if(CTC > 300000 && CTC <= 500000)

{

tax = (CTC/100)\*20;

System.out.println("Income tax payable is : " + tax);

}

else if(CTC > 500000 && CTC <= 1000000)

{

tax = (CTC/100)\*30;

System.out.println("Income tax payable is : " + tax);

}

}

}

Output:

Enter income :

400000

Income tax payable is : 80000.0

import java.util.Scanner;

public class Login\_User {

public static void main(String[] args) {

String name, password;

int count = 0, itr, track = 0;

while(count<3 && track == 0)

{

Scanner scanner = new Scanner(System.in);

System.out.println("Enter the login name : ");

name = scanner.nextLine();

System.out.println("Enter password : ");

password = scanner.nextLine();

if(name.equals("Subham") && password.equals("satpathy"))

{

//login success tracker

track = 1;

System.out.println("Welcome " + name);

}

else

{

count++;

itr = 3-count;

System.out.println("Try Again. Remaining attempts " + itr);

if(itr == 0)

{

System.out.println("Contact Admin");

}

}

}

}

}

Output:

Enter the login name :

Vedant

Enter password :

VR

Try Again. Remaining attempts 2

Enter the login name :

Vedant

Enter password :

Raizada

Welcome Vedant

import java.util.Arrays;

import java.util.Scanner;

public class Array\_Search {

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(Arrays.toString(arr));

Scanner scanner = new Scanner(System.in);

System.out.println("Enter a number to search in array : ");

int n = scanner.nextInt();

for(int i = 0; i< arr.length; i++)

{

if(arr[i] == n)

{

System.out.println(n + " is found in the array at " + i + "th index.");

}

}

}

}

Output:

[5, 12, 14, 6, 78, 19, 1, 23, 26, 35, 37, 7, 52, 86, 47]

Enter a number to search in array :

19

19 is found in the array at 5th index.

import java.util.Arrays;

public class Bubble\_Sort {

public static void main(String[] args) {

int arr[] = {5,12,14,6,78,19,1,23,26,35,37,7,52,86,47}, temp;

System.out.println(Arrays.toString(arr));

for(int i = 0; i < arr.length-1; i++)

{

for(int j = 0; j < arr.length - i - 1; j++)

{

if(arr[j] > arr[j+1])

{

temp = arr[j];

arr[j] = arr[j+1];

arr[j+1] = temp;

}

}

}

System.out.println("Sorted Array :");

System.out.println(Arrays.toString(arr));

}

}

Output:

[5, 12, 14, 6, 78, 19, 1, 23, 26, 35, 37, 7, 52, 86, 47]

Sorted Array :

[1, 5, 6, 7, 12, 14, 19, 23, 26, 35, 37, 47, 52, 78, 86]

import java.util.Scanner;

public class Avg\_Marks {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

double a[][] = new double[3][3];

double total = 0;

System.out.println("Enter the marks ");

for (int i=0;i<3;i++)

{

for (int j=0;j<3;j++)

{

a[i][j]=scanner.nextInt() ;

}

}

for (int i=0;i<3;i++)

{

for (int j=0;j<3;j++)

{

total += a[i][j];

}

}

System. out. println("Total marks in all subjects is: "+ total);

System. out. println("Average marks in all subjects is: "+ total/9) ;

total = 0;

for (int i=0;i<3;i++)

{

total=0;

for (int j=0;j<3;j++)

{

total += a[i][j];

}

System.out.println();

System. out. println("Total marks for student "+ (i+1) +" of each subject is: "+ total) ;

System. out. println("Average marks for student "+ (i+1) +" of each subject is: "+ total/3);

System.out.println();

total = 0;

}

}

}

Output:

Enter the marks

89

87

67

98

71

61

56

99

78

Total marks in all subjects is: 706.0

Average marks in all subjects is: 78.44444444444444

Total marks for student 1 of each subject is: 243.0

Average marks for student 1 of each subject is: 81.0

Total marks for student 2 of each subject is: 230.0

Average marks for student 2 of each subject is: 76.66666666666667