**Program 1:**

package cg;

import java.util.Scanner;

public class Pgm1

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int n,copy,reminder,sum=0;

System.out.print("enter the number");

n=sc.nextInt();

copy=n;

while(copy!=0)

{

reminder=copy%10;

sum=sum+reminder\*reminder\*reminder;

copy=copy/10;

}

if(sum==n)

{

System.out.println("it is armstrong numbber");

}

else

{System.out.println("it is not armstrong number");

}

}

}

**Program 2:**

package cg;

public class Pgm2

{

public static void main(String[] args)

{

for(int i=100;i<=999;i++)

{

int n=i;

int d=0; //power

int s=0;

while(n>0)

{

d=n%10;

s=s+(d\*d\*d);

n=n/10;

}

if(i==s)

{

System.out.println(i);

}

}

}

}

**Program 3:**

package cg;

import java.util .\*;

public class Pgm3

{

public static void main (String [] args)

{

double pr, rate, time, simi,comi;

Scanner sc=new Scanner (System. in);

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

pr=sc.nextDouble();

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

t=sc.nextDouble();

System. out. println("Enter the Rate of interest");

rate=sc.nextDouble();

simi=(pr \* time \* rate)/100;

comi=pr \* Math.pow(1.0+rate/100.0,t) - pr;

System.out.println("Simple Interest="+simi);

System.out. println("Compound Interest="+comi);

}

}

**Program 4:**

package cg;

import java.util.\*;

public class Pgm4

{

static void result(int [] x)

{

if(x[0] > 60)

{

if(x[1] > 60)

{

if(x[2] > 60)

{

System.out.println("Passed");

}

else

{

System.out.println("Promoted");

}

}

else

{

System.out.println("Failed");

}

}

else

{

System.out.println("Failed");

}

}

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int i=0,j=0,temp;

int a[]=new int[3];

System.out.println("Enter marks of three subjects: ");

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

{

a[i]=sc.nextInt();

}

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

{

for(j=i+1;j<3;j++)

{

if(a[i] < a[j])

{

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

}

result(a);

}}

**Program 5:**

package cg;

import java.util.\*;

public class Pgm5

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

double tax=0.0;

System.out.println("Enter your salary: ");

double salary=sc.nextDouble();

System.out.println("You salary is "+salary);

if((salary > 0) && (salary < 180000))

{

tax=0.0;

}

else

if((salary > 181001.0) && (salary < 300000.0))

{

tax=salary\*(0.1);

}

else if((salary > 300001) && (salary < 500000))

{

tax=salary\*(0.2);

}

Else

if((salary > 500001) && (salary < 1000000))

{

tax=salary\*(0.3);

}

System.out.println("The income tax amount need to be paid is " +tax);

}

}

**Program 6:**

package cg;

import java.util.\*;

class Pgm6

{

static void validation(String name,String pwd,int attempts)

{

String n="Nikita",p="123";

int result;

if(attempts!=3)

{

if(name.equals(n) && pwd.equals(p))

{

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

}

else

{

System.out.println("Invalid Login");

attempts=attempts+1;

enterDetails(attempts);

if(attempts==3)

{

System.out.println("Login limit exceeded");

}

}

}

}

static void enterDetails(int attempts)

{

Scanner sc=new Scanner(System.in);

String password,name;

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

name=sc.next();

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

password=sc.next();

validation(name,password,attempts);

}

public static void main(String[] args)

{

int attempts=1;

enterDetails(attempts);

}

}

**Program 7:**

package cg;

import java.util.\*;

public class Pgm7

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int a[]=new int[15];

int i,key;

boolean found=false;

System.out.println("Enter 15 elements in the array: ");

for(i=0;i<15;i++)

{

a[i]=sc.nextInt();

}

System.out.println("Enter the element to be searched: ");

key=sc.nextInt();

for(i=0;i<15;i++)

{

if(a[i]==key)

{

found=true;

System.out.println("Key " + key + " found in the array");

break;

}

}

if(found==false)

{

System.out.println("Key " + key + " not found in the array");

}

}

}

**Program 9:**

package cg;

import java.util.\*;

public class Pgm9

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int m1,m2,m3,total;

double avg=0.0;

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

m1=sc.nextInt();

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

m2=sc.nextInt();

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

m3=sc.nextInt();

total=m1+m2+m3;

avg=(total/3);

System.out.println("Total marks scored is "+total+" and average is "+avg);

}

}