**CODING OF THE STUDY TOOL APPLICATION**

public class Introduction

{

Wait obj=new Wait();

public void Introduction()

{

System.out.println("|-----------------------------------------------------------------------READ ME----------------------------------------------------------------------|");

System.out.println("| |");

System.out.println("| TITLE: |");

System.out.println("| STUDY TOOLS APPLICATION |");

System.out.println("| |");

System.out.println("| PURPOSE: |");

System.out.println("| ANNUAL COMPUTER PROJECT FOR YEAR 2014-15 |");

System.out.println("| |");

System.out.println("| VERSION: |");

System.out.println("| 2014-15 |");

System.out.println("| |");

System.out.println("| AUTHOR: |");

System.out.println("| ATHARV BALASAHEB DAREKAR |");

System.out.println("| |");

System.out.println("| STD: |");

System.out.println("| X |");

System.out.println("| |");

System.out.println("| ROLL NUMBER: |");

System.out.println("| AO-011 |");

System.out.println("| |");

System.out.println("| USER INSTRUCTIONS: |");

System.out.println("| 1.READ THE INSTRUCTIONS CAREFULLY AND EXECUTE COMMANDS |");

System.out.println("| 2.PLEASE DO NOT MAKE CHANGES IN PROGRAM FILES |");

System.out.println("| |");

System.out.println("| !!!THANK YOU!!! |");

System.out.println("|\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_|");

obj.WaitForIntroduction();

}

}

import java.util.\*;

import java.io.\*;

public class Project\_2014\_15

{

public static void main(String atharv[])throws IOException

{

Scanner A=new Scanner(System.in);

FormulaeBookMathematics obj=new FormulaeBookMathematics();

NewCalculator obj1=new NewCalculator();

PERIODICTABLE obj2=new PERIODICTABLE();

BMI obj3=new BMI();

Wait obj4=new Wait();

Introduction obj5=new Introduction();

String choice;

boolean e=false;

int i=0,i1=0;

do

{

if(i1!=1)

{

obj5.Introduction();

System.out.println("");

System.out.println("");

System.out.println("");

System.out.println("");

System.out.println("");

i1++;

}

if(i!=1)

{

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* WELCOME TO STUDY TOOLS APPLICATION PROGRAMMED BY ATHARV DAREKAR FOR ACADEMYC YEAR 2014-15 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");

obj4.Wait1();

i++;

}

System.out.println(" \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");

System.out.println("| |");

System.out.println("| SELECT A SUBJECT |");

System.out.println("| |");

System.out.println("| 1.CALCULATOR |");

System.out.println("| |");

System.out.println("| 2.FORMULAE BOOK OF MATHEMATICS (BASED ON THE SYLLABUS OF ICSE STANDARD IX & X) |");

System.out.println("| |");

System.out.println("| 3.HEALTH ANALYSIS (BASED ON BODY MASS INDEX (BMI)) |");

System.out.println("| |");

System.out.println("| 4.PERTIODIC TABLE |");

System.out.println("| |");

System.out.println("| ENTER 'EXIT' TO EXIT |");

System.out.println("|\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_|");

System.out.println("");

System.out.println("NOTE :- ON CAPS LOCK BUTTON PLEASE");

System.out.println("");

System.out.println("ENTER YOUR CHOICE");

choice=A.nextLine();

switch(choice)

{

case "1":

{

obj1.NewCalculator();

obj4.Wait();

System.out.println();

}

break;

case "2":

{

obj.FormulaeBookMathematics();

obj4.Wait();

System.out.println();

}

break;

case "3":

{

obj3.BMI();

obj4.Wait();

System.out.println();

}

break;

case "4":

{

obj2.Periodictable();

obj4.Wait();

System.out.println();

}

break;

case "EXIT":

{

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* THANK YOU \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

e=true;

}

break;

default:

{

System.out.println("ERROR INVALID OPTION PLEASE TRY AGAIN");

obj4.Wait1();

}

}

}while(e==false);

}

}

import java.util.\*;

import java.io.\*;

public class NewCalculator

{

Scanner A=new Scanner(System.in);

DataInputStream A2=new DataInputStream(System.in);

Wait obj=new Wait();

boolean flag=false;

void NewCalculator()throws IOException

{

try

{

double result=0,ind;

boolean e1=false,e2=false;

double an,si,co,ta;

double round,cbrt,d;

int cbrtint;

float df;

String ins,t,charat0s,in;

char charat0;

double pi=((22/7)+(355/113))/2;

System.out.println("");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*WELCOME TO CALCULATOR PROGRAMMED BY ATHARV DAREKAR\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("");

obj.Wait1();

do

{

System.out.println();

System.out.println("ENTER NUMBER TO BE OPERATED ALONG WITH THE OPERATOR AS SHOWN BELOW :");

System.out.println("'+25' TO ADD\n'-56' TO SUBTRACT\n'\*85' TO MULTIPLY\n'/87' TO DIVIDE\n'%54' TO FIND MOD\n'|4' TO FIND SQUARE ROOT\n'!8' TO FIND CUBE ROOT\n'^2' TO FIND POWER OF THE BASE");

System.out.println("'T' FOR TRIGENOMETRICAL RATIOS");

System.out.println("");

System.out.println("ENTER '=' FOR RESULT");

System.out.println("ENTER AND RE-ENTER '==' TO RE-SET CALCULATOR");

System.out.println();

System.out.print(result);

do

{

ins=A.nextLine();

charat0=(ins.charAt(0));

charat0s=Character.toString(charat0);

if(charat0s.equals("/"))

{

t=ins.replace("/","");

ind=Double.parseDouble(t);

if(ind!=0)

{

result\*=(1/ind);

}

else

{

System.out.println("INFINITY");

}

}

if(charat0s.equals("+"))

{

t=ins.replace("+","");

ind=Double.parseDouble(t);

result+=ind;

}

if(charat0s.equals("-"))

{

t=ins.replace("-","");

ind=Double.parseDouble(t);

result-=ind;

}

if(charat0s.equals("\*"))

{

t=ins.replace("\*","");

ind=Double.parseDouble(t);

result\*=ind;

}

if(charat0s.equals("|"))

{

t=ins.replace("|","");

ind=Double.parseDouble(t);

result=Math.sqrt(ind);

}

if(charat0s.equals("!"))

{

t=ins.replace("!","");

ind=Double.parseDouble(t);

cbrt=Math.pow(ind,Math.pow(3,-1));

cbrtint=(int)(cbrt);

d=cbrt-cbrtint;

df=(float)(d);

if((df>=0.9998888))

{

round=Math.round(cbrt);

}

else

{

round=cbrt;

}

result=round;

}

if(charat0s.equals("%"))

{

t=ins.replace("%","");

ind=Double.parseDouble(t);

if(ind!=0)

{

result%=ind;

}

else

{

System.out.println("INFINITY");

}

}

if(charat0s.equals("^"))

{

t=ins.replace("^","");

ind=Double.parseDouble(t);

result=Math.pow(result,ind);

}

if(ins.equals("T"))

{

System.out.println("1.Sine OF AN ANGLE");

System.out.println("2.Cosecant OF AN ANGLE");

System.out.println("3.Tangent OF AN ANGLE");

String m=(A2.readLine());

switch (m)

{

case "1":

{

System.out.println("ENTER VALUE FOR ANGLE");

an=Double.parseDouble(A2.readLine());

si=(pi\*an)/180;

System.out.println("Sine VALUE OF GIVEN ANGLE IS\t"+Math.sin(si));

}

break;

case "2":

{

System.out.println("ENTER VALUE FOR ANGLE");

an=Double.parseDouble(A2.readLine());

co=(pi\*an)/180\*an;

System.out.println("Cosecant VALUE OF GIVEN ANGLE IS\t"+Math.cos(co));

}

break;

case "3":

{

System.out.println("ENTER VALUE FOR ANGLE");

an=Double.parseDouble(A2.readLine());

ta=(pi\*an)/180\*an;

System.out.println("Tangent VALUE OF GIVEN ANGLE IS\t"+Math.tan(ta));

}

break;

default:

System.out.println("ERROR INVALID OPTION PLEASE TRY AGAIN");

obj.Wait1();

}

}

System.out.println(result);

if(ins.equals("=="))

result=0;

if(ins.equals("="))

e1=true;

}while(e1==false);

System.out.println("PRESS 'ENTER' TO CONTINUE ELSE ENTER 'EXIT' TO EXIT CALCULATOR");

in=A.nextLine();

e1=false;

if(in.equals("EXIT"))

e2=true;

}while(e2==false);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj.Wait1();

System.out.println("RESOLVINS PLEASE WAIT");

obj.Wait1();

System.out.println("ERROR RESOLVED");

obj.Wait1();

}

}

}

}

import java.io.\*;

public class FormulaeBookMathematics

{

UpdateFormulaeBook obj=new UpdateFormulaeBook();

BufferedReader A=new BufferedReader (new InputStreamReader(System.in));

Wait obj1=new Wait();

boolean flag=false;

void FormulaeBookMathematics()throws IOException

{

try

{

double p,r,t,si,ci,i,s1,s2,s3,l,b,h,hy,tsa,csa,lsa,s,v,c,a,p1,p2,d1,d2,d,ue,e,s123,eacha,n,amt;

String opt,ch;

boolean ei=false;

String eorc;

System.out.println("");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*WELCOME TO FORMULAE BOOK OF MATHEMATICS PROGRAMMED BY ATHARV DAREKAR\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("");

obj1.Wait1();

do

{

System.out.println();

System.out.println("SELECT CATEGORY");

System.out.println("111.COMMERCIAL MATHEMATICS");

System.out.println("222.ALGEBRA");

System.out.println("333.CO-ORDINATE GEOMETRY");

System.out.println("444.GEOMETRY");

System.out.println("555.MENSURATION");

System.out.println("666.STATISTICS");

System.out.println("ENTER YOUR CHOICE");

ch=(A.readLine());

switch (ch)

{

case "111":

{

System.out.println("COMMERCIAL MATHEMATICS");

System.out.println("1.SIMPLE INTEREST");

System.out.println("2.COMPOUND INTEREST");

System.out.println("3.AMOUNT");

}

break;

case "222":

{

System.out.println("ALGEBRA");

System.out.println("42.QUADRATIC EQUATIONS");

System.out.println("43.MATRICE ADDITION");

}

break;

case "333":

{

System.out.println("CO-ORDINATE GEOMETRY");

System.out.println("41.EQUATION OF LINE");

}

break;

case "444":

{

System.out.println("GEOMETRY");

System.out.println("4.PYTHAGORAS THEOREM");

System.out.println("5.ANGLE SUM OF POLYGONS");

System.out.println("6.VALUE OF AN ANGLE OF AN EQUILATERAL POLYGON");

}

break;

case "555":

{

System.out.println("MENSURATION");

System.out.println("7.AREA OF TRIANGLE (HERONS Formuela)");

System.out.println("8.AREA OF TRIANGLE (RIGHT ANGLED TRIANGLE)");

System.out.println("9.AREA OF TRIANGLE (EQUILATERAL TRIANGLE)");

System.out.println("10.AREA OF TRIANGLE (ISOSCELES TRIANGLE)");

System.out.println("11.AREA OF QUADRILATERAL (IRREGULAR)");

System.out.println("12.AREA OF RECTANGEL");

System.out.println("13.AREA OF SQARE");

System.out.println("14.AREA OF PARALLALOGRAM");

System.out.println("15.AREA OF RHOMBUS");

System.out.println("16.AREA OF TRAPEZIUM");

System.out.println("17.AREA OF CIRCLE");

System.out.println("18.AREA OF CONCENTRIC CIRCLE");

System.out.println("19.CIRCUMFERANCE OF CIRCLE");

System.out.println("20.SURFACE AREA OF CUBOID ");

System.out.println("21.SURFACE AREA OF CUBE");

System.out.println("22.SURFACE AREA OF CYLINDER");

System.out.println("23.VOLUME OF CUBOID");

System.out.println("24.VOLUME OF CUBE");

System.out.println("25.VOLUME OF CYLINDER");

System.out.println("26.LATREL SURFACE AREA OF CUBOID");

System.out.println("27.LATREL SURFACE AREA OF CUBE");

System.out.println("28.CURVED SURFACE AREA OF CYLINDER");

System.out.println("29.VOLUME OF CONE");

System.out.println("30.CURVED SURFACE AREA OF CONE");

System.out.println("31.TOTAL SURFACE AREA OF CONE");

System.out.println("32.VOLUME OF SPHERE");

System.out.println("33.SURFACE AREA OF SPHERE");

System.out.println("34.SPHERICAL SHELL");

System.out.println("35.VOLUME OF HEMISPHERE");

System.out.println("36.TOTAL SURFACE AREA OF HEMISPHERE");

}

break;

case "666":

{

System.out.println("666.STATISTICS");

System.out.println("37.MEAN");

System.out.println("38.MEAN OF GROUPED DATA");

System.out.println("39.MEDIAN");

System.out.println("40.QUARTILE");

}

break;

default:

{

System.out.println("ERROR INVALID OPTION PLEASE TRY AGAIN");

obj1.Wait1();

System.out.println("ENTER 'EXIT' AND PLEASE TRY AGAIN");

}

}

opt=(A.readLine());

switch (opt)

{

case "1":

{

System.out.println("ENTER VALUE FOR PRINCIPLE/CAPITAL");

p=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR RATE %(PER ANNUM)");

r=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR TIME SPAN (YEAR)");

t=Double.parseDouble(A.readLine());

si=p\*r\*t/100;

System.out.println("SIMPLE INTEREST Rs."+si);

}

break;

case "2":

{

System.out.println("ENTER VALUE FOR PRINCIPLE/CAPITAL");

p=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR RATE %(PER ANNUM)");

r=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR TIME SPAN (YEAR)");

t=Double.parseDouble(A.readLine());

ci=(p\*(Math.pow((100+r/100),t)))-p;

System.out.println("COMPOUND INTEREST Rs."+ci);

}

break;

case "3":

{

System.out.println("ENTER VALUE FOR PRINCIPLE/CAPITAL");

p=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR COMPOUND/SIMPLE INTEREST");

i=Double.parseDouble(A.readLine());

amt=p+i;

System.out.println("AMOUNT Rs."+amt);

}

break;

case "4":

{

String z;

System.out.println("1.TO FIND HYPOTENUSE");

System.out.println("2.TO FIND BASE");

System.out.println("3.TO FIND HIGHT");

z=(A.readLine());

switch (z)

{

case "1":

{

System.out.println("ENTER VALUE FOR HEIGHT");

h=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR BASE");

b=Double.parseDouble(A.readLine());

hy=Math.sqrt((h\*h+b\*b));

System.out.println("HYPOTENUSE OF THE TRIANGLE "+hy);

}

break;

case "2":

{

System.out.println("ENTER VALUE FOR HEIGHT");

h=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR Hypotenus");

hy=Double.parseDouble(A.readLine());

b=Math.sqrt((hy\*hy-h\*h));

System.out.println("BASE OF THE TRIANGLE "+b);

}

break;

case "3":

{

System.out.println("ENTER VALUE FOR Hypotenus");

hy=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR BASE");

b=Double.parseDouble(A.readLine());

h=Math.sqrt((hy\*hy-b\*b));

System.out.println("HEIGHT OF THE TRIANGLE "+h);

}

break;

default:

{

System.out.println("ERROR INVALID OPTION PLEASE TRY AGAIN");

obj1.Wait1();

}

}

}

break;

case "5":

{

System.out.println("ENTER NUMBER OF SIDES OF THE POLYGON");

n=Double.parseDouble(A.readLine());

a=(2\*n-4)\*90;

System.out.println("ANGLE SUM OF THE POLYGON "+a+"\*");

}

break;

case "6":

{

System.out.println("ENTER NUMBER OF SIDES OF THE POLYGON");

n=Double.parseDouble(A.readLine());

eacha=((2\*n-4)\*90)/n;

System.out.println("EACH ANGLE OF THE MEASURES "+eacha);

}

break;

case "7":

{

System.out.println("ENTER VALUE FOR SIDE 1");

s1=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR SIDE 2");

s2=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR SIDE 3");

s3=Double.parseDouble(A.readLine());

s123=(s1+s2+s3)/2;

a=Math.sqrt((s123-s1)\*(s123-s2)\*(s123-s3));

System.out.println("THE AREA OF THE TRIANGLE "+a);

}

break;

case "8":

{

System.out.println("ENTER VALUE FOR HEIGHT");

h=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR BASE");

b=Double.parseDouble(A.readLine());

a=h\*b\*0.5;

System.out.println("THE AREA OF THE TRIANGLE "+a);

}

break;

case "9":

{

System.out.println("ENTER VALUE FOR SIDE");

s=Double.parseDouble(A.readLine());

a=s\*s\*(Math.sqrt(3)/4);

System.out.println("THE AREA OF THE TRIANGLE "+a);

}

break;

case "10":

{

System.out.println("ENTER VALUE FOR EQUAL SIDES");

e=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR UNEQUAL SIDE");

ue=Double.parseDouble(A.readLine());

a=ue\*0.25\*Math.sqrt(e\*e\*4-ue\*ue);

System.out.println("THE AREA OF THE TRIANGLE "+a);

}

break;

case "11":

{

System.out.println("ENTER VALUE FOR DIAGONAL");

d=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR 1 PERPENDICUALR TO THE DIAGONAL");

d1=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR 2 PERPENDICUALR TO THE DIAGONAL");

d2=Double.parseDouble(A.readLine());

a=(d/2)\*(d1+d2);

System.out.println("AREA OF THE IRREGUAL QUADRILATERAL "+a);

}

break;

case "12":

{

System.out.println("ENTER VALUE FOR LENGHT");

l=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR BREADTH");

b=Double.parseDouble(A.readLine());

a=l\*b;

System.out.println("AREA OF THE RECTANGLE "+a);

}

break;

case "13":

{

System.out.println("ENTER VALUE FOR SIDE");

s=Double.parseDouble(A.readLine());

a=s\*s;

System.out.println("AREA OF THE SQUARE"+a);

}

break;

case "14":

{

System.out.println("ENTER VALUE FOR HEIGHT");

h=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR BASE");

b=Double.parseDouble(A.readLine());

a=b\*h;

System.out.println("AREA OF THE PARALLELOGRAM "+a);

}

break;

case "15":

{

System.out.println("ENTER VALUE FOR DIAGONAL 1");

d1=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR DIAGONAL 2");

d2=Double.parseDouble(A.readLine());

a=d1\*d2\*0.5;

System.out.println("AREA OF THE RHOMBUS "+a);

}

break;

case "16":

{

System.out.println("ENTER VALUE FOR HEIGHT");

h=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR PARALLEL 1");

p1=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR PARALLEL 2");

p2=Double.parseDouble(A.readLine());

a=(p1+p2)\*h\*0.5;

System.out.println("AREA OF THE TRAPEZIUM "+a);

}

break;

case "17":

{

System.out.println("ENTER VALUE FOR RADIUS");

r=Double.parseDouble(A.readLine());

a=r\*r\*22/7;

System.out.println("AREA OF THE CIRCLE "+a);

}

break;

case "18":

{

obj.AreaOfConcentricCircles();

}

break;

case "19":

{

System.out.println("ENTER VALUE FOR RADIUS");

r=Double.parseDouble(A.readLine());

c=r\*2\*22/7;

System.out.println("CIRCUMFERANCE OF THE CIRCLE "+c);

}

break;

case "20":

{

System.out.println("ENTER VALUE FOR LENGHT");

l=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR BREADTH");

b=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR HEIGHT");

h=Double.parseDouble(A.readLine());

tsa=(l\*b+l\*h+b\*h)\*2;

System.out.println("SURFACE AREA OF THE CUBOID "+tsa);

}

break;

case "21":

{

System.out.println("ENTER VALUE FOR SIDE");

s=Double.parseDouble(A.readLine());

tsa=s\*s\*6;

System.out.println("SURFACE AREA OF THE CUBE "+tsa);

}

break;

case "22":

{

System.out.println("ENTER VALUE FOR RADIUS");

r=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR HEIGHT");

h=Double.parseDouble(A.readLine());

tsa=r\*(h+r)\*2\*22/7;

System.out.println("SURFACE AREA OF THE CYLINDER "+tsa);

}

break;

case "23":

{

System.out.println("ENTER VALUE FOR LENGHT");

l=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR BREADTH");

b=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR HEIGHT");

h=Double.parseDouble(A.readLine());

v=l\*b\*h;

System.out.println("VOLUME OF THE CUBOID "+v);

}

break;

case "24":

{

System.out.println("ENTER VALUE FOR SIDE");

s=Double.parseDouble(A.readLine());

v=s\*s\*s;

System.out.println("VOLUME OF THE CUBE "+v);

}

break;

case "25":

{

System.out.println("ENTER VALUE FOR RADIUS");

r=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR HEIGHT");

h=Double.parseDouble(A.readLine());

v=r\*r\*h\*22/7;

System.out.println("VOLUME OF THE CYLINDER "+v);

}

break;

case "26":

{

System.out.println("ENTER VALUE FOR LENGTH");

l=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR BREADTH");

b=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR HEIGHT");

h=Double.parseDouble(A.readLine());

lsa=(l+b)\*h\*2;

System.out.println("LATREL SURFACE AREA OF THE CUBOID "+lsa);

}

break;

case "27":

{

System.out.println("ENTER VALUE FOR SIDE");

s=Double.parseDouble(A.readLine());

lsa=s\*s\*4;

System.out.println("LATERAL SURFACE AREA OF THE CUBE "+lsa);

}

break;

case "28":

{

System.out.println("ENTER VALUE FOR RADIUS");

r=Double.parseDouble(A.readLine());

System.out.println("ENTER VALUE FOR HEIGHT");

h=Double.parseDouble(A.readLine());

csa=r\*h\*2\*22/7;

System.out.println("CURVED SURFACE AREA OF THE CYLINDER "+csa);

}

break;

case "29":

{

obj.VolumeOfCone();

}

break;

case "30":

{

obj.CurvedSurfaceAreaCone();

}

break;

case "31":

{

obj.TotalSurfaceAreaCone();

}

break;

case "32":

{

obj.VolumeOfSphere();

}

break;

case "33":

{

obj.SurfaceAreaOfSphere();

}

break;

case "34":

{

obj.SphericalShell();

}

break;

case "35":

{

obj.VolumeOfHemisphere();

}

break;

case "36":

{

obj.TotalSurfaceAreaHemisphere();

}

break;

case "37":

{

obj.Mean();

}

break;

case "38":

{

obj.MeanOfGroupedData();

}

break;

case "39":

{

obj.Median();

}

break;

case "40":

{

obj.Quartile();

}

break;

case "41":

{

obj.EquationOfLine();

}

break;

case "42":

{

obj.Discriminant();

}

break;

case "43":

{

obj.MatrixAddition();

}

break;

case "EXIT":

{

ei=true;

}

break;

default:

{

System.out.println("ERROR INVALID OPTION PLEASE TRY AGAIN");

obj1.Wait1();

}

}

System.out.println("PRESS 'ENTER' TO CONTINUE ELSE ENTER 'EXIT' TO EXIT FORMULAE BOOK OF MATHEMATICS");

eorc=A.readLine();

if(eorc.equals("EXIT"))

ei=true;

}while(ei==false);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait1();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait1();

System.out.println("ERROR RESOLVED");

obj1.Wait1();

}

}

}

}

import java.io.\*;

import java.util.\*;

public class UpdateFormulaeBook

{

DataInputStream A=new DataInputStream(System.in);

Scanner A1=new Scanner(System.in);

PrintWriter A2=new PrintWriter(System.out,true);

Wait obj1=new Wait();

double pi=((22/7)+(355/113))/2;

boolean flag=false;

void VolumeOfSphere()throws IOException

{

try

{

double r,vol;

System.out.println("ENTER RADIUS OF THE SPHERE");

r=Double.parseDouble(A.readLine());

vol=pi\*r\*r\*r\*4/3;

System.out.println("THE VOLUME THE GIVEN SPHERE "+vol);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void VolumeOfCone()throws IOException

{

try

{

double r,h,vol;

System.out.println("ENTER RADIUS OF THE BASE OF THE CONE");

r=Double.parseDouble(A.readLine());

System.out.println("ENTER THE HEIGHT OF THE CONE");

h=Double.parseDouble(A.readLine());

vol=pi\*r\*r\*1/3\*h;

System.out.println("THE VOLUME THE GIVEN SPHERE "+vol);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void CurvedSurfaceAreaCone()throws IOException

{

try

{

double ar,l,r;

System.out.println("ENTER RADIUS OF THE BASE OF THE CONE");

r=Double.parseDouble(A.readLine());

System.out.println("ENTER THE SLANT HEIGHT OF THE CONE");

l=Double.parseDouble(A.readLine());

ar=pi\*r\*l;

System.out.println("CURVED SURFACE AREA OF THE GIVEN CONE "+ar);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void SurfaceAreaOfSphere()

{

try

{

double ar,r;

System.out.println("ENTER RADIUS OF THE SPHERE");

r=A1.nextDouble();

ar=pi\*r\*r\*4;

System.out.println("THE SURFACE AREA OF THE GIVEN SPHERE "+ar);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void TotalSurfaceAreaCone()throws IOException

{

try

{

double ar,l,r;

System.out.println("ENTER RADIUS OF THE BASE OF THE CONE");

r=Double.parseDouble(A.readLine());

System.out.println("ENTER THE HEIGHT OF THE CONE");

l=Double.parseDouble(A.readLine());

ar=pi\*r\*(l+r);

System.out.println("THE VOLUME THE GIVEN SPHERE "+ar);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void VolumeOfHemisphere()throws IOException

{

try

{

double r,vol;

System.out.println("ENTER RADIUS OF THE HEMISPHERE OF SPHERE");

r=Double.parseDouble(A.readLine());

vol=pi\*r\*r\*r\*2/3;

System.out.println("THE GIVEN HEMISPHERE OF SPHERE "+vol);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void TotalSurfaceAreaHemisphere()throws IOException

{

try

{

double r,ar;

System.out.println("ENTER RADIUS OF THE HEMISPHERE OF SPHERE");

r=Double.parseDouble(A.readLine());

ar=3\*pi\*r\*r;

System.out.println("THE TOTAL SURFACE AREA OF THE GIVEN HEMISPHERE OF SPHERE "+ar);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void SphericalShell()throws IOException

{

try

{

double R,r,vol;

System.out.println("ENTER RADIUS OF THE OUTER SPHERE");

R=Double.parseDouble(A.readLine());

System.out.println("ENTER RADIUS OF THE INNER SPHERE");

r=Double.parseDouble(A.readLine());

vol=pi\*((R\*R\*R)-(r\*r\*r))\*4/3;

System.out.println("THE VILUME OF THE MATERIAL "+vol);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void AreaOfConcentricCircles() throws IOException

{

try

{

double R,r,ar;

System.out.println("ENTER RADIUS OF THE OUTER CIRCLE");

R=Double.parseDouble(A.readLine());

System.out.println("ENTER RADIUS OF THE INNER CIRCLE");

r=Double.parseDouble(A.readLine());

ar=pi\*((R\*R)-(r\*r));

System.out.println("THE AREA INCLOSED BETWEEN THE TWO CONCENTRIC CIRCLES "+ar);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void Mean() throws IOException

{

try

{

System.out.println("ENTER THE NUMBER OF OBSERVATIONS");

int obs=Integer.parseInt(A.readLine());

double array[]=new double[obs];

double sum=0,avg;

int i;

System.out.println("ENTER EACH OBSERVATION ONE BY ONE");

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

{

array[i]=Integer.parseInt(A.readLine());

}

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

{

sum+=array[i];

}

avg=sum/obs;

System.out.println("THE ARITHEMATICAL MEAN / AVERAGE OF THE GIVEN OBSERVATION "+avg);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void Median()

{

try

{

System.out.println("ENTER THE NUMBER OF OBSERVATIONS");

int obs=A1.nextInt();

int i,j;

double t=0,median;

double array[]=new double[obs];

System.out.println("ENTER THE NUMBERS");

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

{

array[i]=A1.nextInt();

}

for(i=0;i<obs-1;i++)

{

for(j=0;j<((obs-1)-i);j++)

{

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

{

t=array[j];

array[j]=array[j+1];

array[j+1]=t;

}

}

}

if(obs%2==0)

{

median=((array[((obs-1)/2)]+array[((obs+1)/2)])/2);

}

else

{

median=array[obs/2];

}

System.out.println("THE MEDIAN OF THE GIVEN DATA "+median);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void Quartile()throws IOException

{

try

{

System.out.println("ENTER THE NUMBER OF OBSERVATIONS");

int obs=Integer.parseInt(A.readLine());

int i,j;

double t=0,Q2=0;

int Q1,Q3;

double array[]=new double[obs];

System.out.println("ENTER THE NUMBERS");

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

{

array[i]=A1.nextInt();

}

for(i=0;i<obs-1;i++)

{

for(j=0;j<((obs-1)-i);j++)

{

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

{

t=array[j];

array[j]=array[j+1];

array[j+1]=t;

}

}

}

if(obs%2==0)

{

Q1=((obs+1)/4)-1;

Q3=(((obs+1)\*3)/4)-1;

Q2=array[Q3]-array[Q1];

}

else

{

Q1=(obs)/4;

Q3=(3\*(obs)/4);

Q2=array[Q3]-array[Q1];

}

System.out.println("THE UPPER QUARTILE "+array[Q3]);

System.out.println("THE LOWER QUARTILE "+array[Q1]);

System.out.println("THE INTER-QUARTILE "+Q2);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void MeanOfGroupedData()

{

try

{

int colomn,row,i,j;

double mean,sum\_product\_fx=0,sum\_f=0;

String dataoption;

row=2;

System.out.println("ENTER THE TYPE OF DATA");

System.out.println("1.UNGROUPED DATA");

System.out.println("2.GROUPED CONTINIOUS DATA");

System.out.println("3.GROUPED DISCONTINIOUS DATA");

dataoption=A1.nextLine();

switch(dataoption)

{

case "1":

{

System.out.println("ENTER THE NUMBER OF COLOMN OF TABLE OF THE DATA COLOMN (HERE ARE 2 ROWS 1 AS CLASS AND 2 AS FREQUENCY)");

System.out.println("Ex.");

String ex[][]={{"CLASS ","5","6","7","8","9"},{"FREQUENCY","4","5","3","6","2"}};

System.out.println("HERE ARE 5 COLOMN");

for(i=0;i<2;i++)

{

for(j=0;j<6;j++)

{

System.out.print(ex[i][j]+"\t");

}

System.out.println("");

}

System.out.println("");

System.out.println("ENTER THE VALUE");

colomn=A1.nextInt();

double arraytable[][]=new double[row][colomn];

System.out.println("ENTER THE CLASS IN THE SERIES");

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

{

for(j=0;j<colomn;j++)

{

arraytable[i][j]=A1.nextDouble();

}

if(i==0)

System.out.println("ENTER THE FREQUENCY IN THE SAME SERIES AS THE CLASS");

}

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

{

sum\_product\_fx+=((arraytable[0][i])\*(arraytable[1][i]));

sum\_f+=arraytable[1][i];

}

mean=sum\_product\_fx/ sum\_f;

System.out.println("THE MEAN OF GIVEN DATA "+mean);

}

break;

case "2":

{

System.out.println("ENTER THE NUMBER OF COLOMN OF TABLE OF DATA COLOMN (HERE ARE 2 ROWS 1 AS CLASS AND 2 AS FREQUENCY)");

System.out.println("Ex.");

String ex[][]={{"CLASS INTERVAL","5 10","10 15","15 20","20 25","25 30"},{"FREQUENCY ","4","5","3","6","2"}};

System.out.println("HERE ARE 5 COLOMN");

for(i=0;i<2;i++)

{

for(j=0;j<6;j++)

{

System.out.print(ex[i][j]+"\t");

}

System.out.println("");

}

System.out.println("");

System.out.println("ENTER THE VALUE");

colomn=A1.nextInt();

double classintervel[][]=new double[colomn][2];

double frequency[]=new double[colomn];

System.out.println("ENTER THE CLASS INTERVAL");

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

{

for(j=0;j<2;j++)

{

classintervel[i][j]=A1.nextDouble();

}

System.out.println("");

}

System.out.println("ENTER THE FREQUENCY SERIALY AS THE CLASS INTERVALS ARE ENTERED");

System.out.println("");

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

{

frequency[i]=A1.nextDouble();

}

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

{

sum\_product\_fx+=(((classintervel[i][0]+classintervel[i][1])/2)\*frequency[i]);

sum\_f+=frequency[i];

}

mean=sum\_product\_fx/sum\_f;

System.out.println("THE MEAN OF GIVEN DATA IS "+mean);

}

break;

case "3":

{

System.out.println("ENTER THE NUMBER OF COLOMN OF TABLE OF DATA COLOMN (HERE ARE 2 ROWS 1 AS CLASS AND 2 AS FREQUENCY)");

System.out.println("Ex.");

String ex[][]={{"CLASS INTERVALS","5 10","15 20","25 30","35 40","45 50"},{"FREQUENCY ","4","5","3","6","2"}};

System.out.println("HERE ARE 5 COLOMN");

for(i=0;i<2;i++)

{

for(j=0;j<6;j++)

{

System.out.print(ex[i][j]+"\t");

}

System.out.println("");

}

System.out.println("");

System.out.println("ENTER THE VALUE");

colomn=A1.nextInt();

double classintervel[][]=new double[colomn][2];

double frequency[]=new double[colomn];

System.out.println("ENTER THE CLASS INTERVALS");

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

{

for(j=0;j<2;j++)

{

classintervel[i][j]=A1.nextDouble();

}

System.out.println("");

}

double intervel=(classintervel[0][1]-classintervel[1][1])/2;

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

{

classintervel[i][0]=((classintervel[i][0])+intervel);

classintervel[i][1]=((classintervel[i][1])-intervel);

}

System.out.println("ENTER THE FREQUENCY SERIALY AS THE CLASS INTERVALS ARE ENTERED");

System.out.println("");

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

{

frequency[i]=A1.nextDouble();

}

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

{

sum\_product\_fx+=(((classintervel[i][0]+classintervel[i][1])/2)\*frequency[i]);

sum\_f+=frequency[i];

}

mean=sum\_product\_fx/sum\_f;

System.out.println("THE MEAN OF GIVEN DATA "+mean);

}

break;

default:

System.out.println("ERROR INVALID OPTION PLEASE TRY AGAIN");

obj1.Wait1();

}

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void EquationOfLine()throws IOException

{

try

{

System.out.println("ENTER THE VALUE OF\nm (SLOPE),\nx (CO-ORDINATE),\nc (y-INTERCEPT),\ny (CO-ORDINATE)\nAND THE VALUE TO BE CALCULATED AS '?'");

String mxcy[]=new String[4];

int i;

char Smat0,Sxat0,Scat0,Syat0;

double m=0,x=0,c=0,y=0;

boolean flagm=false,flagx=false,flagc=false,flagy=false;

for(i=0;i<4;i++)

{

if(i==0)

System.out.print("m=");

if(i==1)

System.out.print("x=");

if(i==2)

System.out.print("c=");

if(i==3)

System.out.print("y=");

mxcy[i]=(A.readLine());

}

Smat0=mxcy[0].charAt(0);

Sxat0=mxcy[1].charAt(0);

Scat0=mxcy[2].charAt(0);

Syat0=mxcy[3].charAt(0);

flagm=Character.isDigit(Smat0);

flagx=Character.isDigit(Sxat0);

flagc=Character.isDigit(Scat0);

flagy=Character.isDigit(Syat0);

if(flagm==true)

m=Double.parseDouble(mxcy[0]);

if(flagx==true)

x=Double.parseDouble(mxcy[1]);

if(flagc==true)

c=Double.parseDouble(mxcy[2]);

if(flagy==true)

y=Double.parseDouble(mxcy[3]);

if((flagm==true)&&(flagx==true)&&(flagc==true)&&(flagy==false))

{

y=(m\*x)+c;

System.out.println("CO=ORDINATE y= "+y);

}

if((flagm==false)&&(flagx==true)&&(flagc==true)&&(flagy==true))

{

m=(y-c)/x;

System.out.println("SLOPE m= "+m);

}

if((flagm==true)&&(flagx==false)&&(flagc==true)&&(flagy==true))

{

x=(y-c)/m;

System.out.println("CO-ORDINATE x= "+x);

}

if((flagm==true)&&(flagx==true)&&(flagc==false)&&(flagy==true))

{

c=y-(m\*x);

System.out.println("y-INTERCEPT c= "+c);

}

System.out.println("EQUATION OF LINE "+"y = "+m+" x "+" + "+c);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

void Discriminant()

{

try

{

Scanner A=new Scanner(System.in);

double a,b,c,dis,r1,r2;

System.out.println("ENTER THE VALUE FOR VARIEABLE a,b,c TO KNOW THE ROOTS OF THE QUADRATIC EQUATION \ni.e. ax2+bx+c=0");

System.out.print("a=");

a=A.nextDouble();

System.out.print("b=");

b=A.nextDouble();

System.out.print("c=");

c=A.nextDouble();

dis=b\*b-(4\*a\*c);

if(dis>0)

System.out.println("THE ROOTS ARE REAL AND UNEQUAL");

if(dis<0)

System.out.println("THE ROOTS ARE IMAGNARY");

if(dis==0)

System.out.println("THE ROOTS ARE REAL AND EQUAL");

System.out.println("");

if(dis>=0)

{

System.out.println("THE ROOTS ARE");

r1=(-b+Math.sqrt(dis))/2\*a;

r2=(-b-Math.sqrt(dis))/2\*a;

System.out.print(r1+" & "+r2+"\n");

}

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait1();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait1();

System.out.println("ERROR RESOLVED");

obj1.Wait1();

}

}

}

void MatrixAddition()

{

try

{

int row,colomn,i,j;

A2.println("ENTER THE ORDER OF MATRIX (ROW X COLOMN)");

row=A1.nextInt();

colomn=A1.nextInt();

A2.println("ENTER VALUE OF FIRST MATRIX");

double m1[][]=new double[row][colomn];

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

{

for(j=0;j<colomn;j++)

{

m1[i][j]=A1.nextInt();

}

A2.println("");

}

A2.println("ENTER VALUE OF SECOND MATRIX");

double m2[][]=new double[row][colomn];

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

{

for(j=0;j<colomn;j++)

{

m2[i][j]=A1.nextInt();

}

A2.println("");

}

double sum[][]=new double[row][colomn];

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

{

for(j=0;j<colomn;j++)

{

sum[i][j]=m1[i][j]+m2[i][j];

}

}

A2.println("THE SUM OF THE GIVEN MATRICES");

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

{

for(j=0;j<colomn;j++)

{

A2.print(sum[i][j]+" ");

}

A2.println("");

}

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj1.Wait();

System.out.println("RESOLVINS PLEASE WAIT");

obj1.Wait();

System.out.println("ERROR RESOLVED");

obj1.Wait();

}

}

}

}

import java.io.\*;

public class BMI

{

Wait obj=new Wait();

boolean flag=false;

void BMI()throws IOException

{

try

{

BufferedReader A=new BufferedReader(new InputStreamReader(System.in));

double h,w,bmi;

String eorc;

boolean e=false;

System.out.println("");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*WELCOME TO HEALTH ANALYSIS PROGRAM PROGRAMMED BY ATHARV DAREKAR\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("");

obj.Wait1();

do

{

System.out.println();

System.out.println("ENTER YOUR WEIGHT (IN Kg)");

w=Double.parseDouble(A.readLine());

System.out.println("");

System.out.println("ENTER YOUR HEIGHT (IN m)");

h=Double.parseDouble(A.readLine());

System.out.println("");

bmi=(w/(h\*h));

if (bmi<=13.0)

{

System.out.println("VERY SEVERELY UNDERWEIGHT");

System.out.println("");

}

if((bmi>=13.0)&&(bmi<14.0))

{

System.out.println("SEVERELY UNDERWEIGHT");

System.out.println("");

}

if((bmi>=14.0)&&(bmi<16.5))

{

System.out.println("UNDERWEIGHT");

System.out.println("");

}

if((bmi>=16.5)&&(bmi<23.0))

{

System.out.println("HEALTHY");

System.out.println("");

}

if((bmi>=23.0)&&(bmi<28.0))

{

System.out.println("OVERWEIGHT");

System.out.println("");

}

if((bmi>=28.0)&&(bmi<33.0))

{

System.out.println("OBESE CLASS I (MODERATELY OBESE)");

System.out.println("");

}

if((bmi>=33.0)&&(bmi<38.0))

{

System.out.println("OBESE CLASS II (SEVERELY OVERWEIGHT)");

System.out.println("");

}

if((bmi>=38.0))

{

System.out.println("OBESE CLASS III (VERY SEVERELY OVERWEIGHT)");

System.out.println("");

}

System.out.println("PRESS 'ENTER' TO CONTINUE ELSE ENTER 'EXIT' TO EXIT HEALTH ANALYSIS");

eorc=A.readLine();

if(eorc.equals("EXIT"))

e=true;

}while(e==false);

}catch(Exception e){flag=true;}

finally

{

if(flag==true)

{

System.out.println("RUN-TIME ERROR COMMITED");

obj.Wait1();

System.out.println("RESOLVINS PLEASE WAIT");

obj.Wait1();

System.out.println("ERROR RESOLVED");

obj.Wait1();

}

}

}

}

import java.io.\*;

class PERIODICTABLE

{

Wait obj=new Wait();

boolean e=false;

void Periodictable()throws IOException

{

BufferedReader A=new BufferedReader(new InputStreamReader(System.in));

String atomicnumber,eorc;

System.out.println("");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*WELCOME TO PERIODIC TABLE PROGRAMMED BY ATHARV DAREKAR\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("");

obj.Wait1();

do

{

System.out.println();

System.out.println("ENTER THE ATOMIC NUMBER OF THE ELEMENT FOR INFORMATION");

atomicnumber=A.readLine();

switch (atomicnumber)

{

case "1":

System.out.println("ELEMENT-HYDROGEN (H)");

System.out.println("MASS NUMBER=1.008");

System.out.println("PERIOD AND GROUP=1,1");

System.out.println("STATE AT ROOM TEMPRETURE-GAS");

System.out.println("CLASSIFICATION-ALKALINE METAL");

System.out.println("PROPERTIES OF- NON-METAL");

System.out.println("VALENCY=+1");

System.out.println("");

break;

case "2":

System.out.println("ELEMENT-HELIUM (He)");

System.out.println("MASS NUMBER=4.003");

System.out.println("PERIOD AND GROUP=1,18");

System.out.println("STATE AT ROOM TEMPRETURE-GAS");

System.out.println("CLASSIFICATION-NOBLE ELEMENT");

System.out.println("PROPERTIES OF-INERT ");

System.out.println("VALENCY=0");

System.out.println("");

break;

case "3":

System.out.println("ELEMENT-LITHIUM (Li)");

System.out.println("MASS NUMBER=6.941");

System.out.println("PERIOD AND GROUP=2,1");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-ALKALINE METAL");

System.out.println("PROPERTIES OF- METALS");

System.out.println("VALENCY=+1");

System.out.println("");

break;

case "4":

System.out.println("ELEMENT-BERYLLIUM (Be)");

System.out.println("MASS NUMBER=9.012182");

System.out.println("PERIOD AND GROUP=2,13");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-METALS");

System.out.println("PROPERTIES OF-ALKALINE EARTH METAL ");

System.out.println("VALENCY=+2");

System.out.println("");

break;

case "5":

System.out.println("ELEMENT-BORON (B)");

System.out.println("MASS NUMBER=10.811");

System.out.println("PERIOD AND GROUP=2,14");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-ALKALINE METAL");

System.out.println("PROPERTIES OF- METAL");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "6":

System.out.println("ELEMENT-CARBON (C)");

System.out.println("MASS NUMBER=12.0107");

System.out.println("PERIOD AND GROUP=2,14");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENTS");

System.out.println("PROPERTIES OF-NON-METAL ");

System.out.println("VALENCY=-4,4");

System.out.println("");

break;

case "7":

System.out.println("ELEMENT-NITROGEN (N)");

System.out.println("MASS NUMBER=14.67");

System.out.println("PERIOD AND GROUP=2,15");

System.out.println("STATE AT ROOM TEMPRETURE-GAS");

System.out.println("CLASSIFICATION-NORMAL ELEMENTS");

System.out.println("PROPERTIES OF-NON-METAS ");

System.out.println("VALENCY=-3");

System.out.println("");

break;

case "8":

System.out.println("ELEMENT-OXYGEN (O)");

System.out.println("MASS NUMBER=15.9994");

System.out.println("PERIOD AND GROUP=2,16");

System.out.println("STATE AT ROOM TEMPRETURE-GAS");

System.out.println("CLASSIFICATION-NORMAL ELEMENTS");

System.out.println("PROPERTIES OF-NON-METALS ");

System.out.println("VALENCY=-2");

System.out.println("");

break;

case "9":

System.out.println("ELEMENT-FLUROINE (F)");

System.out.println("MASS NUMBER=18.998403");

System.out.println("PERIOD AND GROUP=2,17");

System.out.println("STATE AT ROOM TEMPRETURE-GAS");

System.out.println("CLASSIFICATION-NORMAL ELEMENTS");

System.out.println("PROPERTIES OF-NON-METAL ");

System.out.println("VALENCY=-1");

System.out.println("");

break;

case "10":

System.out.println("ELEMENT-NEON (Ne)");

System.out.println("MASS NUMBER=20.1797");

System.out.println("PERIOD AND GROUP=2,18");

System.out.println("STATE AT ROOM TEMPRETURE-GAS");

System.out.println("CLASSIFICATION-NOBEL ELEMENT");

System.out.println("PROPERTIES OF-INERT");

System.out.println("VALENCY=0");

System.out.println("");

break;

case "11":

System.out.println("ELEMENT-SODIUM (Na)");

System.out.println("MASS NUMBER=22.989769");

System.out.println("PERIOD AND GROUP=3,1");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-ALKALINE METAL");

System.out.println("PROPERTIES OF-METALS ");

System.out.println("VALENCY=1");

System.out.println("");

break;

case "12":

System.out.println("ELEMENT-MAGNESIUM (Mg)");

System.out.println("MASS NUMBER=24.3050");

System.out.println("PERIOD AND GROUP=3,2");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-ALKALINE EARTH METAL ");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=2");

System.out.println("");

break;

case "13":

System.out.println("ELEMENT-ALUMINIUM (Al)");

System.out.println("MASS NUMBER= 26.981539");

System.out.println("PERIOD AND GROUP=3,13");

System.out.println("STATE AT ROOM TEMPRETURE-");

System.out.println("CLASSIFICATION-NORMAL-ELEMENTS");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "14":

System.out.println("ELEMENT-SILICON (Si)");

System.out.println("MASS NUMBER=28.0855");

System.out.println("PERIOD AND GROUP=3,14");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METALLOID ");

System.out.println("VALENCY=-4");

System.out.println("");

break;

case "15":

System.out.println("ELEMENT-PHOSPHOROUS (P)");

System.out.println("MASS NUMBER=30.973762");

System.out.println("PERIOD AND GROUP=3,15");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-NON METAL");

System.out.println("VALENCY=-3");

System.out.println("");

break;

case "16":

System.out.println("ELEMENT-SULPHUR (S)");

System.out.println("MASS NUMBER=32.65");

System.out.println("PERIOD AND GROUP=3,16");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-NON METAL ");

System.out.println("VALENCY=-2");

System.out.println("");

break;

case "17":

System.out.println("ELEMENT-CHLORINE (Cl)");

System.out.println("MASS NUMBER=35.453");

System.out.println("PERIOD AND GROUP=3,17");

System.out.println("STATE AT ROOM TEMPRETURE-GAS");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF- NON METAL");

System.out.println("VALENCY=-1");

System.out.println("");

break;

case "18":

System.out.println("ELEMENT-ARGON (Ar)");

System.out.println("MASS NUMBER=39.948");

System.out.println("PERIOD AND GROUP=3,18");

System.out.println("STATE AT ROOM TEMPRETURE-GAS");

System.out.println("CLASSIFICATION-NOBLE ELEMENT");

System.out.println("PROPERTIES OF-INERT ");

System.out.println("VALENCY=0");

System.out.println("");

break;

case "19":

System.out.println("ELEMENT-POTASSIUM (K)");

System.out.println("MASS NUMBER=39.0983");

System.out.println("PERIOD AND GROUP=4,1");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-ALKALINE METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=1");

System.out.println("");

break;

case "20":

System.out.println("ELEMENT-CALCIUM (Ca)");

System.out.println("MASS NUMBER=40.078");

System.out.println("PERIOD AND GROUP=4,2");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-ALKALINE EARTH METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=2");

System.out.println("");

break;

case "21":

System.out.println("ELEMENT-SCANDIUM (Sc)");

System.out.println("MASS NUMBER=44.95592");

System.out.println("PERIOD AND GROUP=4,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSITION METALS");

System.out.println("PROPERTIES OF-METALS");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "22":

System.out.println("ELEMENT-TITANIUM (Ti)");

System.out.println("MASS NUMBER=47.867");

System.out.println("PERIOD AND GROUP=4,4");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSITION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4");

System.out.println("");

break;

case "23":

System.out.println("ELEMENT-VANADIUM (V)");

System.out.println("MASS NUMBER=50.9415");

System.out.println("PERIOD AND GROUP=4,5");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSITION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=5");

System.out.println("");

break;

case "24":

System.out.println("ELEMENT-CHROMIUM (Cr)");

System.out.println("MASS NUMBER=51.9961");

System.out.println("PERIOD AND GROUP=4,6");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSION ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=6,3");

System.out.println("");

break;

case "25":

System.out.println("ELEMENT-MANGANESE (Mn)");

System.out.println("MASS NUMBER=54.938045");

System.out.println("PERIOD AND GROUP=4,7");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSITION ELEMENT");

System.out.println("PROPERTIES OF- METAL");

System.out.println("VALENCY=7,4,2");

System.out.println("");

break;

case "26":

System.out.println("ELEMENT-IRON (Fe)");

System.out.println("MASS NUMBER=55.845");

System.out.println("PERIOD AND GROUP=4,8");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=2,3");

System.out.println("");

break;

case "27":

System.out.println("ELEMENT-COBALT (Co)");

System.out.println("MASS NUMBER=58.933195");

System.out.println("PERIOD AND GROUP=4,9");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRASITION METAL");

System.out.println("PROPERTIES OF- METAL");

System.out.println("VALENCY=2,3");

System.out.println("");

break;

case "28":

System.out.println("ELEMENT-NICKEL (Ni)");

System.out.println("MASS NUMBER=58.6934");

System.out.println("PERIOD AND GROUP=4,10");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=2");

System.out.println("");

break;

case "29":

System.out.println("ELEMENT-COPPER (Cu)");

System.out.println("MASS NUMBER=63.546");

System.out.println("PERIOD AND GROUP=4,11");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=1,2");

System.out.println("");

break;

case "30":

System.out.println("ELEMENT-ZINC (Zn)");

System.out.println("MASS NUMBER=65.38");

System.out.println("PERIOD AND GROUP=4,12");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=2");

System.out.println("");

break;

case "31":

System.out.println("ELEMENT-GALLIUM (Ga)");

System.out.println("MASS NUMBER=69.723");

System.out.println("PERIOD AND GROUP=4,13");

System.out.println("STATE AT ROOM TEMPRETURE-LIQUID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "32":

System.out.println("ELEMENT-GERMANIUM (Ge)");

System.out.println("MASS NUMBER=72.64");

System.out.println("PERIOD AND GROUP=4,14");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METALOID ");

System.out.println("VALENCY=-4");

System.out.println("");

break;

case "33":

System.out.println("ELEMENT-ARSENIC (As)");

System.out.println("MASS NUMBER=74.9216");

System.out.println("PERIOD AND GROUP=4,15");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METALOID ");

System.out.println("VALENCY=-3");

System.out.println("");

break;

case "34":

System.out.println("ELEMENT-SELENIUM (Se)");

System.out.println("MASS NUMBER=78.96");

System.out.println("PERIOD AND GROUP=4,16");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-NON METAL ");

System.out.println("VALENCY=-2");

System.out.println("");

break;

case "35":

System.out.println("ELEMENT-BROMINE (Br)");

System.out.println("MASS NUMBER=79.904");

System.out.println("PERIOD AND GROUP=4,17");

System.out.println("STATE AT ROOM TEMPRETURE-LIQUID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-NON METAL ");

System.out.println("VALENCY=5,3,1");

System.out.println("");

break;

case "36":

System.out.println("ELEMENT-KRYPTON (Kr)");

System.out.println("MASS NUMBER=83.798");

System.out.println("PERIOD AND GROUP=4,18");

System.out.println("STATE AT ROOM TEMPRETURE-GAS");

System.out.println("CLASSIFICATION-NOBLE ELEMENT");

System.out.println("PROPERTIES OF-INERT ");

System.out.println("VALENCY=0");

System.out.println("");

break;

case "37":

System.out.println("ELEMENT-RUBIDIUM (Rb)");

System.out.println("MASS NUMBER=85.4678");

System.out.println("PERIOD AND GROUP=5,1");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-ALKALI METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=1");

System.out.println("");

break;

case "38":

System.out.println("ELEMENT-STRONTIUM (Sr)");

System.out.println("MASS NUMBER=87.62");

System.out.println("PERIOD AND GROUP=5,2");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-ALKALI EARTH METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=2");

System.out.println("");

break;

case "39":

System.out.println("ELEMENT-YTTRIUM (Y)");

System.out.println("MASS NUMBER=88.90585");

System.out.println("PERIOD AND GROUP=5,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "40":

System.out.println("ELEMENT-ZIRCONIUM (Zr)");

System.out.println("MASS NUMBER=91.224");

System.out.println("PERIOD AND GROUP=5,4");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRASNSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4");

System.out.println("");

break;

case "41":

System.out.println("ELEMENT-NIOBIUM (Nb)");

System.out.println("MASS NUMBER=92.90638");

System.out.println("PERIOD AND GROUP=5,5");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=5");

System.out.println("");

break;

case "42":

System.out.println("ELEMENT-MOLYBDENUM (Mo)");

System.out.println("MASS NUMBER=95.96");

System.out.println("PERIOD AND GROUP=5,6");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF- METAL");

System.out.println("VALENCY=6,4");

System.out.println("");

break;

case "43":

System.out.println("ELEMENT-TECHNETIUM (Tc)");

System.out.println("MASS NUMBER=98.9062");

System.out.println("PERIOD AND GROUP=5,7");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRAMNSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=7,4");

System.out.println("");

break;

case "44":

System.out.println("ELEMENT-RUTHENIUM (Ru)");

System.out.println("MASS NUMBER=101.7");

System.out.println("PERIOD AND GROUP=5,8");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4,3");

System.out.println("");

break;

case "45":

System.out.println("ELEMENT-RHODIUM (Rh)");

System.out.println("MASS NUMBER=102.9055");

System.out.println("PERIOD AND GROUP=5,9");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "46":

System.out.println("ELEMENT- PALLADIUM (Pd)");

System.out.println("MASS NUMBER=106.42");

System.out.println("PERIOD AND GROUP=5,10");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4,2");

System.out.println("");

break;

case "47":

System.out.println("ELEMENT-SILVER (Ag)");

System.out.println("MASS NUMBER=107.8682");

System.out.println("PERIOD AND GROUP=5,11");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=1");

System.out.println("");

break;

case "48":

System.out.println("ELEMENT-CADMIUM (Cd)");

System.out.println("MASS NUMBER=112.411");

System.out.println("PERIOD AND GROUP=5,12");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=2");

System.out.println("");

break;

case "49":

System.out.println("ELEMENT-INDIUM (In)");

System.out.println("MASS NUMBER=114.818");

System.out.println("PERIOD AND GROUP=5,13");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "50":

System.out.println("ELEMENT-TIN (Sn)");

System.out.println("MASS NUMBER=118.710");

System.out.println("PERIOD AND GROUP=5,14");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=-4");

System.out.println("");

break;

case "51":

System.out.println("ELEMENT-ANTIMONY (Sb)");

System.out.println("MASS NUMBER=121.76");

System.out.println("PERIOD AND GROUP=5,15");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METALLOID ");

System.out.println("VALENCY=-3");

System.out.println("");

break;

case "52":

System.out.println("ELEMENT-TALLURIAM (Te) ");

System.out.println("MASS NUMBER=127.6");

System.out.println("PERIOD AND GROUP=5,16");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METALLOID ");

System.out.println("VALENCY=-2");

System.out.println("");

break;

case "53":

System.out.println("ELEMENT-IODINE (I)");

System.out.println("MASS NUMBER=126.90447");

System.out.println("PERIOD AND GROUP=5,17");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-NON METAL ");

System.out.println("VALENCY=1");

System.out.println("");

break;

case "54":

System.out.println("ELEMENT-XENON (Xe)");

System.out.println("MASS NUMBER=131.293");

System.out.println("PERIOD AND GROUP=5,18");

System.out.println("STATE AT ROOM TEMPRETURE-GAS");

System.out.println("CLASSIFICATION-NOBLE ELEMENT");

System.out.println("PROPERTIES OF-INERT ");

System.out.println("VALENCY=0");

System.out.println("");

break;

case "55":

System.out.println("ELEMENT-CAESIUM (Cs)");

System.out.println("MASS NUMBER=132.90545");

System.out.println("PERIOD AND GROUP=6,1");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-ALKALINE METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=1");

System.out.println("");

break;

case "56":

System.out.println("ELEMENT-BARIUM (Ba)");

System.out.println("MASS NUMBER=137.327");

System.out.println("PERIOD AND GROUP=6,2");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-ALKALINE EARTH METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=2");

System.out.println("");

break;

case "57":

System.out.println("ELEMENT-LANTHANUM (La)");

System.out.println("MASS NUMBER=138.94788");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "58":

System.out.println("ELEMENT-CERIUM (Ce)");

System.out.println("MASS NUMBER=140.116");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4,3");

System.out.println("");

break;

case "59":

System.out.println("ELEMENT-PRASEODYMIUM (Pr)");

System.out.println("MASS NUMBER=140.90765");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "60":

System.out.println("ELEMENT-NEODYMIUM (Nd)");

System.out.println("MASS NUMBER=144.242");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "61":

System.out.println("ELEMENT-PROMETHIUM (Pm)");

System.out.println("MASS NUMBER=144.9127");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-IINER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "62":

System.out.println("ELEMENT-SAMARIUM (Sm)");

System.out.println("MASS NUMBER=150.36");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-IINER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "63":

System.out.println("ELEMENT-EUROPIUM (Eu)");

System.out.println("MASS NUMBER=151.964");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-IINER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "64":

System.out.println("ELEMENT-GADOLINIUM (Gd)");

System.out.println("MASS NUMBER=157.25");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-IINER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "65":

System.out.println("ELEMENT-TERBIUM (Tb)");

System.out.println("MASS NUMBER=158.92535");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-IINER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "66":

System.out.println("ELEMENT-DYSPROSIUM (Dy)");

System.out.println("MASS NUMBER=");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-IINER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "67":

System.out.println("ELEMENT-HOLMIUM (Ho)");

System.out.println("MASS NUMBER=164.93032");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-IINER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "68":

System.out.println("ELEMENT-ERBIUM (Er)");

System.out.println("MASS NUMBER=167.259");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-IINER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "69":

System.out.println("ELEMENT-THULIUM (Tm)");

System.out.println("MASS NUMBER=168.93421");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-IINER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "70":

System.out.println("ELEMENT-YTTERBIUM (Yb)");

System.out.println("MASS NUMBER=173.054");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-IINER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "71":

System.out.println("ELEMENT-LUTETIUM (Lu)");

System.out.println("MASS NUMBER=174.9668");

System.out.println("PERIOD AND GROUP=6,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-IINER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "72":

System.out.println("ELEMENT-HAFNIUM (Hf)");

System.out.println("MASS NUMBER=178.48");

System.out.println("PERIOD AND GROUP=6,4");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4");

System.out.println("");

break;

case "73":

System.out.println("ELEMENT-TANTALUM (Ta)");

System.out.println("MASS NUMBER=180.9479");

System.out.println("PERIOD AND GROUP=6,5");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=5");

System.out.println("");

break;

case "74":

System.out.println("ELEMENT-TUNGSTEN (W)");

System.out.println("MASS NUMBER=183.84");

System.out.println("PERIOD AND GROUP=6,6");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4,6");

System.out.println("");

break;

case "75":

System.out.println("ELEMENT-RHENIUM (Re)");

System.out.println("MASS NUMBER=186.207");

System.out.println("PERIOD AND GROUP=6,7");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=0");

System.out.println("");

break;

case "76":

System.out.println("ELEMENT-OSMIUM (Os)");

System.out.println("MASS NUMBER=190.23");

System.out.println("PERIOD AND GROUP=6,8");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4");

System.out.println("");

break;

case "77":

System.out.println("ELEMENT-IRADIUM (Ir)");

System.out.println("MASS NUMBER=192.217");

System.out.println("PERIOD AND GROUP=6,9");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4,3");

System.out.println("");

break;

case "78":

System.out.println("ELEMENT-PLATINUM (Pt)");

System.out.println("MASS NUMBER=195.084");

System.out.println("PERIOD AND GROUP=6,10");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4,2");

System.out.println("");

break;

case "79":

System.out.println("ELEMENT-GOLD (Au)");

System.out.println("MASS NUMBER=196.96657");

System.out.println("PERIOD AND GROUP=6,11");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "80":

System.out.println("ELEMENT-MERCURY (Hg)");

System.out.println("MASS NUMBER=200.59");

System.out.println("PERIOD AND GROUP=6,12");

System.out.println("STATE AT ROOM TEMPRETURE-LIQUID");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=2,1");

System.out.println("");

break;

case "81":

System.out.println("ELEMENT-THALIUM (Tl)");

System.out.println("MASS NUMBER=204.3833");

System.out.println("PERIOD AND GROUP=6,13");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3,1");

System.out.println("");

break;

case "82":

System.out.println("ELEMENT-LEAD (Pb)");

System.out.println("MASS NUMBER=207.2");

System.out.println("PERIOD AND GROUP=6,14");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4,2");

System.out.println("");

break;

case "83":

System.out.println("ELEMENT-BISMUTH (Bi)");

System.out.println("MASS NUMBER= 208.98040");

System.out.println("PERIOD AND GROUP=6,15");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "84":

System.out.println("ELEMENT-POLONIUM (Po)");

System.out.println("MASS NUMBER=208.9824");

System.out.println("PERIOD AND GROUP=6,16");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4,2");

System.out.println("");

break;

case "85":

System.out.println("ELEMENT-ASTATINE (At)");

System.out.println("MASS NUMBER=209.9871");

System.out.println("PERIOD AND GROUP=6,17");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-NON METAL ");

System.out.println("VALENCY=1");

System.out.println("");

break;

case "86":

System.out.println("ELEMENT-RADON (Rn)");

System.out.println("MASS NUMBER=222.0176");

System.out.println("PERIOD AND GROUP=6,18");

System.out.println("STATE AT ROOM TEMPRETURE-GAS");

System.out.println("CLASSIFICATION-NOBEL ELEMENT");

System.out.println("PROPERTIES OF-INERT ");

System.out.println("VALENCY=0");

System.out.println("");

break;

case "87":

System.out.println("ELEMENT-FRANCIUM (Fr)");

System.out.println("MASS NUMBER=223.0197");

System.out.println("PERIOD AND GROUP=7,1");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-ALKALINE METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=1");

System.out.println("");

break;

case "88":

System.out.println("ELEMENT-RADIUM (Ra)");

System.out.println("MASS NUMBER=226.0254");

System.out.println("PERIOD AND GROUP=7,2");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-ALKALINE EARTH METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "89":

System.out.println("ELEMENT-ACTINIUM (Ac)");

System.out.println("MASS NUMBER=227.0278");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

case "90":

System.out.println("ELEMENT-THORIUM (Th)");

System.out.println("MASS NUMBER=232.381");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4");

System.out.println("");

break;

case "91":

System.out.println("ELEMENT-PROTACTIUM (Pa) ");

System.out.println("MASS NUMBER=231.3588");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=5");

System.out.println("");

break;

case "92":

System.out.println("ELEMENT-URANIUM (U)");

System.out.println("MASS NUMBER=238.2898");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSMISSION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=6");

System.out.println("");

break;

case "93":

System.out.println("ELEMENT-NEPTUNIUM (Np)");

System.out.println("MASS NUMBER=237.482");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSMISSION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=5");

System.out.println("");

break;

case "94":

System.out.println("ELEMENT-PLUTONIUM (Pu)");

System.out.println("MASS NUMBER=244.642");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSMISSION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=4");

System.out.println("");

break;

case "95":

System.out.println("ELEMENT-AMERICIUM (Am)");

System.out.println("MASS NUMBER=243.614");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSMISSION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "96":

System.out.println("ELEMENT-CURIUM (Cm)");

System.out.println("MASS NUMBER=247");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSMISSION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "97":

System.out.println("ELEMENT-BERKELIUM (Bk)");

System.out.println("MASS NUMBER=247.703");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSMISSION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "98":

System.out.println("ELEMENT-CALIFORNIUM (Cf)");

System.out.println("MASS NUMBER=251.796");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSMISSION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "99":

System.out.println("ELEMENT-EINSTEINIUM (Es)");

System.out.println("MASS NUMBER=252.03");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSMISSION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "100":

System.out.println("ELEMENT-FERMIUM (Fm)");

System.out.println("MASS NUMBER=257.951");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSMISSION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "101":

System.out.println("ELEMENT-MENDELEVIUM (Md)");

System.out.println("MASS NUMBER=258.1");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSMISSION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "102":

System.out.println("ELEMENT-NOBLIUM (No)");

System.out.println("MASS NUMBER=259.1009");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSMISSION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "103":

System.out.println("ELEMENT-LAWRENCIUM (Lr)");

System.out.println("MASS NUMBER=260.1053");

System.out.println("PERIOD AND GROUP=7,3");

System.out.println("STATE AT ROOM TEMPRETURE-SOLID");

System.out.println("CLASSIFICATION-INNER TRANSMISSION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("VALENCY=3");

System.out.println("");

break;

case "104":

System.out.println("ELEMENT-RUTHERFORDIUM (Rf)");

System.out.println("MASS NUMBER=261.11");

System.out.println("PERIOD AND GROUP=7,4");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "105":

System.out.println("ELEMENT-DUBNIUM (Db)");

System.out.println("MASS NUMBER=262.11");

System.out.println("PERIOD AND GROUP=7,5");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "106":

System.out.println("ELEMENT-SEABORGIUM (Sg)");

System.out.println("MASS NUMBER=263.12");

System.out.println("PERIOD AND GROUP=7,6");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "107":

System.out.println("ELEMENT-BOHRIUM (Bh)");

System.out.println("MASS NUMBER=262.12");

System.out.println("PERIOD AND GROUP=7,7");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "108":

System.out.println("ELEMENT-HASSIUM (Hs)");

System.out.println("MASS NUMBER=264");

System.out.println("PERIOD AND GROUP=7,8");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "109":

System.out.println("ELEMENT-MEITNERIUM (Mt)");

System.out.println("MASS NUMBER=266.1378");

System.out.println("PERIOD AND GROUP=7,9");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "110":

System.out.println("ELEMENT-DAMSTACIUM (Ds)");

System.out.println("MASS NUMBER=269");

System.out.println("PERIOD AND GROUP=7,10");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "111":

System.out.println("ELEMENT-ROENTGENTIUM (Rg)");

System.out.println("MASS NUMBER=272");

System.out.println("PERIOD AND GROUP=7,11");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "112":

System.out.println("ELEMENT-COPERNICIUM (Cp)");

System.out.println("MASS NUMBER=277");

System.out.println("PERIOD AND GROUP=7,12");

System.out.println("CLASSIFICATION-TRANSISION METAL");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "113":

System.out.println("ELEMENT-UNUNTRIUM (Uut)");

System.out.println("MASS NUMBER=284");

System.out.println("PERIOD AND GROUP=7,13");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "114":

System.out.println("ELEMENT-UNUNQUADIUM (Uuq)");

System.out.println("MASS NUMBER=289");

System.out.println("PERIOD AND GROUP=7,14");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "115":

System.out.println("ELEMENT-UNUNPENTIUM (Uup)");

System.out.println("MASS NUMBER=288");

System.out.println("PERIOD AND GROUP=7,15");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "116":

System.out.println("ELEMENT-UNUNHEXIUM (Uuh)");

System.out.println("MASS NUMBER=292");

System.out.println("PERIOD AND GROUP=7,16");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "117":

System.out.println("ELEMENT-UNUNSEPTIUM (Uuh)");

System.out.println("MASS NUMBER=293");

System.out.println("PERIOD AND GROUP=7,17");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

case "118":

System.out.println("ELEMENT-UNUNOCTIUM (Uuo)");

System.out.println("MASS NUMBER=294");

System.out.println("PERIOD AND GROUP=7,18");

System.out.println("CLASSIFICATION-NORMAL ELEMENT");

System.out.println("PROPERTIES OF-METAL ");

System.out.println("");

break;

default:

System.out.println("ERROR INVALID OPTION PLEASE TRY AGAIN");

obj.Wait1();

}

System.out.println("PRESS 'ENTER' TO CONTINUE ELSE ENTER 'EXIT' TO EXIT PERIODIC TABLE");

eorc=A.readLine();

if(eorc.equals("EXIT"))

e=true;

}while(e==false);

}

}

public class Wait

{

void Wait()

{

int i=0;

//Delay Of 3 sec

for(i=1;i<=11111111;i++)

{

System.out.print("");

}

}

void Wait1()

{

int j=0;

//Delay Of 4 sec

for(j=1;j<=14814815;j++)

{

System.out.print("");

}

}

void WaitForIntroduction()

{

//Delay Of 30 sec

for(int i=1;i<=185185190;i++)

{

System.out.print("");

}

}

}