POP LAB ASSIGNMENTS

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Section: A

1.WAP to print a message "Hello World".

class HW

{public static void main(String[]args)

{

System.out.println(" " + " Hello World ");

}

}

2. WAP to print a message your name and address in two different lines.

import java.util.Scanner;

class Info

{public static void main(String[]args)

{

Scanner myobj = new Scanner(System.in);

System.out.print("Enter name and address : ");

String a = myobj.nextLine();

String b = myobj.nextLine();

System.out.println("Name is " + a );

System.out.println(a + " lives in " + b);

}

}

3. WAP to assign two variables and print the sum of both numbers.

class Sum

{public static void main(String[]args)

{

int p,q,r;

p = 12;

q = 10

r =p + q;

System.out.println("Sum of p and q is " + r) ;

}

}

4. WAP to read two numbers from command line using args[ ] and print the sum of both numbers.

class Sum

{public static void main(String[]args)

{

int p,q,r;

p = 12;

q = 10;

r =p + q;

System.out.println("Sum of p and q is " + r) ;

}

}

5. WAP to do arithmetic operation (+, -, \*, /) after reading two numbers as in Q4.

import java.util.Scanner;

class ARoperation

{public static void main(String[]args)

{

Scanner myobj = new Scanner(System.in);

System.out.print("Enter two numbers : ");

int p,q,r,s,t,u ;

p = myobj.nextInt();

q = myobj.nextInt();

r = p + q;

s = p - q;

t = p \* q;

u = p / q;

System.out.println("Sum of p and q is " + r );

System.out.println("Subtraction of p and q is " + s);

System.out.println("Multiplication of p and q is " + t);

System.out.println("p divided by q is " + u);

}

}

6. WAP to calculate/print area and perimeter of a rectangle.

import java.util.Scanner;

class Areaandperi

{public static void main(String[]args)

{

Scanner myobj = new Scanner(System.in);

System.out.print("Enter length and breadth : ");

int len,breadth,peri,area ;

len = myobj.nextInt();

breadth = myobj.nextInt();

peri = 2\*(len + breadth);

area = len \* breadth;

System.out.println("Area of rectangle is " + area);

System.out.println("Perimeter of rectangle is " + peri);

}

}

7. WAP to calculate/print area and circumference of a circle.

import java.util.Scanner;

class Areacirc

{public static void main(String[]args)

{

Scanner ac = new Scanner(System.in);

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

int r, q, area, circumference;

r = ac.nextInt();

q = 22/7;

area = q \* r \* r;

circumference = q \* r;

System.out.println(" Circumference of circle is " + circumference);

System.out.println(" Area of circle is " + area);

}

}

8. WAP to calculate the simple interest where P, R, T are given by user at command line.

import java.util.Scanner; //quesno.8

class SI

{public static void main(String[]args)

{

Scanner myobj = new Scanner(System.in);

System.out.print("Enter values : ");

int p, r, t,interest ;

p = myobj.nextInt();

t = myobj.nextInt();

r = myobj.nextInt();

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

System.out.println("Simple Interest is " + interest);

}

}

9. WAP to print the big number out of two numbers.

import java.util.Scanner; //Qno9

class Bignum1

{public static void main(String[]args)

{

int i,j;

Scanner myobj= new Scanner(System.in);

System.out.print("Enter any number : ");

i = myobj.nextInt();

j = myobj.nextInt();

if (i>j)

{

System.out.println("i is greater than j");

}

else

{

System.out.println("j is greater than i");

}

}

}

10.WAP to print the big number out of three numbers.

import java.util.Scanner; //Qno10

class Bignum2

{public static void main(String[]args)

{

int a,b,c;

Scanner myobj= new Scanner(System.in);

System.out.print("Enter any number : ");

a = myobj.nextInt();

b = myobj.nextInt();

c = myobj.nextInt();

if (a>b)

{

if (a>c)

System.out.println("a is greater than c");

else

System.out.println("c is greater than a");

}

else

{

if (b>c)

System.out.println("b is greater than c");

else

System.out.println("c is greater than b");

}

}

}

11.Any integer is input through the keyboard. Write a program to find out whether it is an odd number or even number.

import java.util.Scanner; //Qno.11

class OEnum

{public static void main(String[]args)

{

Scanner reader = new Scanner(System.in);

System.out.println("Enter any number to be checked as even or odd : ");

int v;

v = reader.nextInt();

if (v % 2 == 0)

{

System.out.println("Given number is even. ");

}

else

{

System.out.println("Given number is odd. ");

}

}

}

12.WAP to check whether a triangle is valid or not, when the three angles of the triangle are entered through the keyboard.

import java.util.Scanner; //Qno.12

class Triangle

{public static void main(String[]args)

{

Scanner angle = new Scanner(System.in);

System.out.println("Enter the angles of triangle : ");

int r,s,t;

r = angle.nextInt();

s = angle.nextInt();

t = angle.nextInt();

if (r == 60 && s == 60 && t == 60)

{

System.out.println("The triangle is valid. ");

}

else if (r == 90 && s == 60 && t == 30)

{

System.out.println("The triangle is valid. ");

}

else

{

System.out.println("The triangle is not valid. ");

}

}

}

13.If cost price and selling price of an item is input through the keyboard, write a program to determine whether the seller has made profit or incurred loss. Also determine how much profit he made or loss he incurred.

import java.util.Scanner;

class Profitorloss

{public static void main(String[]args)

{

Scanner calc = new Scanner(System.in);

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

int sp , cp, profit, loss ;

cp = calc.nextInt();

sp = calc.nextInt();

profit = sp - cp ;

loss = cp - sp ;

if (sp == cp)

System.out.println("Nor profit nor loss. ");

else if(sp > cp)

System.out.println( "Profit = " + profit);

else

System.out.println( "Loss = " + loss );

}

}

14.A company insures its drivers in the following cases:

− If the driver is married.

− If the driver is unmarried, male & above 30 years of age.

− If the driver is unmarried, female & above 25 years of age.

In all other cases the driver is not insured. If the marital status, sex and age of the driver are the inputs, write a program to determine whether the driver is to be insured or not.

import java.util.Scanner;

class Insure

{public static void main(String[]args)

{

Scanner myobj = new Scanner(System.in);

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

String status = myobj.nextLine();

String sex;

int age ;

sex = myobj.nextLine();

age = myobj.nextInt();

if (status.equals( "married"))

System.out.println("The driver is insured. ");

else if (status.equals( "unmarried") && sex.equals( "male") && age > 30)

System.out.println("The driver is insured. ");

else if (status.equals( "unmarried") && sex.equals( "female") && age >25)

System.out.println("The driver is insured. ");

else

System.out.println("The driver is not insured. ");

}

}

15.WAP to swap the values of two numbers with the third variable.

import java.util.Scanner;

class Swap

{public static void main(String[]args)

{

Scanner swap= new Scanner(System.in);

int p, q, r;

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

p = swap.nextInt();

q = swap.nextInt();

System.out.println("Before swapping " + " p = " + p + " q = " + q);

r = p ;

p = q ;

q = r ;

System.out.println("After swapping " + " p = " + p + " q = " + q);

}

}

16.WAP to swap the values of two numbers without third variable.

import java.util.Scanner;

class Swap1

{public static void main(String[]args)

{

Scanner swap= new Scanner(System.in);

int m ,n ;

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

m = swap.nextInt();

n = swap.nextInt();

System.out.println("Before swapping " + " m = " + m + " n = " + n);

m = m + n;

n = m - n;

m = m - n;

System.out.println("After swapping " + " m = " + m + " n = " + n);

}

}

17.WAP to input day no at command line and print day name using if statement.

import java.util.Scanner;

class Dayno

{public static void main(String[]args)

{

Scanner in = new Scanner(System.in);

System.out.println("Enter day no : ");

int day = in.nextInt();

if (day == 1)

System.out.println("Sunday ");

else if (day == 2)

System.out.println("Monday ");

else if (day == 3)

System.out.println("Tuesday ");

else if (day == 4)

System.out.println("Wednesday ");

else if (day == 5)

System.out.println("Thursday ");

else if (day == 6)

System.out.println("Friday ");

else if (day == 7)

System.out.println("Saturday ");

else

System.out.println("Not valid day no.");

}

}

18.WAP to input day no at command line and print day name using switch statement.

import java.util.Scanner;//Qno.18

class Dayno1

{public static void main(String[]args)

{

Scanner in = new Scanner(System.in);

System.out.println("Input number : ");

int day = in.nextInt();

switch(day)

{

case 1 : System.out.println("Sunday ");

break;

case 2 : System.out.println("Monday ");

break;

case 3 : System.out.println("Tuesday ");

break;

case 4 : System.out.println("Wednesday ");

break;

case 5 : System.out.println("Thursday ");

break;

case 6 : System.out.println("Friday ");

break;

case 7 : System.out.println("Saturday ");

break;

default : System.out.println("Invalid day range ");

}

}

}

19.WAP to input month no at command line and print month name using if statement.

import java.util.Scanner;//Qno.19

class Monthno

{public static void main(String[]args)

{

Scanner in = new Scanner(System.in);

System.out.println("Enter month no : ");

int month = in.nextInt();

if (month == 1)

System.out.println("January ");

else if (month == 2)

System.out.println("February ");

else if (month == 3)

System.out.println("March ");

else if (month == 4)

System.out.println("April ");

else if (month == 5)

System.out.println("May ");

else if (month == 6)

System.out.println("June ");

else if (month == 7)

System.out.println("July ");

else if (month == 8)

System.out.println("August ");

else if (month == 9)

System.out.println("September ");

else if (month == 10)

System.out.println("October ");

else if (month == 11)

System.out.println("November ");

else if(month == 12)

System.out.println("December ");

else

System.out.println("Not valid month no.");

}

}

20.WAP to input month no at command line and print month name using switch statement.

import java.util.Scanner;

class Monthno1

{public static void main(String[]args)

{

Scanner in = new Scanner(System.in);

System.out.println("Input month no : ");

int month = in.nextInt();

switch(month)

{

case 1 : System.out.println("January ");

break;

case 2 : System.out.println("February");

break;

case 3 : System.out.println("March ");

break;

case 4 : System.out.println("April ");

break;

case 5 : System.out.println("May ");

break;

case 6 : System.out.println("June ");

break;

case 7 : System.out.println("July ");

break;

case 8 : System.out.println("August ");

break;

case 9 : System.out.println("September ");

break;

case 10 : System.out.println("October ");

break;

case 11 : System.out.println("November ");

break;

case 12 : System.out.println("December ");

break;

default : System.out.println("Invalid month no ");

}

}

}

21.WAP to Enter income of person. Calculate tax as per Nepal Government, Salary Tax is levied at a rate of 1%, 15%, 25% and 35% (i.e Extra 40% of Tax amount) on yearly accessible salary upto 350,000, 350,001–450,000, 450,001–2,500,000 and 25,000,001 and above respectively.

0000 && r <= 2500000)

{

r = (r \* 25)/100;

System.out.println(" Your's yearly income is " + r);

}

else if(r > 2500000 && r <= 50000000 )

{

r = (r \* 35)/100;

System.out.println(" Your's yearly income is " + r);

}

else

{

r = (r \* 40)/100;

System.out.println("Your's monthly income is " + r);

}

}

}

22.Write a menu driven program using switch statement which has following options and perform the task as per user choice input.

1. To print the Factorial of a number.

2. To check no is Prime or not

3. To check no is Odd or even

4. To check no is Palindrome or not.

5. To check no is Armstrong or not.

6. To check no is Magic or not.

7. Exit

import java.util.Scanner; //Qno.22

class Task

{public static void main(String[]args)

{

Scanner op = new Scanner(System.in);

System.out.println("Enter any task no :");

int x,y,z ,sum,r,i;

x = op.nextInt();

y= op.nextInt();

switch (x)

{

case 1: r=1;

if (y <=0)

System.out.println("There is no factorial. ");

else

{

for(i=1; i<=y ;++i)

r =r \* i;

}

System.out.println("The factorial is " + r);

break;

case 2:

for(i=2; i<= y/2; i++)

{

z=y % i;

if(z==0)

System.out.println(y + " is not prime number. ");

else

System.out.println(y + " is a prime number. ");

}

break;

case 3:

if (y%2==0)

System.out.println( y + " is an even number. ");

else

System.out.println( y + " is odd number. ");

break;

case 4: sum=0;

i=y;

while(y > 0)

{

z=y % 10;

sum=sum\*10+z;

y=y/10;

}

if (i==sum)

System.out.println(y +" is palindrome number. ");

else

System.out.println(y+ " is not palindrome number. ");

break;

case 5:

sum=0;

i=y;

while(y > 0)

{

z=y%10;

sum=sum+z\*z\*z;

y=y/10;

}

if (i==sum)

System.out.println(y + "is palindrome number. ");

else

System.out.println(y + "is not palindrome number. ");

break;

case 6: sum=0;

i=y ;

while(y > 9)

{

while(y > 0)

{

z=y%10;

sum=sum+ z\*z\*z;

y = y /10;

}

if (sum>9)

y=sum;

sum=0;

System.out.println("Sum is" + sum);

}

if (sum==1)

System.out.println(y + "is magic number. ");

else

System.out.println(y + "is not magic number. ");

break;

}

}

}

23.Write Programs to print following series

A. 1 2 3 4 5 6 7 8 ... 100/N

import java.util.Scanner; // Q.no23 a

class Num1

{public static void main(String[]args)

{

Scanner it = new Scanner(System.in);

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

int i= it.nextInt();

for ( i = 1 ; i <=100; i ++)

System.out.println(i);

}

}

B. 2 4 6 8 10 12 14 16 ... 100/N

import java.util.Scanner; // Q.no23 a

class Num1

{public static void main(String[]args)

{

Scanner it = new Scanner(System.in);

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

int i= it.nextInt();

for ( i = 1 ; i <=100; i ++)

System.out.println(i);

}

}

C. 1 3 5 7 9 11 13 15 ... 100/N

import java.util.Scanner; // Q23.C

class Num3

{public static void main(String[]args)

{

Scanner it = new Scanner(System.in);

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

int i= it.nextInt();

for (i = 1 ; i <100; i = i+2)

System.out.println(i);

}

}

D. 1 4 9 16 25 36 49 64 ... 100/N

import java.util.Scanner; // Q23.d

class Num4

{public static void main(String[]args)

{

Scanner it = new Scanner(System.in);

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

int i= it.nextInt();

for (i = 1 ; i <=10; i++ )

System.out.println( i\*i );

}

}

E. 0 3 8 15 24 35 48 63 ... 100/N

import java.util.Scanner; // Q23.e

class Num5

{public static void main(String[]args)

{

Scanner it = new Scanner(System.in);

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

int i= it.nextInt();

for (i = 1 ; i <=10; i++ )

System.out.println( i\*i - 1 );

}

}

F. 2 5 10 17 26 37 50 65 ... 100/N

import java.util.Scanner;

class Num6

{public static void main(String[]args)

{

Scanner it = new Scanner(System.in);

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

int i= it.nextInt();

for (i = 1 ; i <=10; i++ )

System.out.println( i\*i + 1 );

}

}

G. 0 1 1 2 3 5 8 13 ... N terms

class Num7

{public static void main(String[]args)

{

int p , q, i, n;

p = 0;

q = 1;

n = 10;

i = 1;

while (i <= n)

{

System.out.println(p);

int sum = p + q;

p = q;

q = sum;

i++;

}

}

}

24. WAP to print the following patterns.

|  |  |  |
| --- | --- | --- |
|  | import java.util.Scanner; //Qno.24A  class Fig1  {public static void main(String[]args)  {  Scanner sc = new Scanner(System.in);  System.out.println("How many rows you want in this pattern?");  int rows = sc.nextInt();  for (int i = 1 ; i<= rows ; i++)  {  for (int j = 1; j <= i; j++)  System.out.print( " " + j);  System.out.println( );  }  }  } | |
|  | import java.util.Scanner; //Qno.24B  class Fig2  {public static void main(String[]args)  {  Scanner sc = new Scanner(System.in);  System.out.println("How many rows you want in this pattern?");  int rows = sc.nextInt();  for (int i = 1 ; i<= rows ; i++)  {  for (int j = 1; j <= i; j++)  System.out.print( "1 ");  System.out.println( );  }  }  } | |
|  | import java.util.Scanner; //Qno.24C  class Fig3  {public static void main(String[]args)  {  Scanner sc = new Scanner(System.in);  System.out.println("How many rows you want in this pattern?");  int rows = sc.nextInt();  for (int i = 1 ; i<= rows ; i++)  {  for (int j = 1; j <= i; j++)  System.out.print( " " + i);  System.out.println( );  }  }  } | |
|  | import java.util.Scanner; //Qno.24D  class Fig4  {public static void main(String[]args)  {  Scanner sc = new Scanner(System.in);  System.out.println("How many rows you want in this pattern?");  int rows = sc.nextInt();  for (int i = 1 ; i<= rows ; i++)  {  for (int j = 1; j <= i; j++)  System.out.print( "\* ");  System.out.println( );  }  }  } | |
|  | import java.util.Scanner; //Qno.24E  class Fig5  {public static void main(String[] args)  {  System.out.println("How many rows you want in this pattern?");    Scanner sc = new Scanner(System.in);  int i, j, rows, w= 1;  rows = sc.nextInt();    for (i = 1; i <= rows; i++ )  {  for(j=1;j<=i; j++, w++)    System.out.printf(" " + w);  System.out.println();  }  }  } | |
|  | import java.util.Scanner; //Qno.24F  class Fig6  {public static void main(String[]args)  {  Scanner sc = new Scanner(System.in);  System.out.println("How many rows you want in this pattern?");    int i, j,w,r ;  r = sc.nextInt();  for (i = 1 ; i<= 6 ; i++)  {  for ( w = r ; w>= 0 ; w--)  System.out.print(" ");  r--;    for (j = 1; j <= i ; j++)  System.out.print(" " + j);  System.out.println( );  }  }  } | |
|  | import java.util.Scanner; //Qno.24G  class Fig7  {public static void main(String[]args)  {  Scanner sc = new Scanner(System.in);  System.out.println("How many rows you want in this pattern?");    int i, j,w,r,p ;  r = sc.nextInt();  for (i = 1 ; i<= 6 ; i++)  {  for ( w = r ; w>= 0 ; w--)  System.out.print(" ");  r--;  for (j = 1; j <= i ; j++)  System.out.print(" " + j);    for (p = j-2; p>=1; p--)  System.out.print(" " + p );  System.out.println();  }  }  } | |
|  | class Fig8 //Qno.24H  {  public static void main(String [] args)  {  int alphabet = 65;  for(int i=0; i<=5; i++)  {  for(int j=0; j<=i; j++)  {  System.out.print((char) (alphabet+j)+ " ");  }  System.out.println();  }  }  } | |
|  | | class Fig9 //Qno.24I    {public static void main(String [] args)  {  int a,b,c,d,e;  d = 8;    for(a=1; a<=6; a++)  {  for(c=d ; c>=0; c--)  System.out.print(" ");  d--;    for(b=1; b<=a; b++)  System.out.print(b +" ");  for(e=b-2; e>=1; e--)  System.out.print(e +" ");    System.out.println();  }    for(a=5 ; a>=1; a --)  {  for(c=9; c>=a; c--)  System.out.print(" ");    for(b=1; b<= a; b++)  System.out.print(b+" ");    for(e=a-1; e>=1; e--)  System.out.print(e+" ");  System.out.println();  }  }  } |

25.WAP to print table of any input number from keyboard.

import java.util.Scanner;

class table

{public static void main(String[]args)

{

Scanner num = new Scanner (System.in);

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

int d,e,f,t ;

d = num.nextInt();

System.out.print("Table of " + d + " is ");

for(f =1; f<=10 ; f++)

System.out.println(" " + (t = d \*f));

}

}

26.WAP to find the factorial value of any number entered through the keyboard.

import java.util.Scanner;

class Fact

{public static void main(String[]args)

{

Scanner num = new Scanner (System.in);

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

int a,b,c;

a = num.nextInt();

c = 1;

if(a <=0 )

System.out.println("There is no factorial. ");

else

{

for (b = 1; b<= a; b++);

c = c\*b;

System.out.println("The factorial is " + c);

}

}

}

27.WAP to read a no using scanner class object and print the sum of its digit.

import java.util.Scanner;

class Sod

{public static void main(String[]args)

{

Scanner no = new Scanner (System.in);

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

int f,sum,num;

num = no.nextInt();

sum = 0 ;

while(num>0)

{

f = num%10;

sum = sum + f;

num = num/10;

}

System.out.println("Sum of digit is " + sum);

}

}

28.WAP to read a no using scanner class object and print the reverse digit of this number

import java.util.Scanner;

class Drev

{public static void main(String[]args)

{

Scanner no = new Scanner (System.in);

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

int f,sum,num;

num = no.nextInt();

sum = 0 ;

while(num>0)

{

f = num%10;

sum = sum \* 10 + f;

num = num/10;

}

System.out.println(sum + " is reverse digit. ");

}

}

29.WAP to read a no using scanner class object and check if it is Palindrome no or not.

import java.util.Scanner; //Qno.29

class Palli

{public static void main(String[]args)

{

Scanner no = new Scanner (System.in);

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

int x,sum,num, y;

num = no.nextInt();

y = num;

sum = 0 ;

while(num>0)

{

x= num%10;

sum = sum \*10 + x;

num = num/10;

}

if (y == sum)

System.out.println(y + " is pallindrome number. ");

else

System.out.println(y + " is not pallindrome number. ");

}

}

30.WAP to read a no using scanner class object and check if it is Armstrong no or not.

import java.util.Scanner;

class Armstrong

{public static void main(String[]args)

{

Scanner no = new Scanner (System.in);

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

int x,sum,num, y;

num = no.nextInt();

y = num;

sum = 0 ;

while(num>0)

{

x= num%10;

sum = sum + x \* x \* x;

num = num/10;

}

if (y == sum)

System.out.println(y + " is Armstrong number. ");

else

System.out.println(y + " is not Armstrong number. ");

}

}

31.WAP to read a no using scanner class object and check if it is Magic no or not.

import java.util.Scanner;

class Magicno

{public static void main(String[]args)

{

Scanner no = new Scanner (System.in);

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

int x,sum,num;

num = no.nextInt();

sum = 0 ;

while(num>9)

{

while(num>0)

{

x= num%10;

sum = sum + x;

num = num/10;

}

if (sum>9)

{

num = sum;

sum = 0;

}

if (sum == 1)

System.out.println(" Given number is magic number. ");

else

System.out.println("Given number is not magic number. ");

}

}

}

32.WAP to print all Armstrong no between 100 and 1000.

import java.util.Scanner;

class arms

{public static void main(String[]args)

{

Scanner no = new Scanner (System.in);

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

int c,sum,num, h;

num = no.nextInt();

sum = 0;

for(h = 100; h<=1000; h++)

{

num = h;

{

while(num>100)

{

c= num%10;

sum = sum + c \* c \* c;

num = num/10;

}

if (sum == h)

System.out.print(" "+ h);

sum = 0;

}

}

}

}

33.WAP to print all Palindromes no between 100 and 1000.

import java.util.Scanner;

class pallindrome

{public static void main(String[]args)

{

int c,sum,num, h;

num = 1000;

sum = 0;

for(h = 100; h<=1000; h++)

{

num = h;

{

while(num>100)

{

c= num%10;

sum = sum \*10 + c;

num = num/10;

}

if (h == sum)

System.out.println(" "+ h);

sum = 0;

}

}

}

}

34.WAP to print all Magic no between 100 and 1000.

class Magicno2 //Qno.34

{public static void main(String[]args)

{

int c,sum,num, h;

num = 1000;

sum = 0;

for(h = 100; h<=1000; h++)

{

num = h;

while(num>9)

{

while(num>=100)

{

c= num%10;

sum = sum + c;

num = num/10;

}

if (sum>9)

{

num = sum;

sum =0;

}

if (h ==sum)

System.out.println(" "+ h);

}

}

}

}

35.WAP to print all tables from 2 to 10.

class Table2

{public static void main(String[]args)

{

int a,b,c;

for(a = 2; a<=10; a++)

{

for (b = 1; b<= 10; b++)

{

c = a\*b;

System.out.println( a +" \* " + b + " is " + c);

System.out.println(" ");

}

}

}

}

36.WAP to enter the numbers till the user wants and at the end it should display the count of positive, negative and zeros entered.

import java.util.Scanner;

class counter

{

public static void main(String[] args)

{

Scanner console = new Scanner(System.in);

int number,

countPositive = 0,

countNegative = 0,

countZero = 0;

char choice;

do

{

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

number = console.nextInt();

if(number > 0)

{

countPositive++;

}

else if(number < 0)

{

countNegative++;

}

else

{

countZero++;

}

System.out.print("Do you want to continue y/n? ");

choice = console.next().charAt(0);

}

while(choice=='y' || choice == 'Y');

System.out.println("Positive numbers: " + countPositive);

System.out.println("Negative numbers: " + countNegative);

System.out.println("Zero numbers: " + countZero);

}

}

37.WAP to print all prime numbers between 3 to 300.

import java.util.Scanner;

class PrimeNumbers

{

public static void main (String[] args)

{

int i = 0;

int num =0;

String primeNumbers = " ";

for (i = 1; i <= 300; i++)

{

int counter=0;

for(num =i; num>=1; num--)

{

if(i%num==0)

{

counter = counter + 1;

}

}

if (counter ==2)

{

primeNumbers = primeNumbers + i + " ";

}

}

System.out.println("Prime numbers from 3 to 300 are :");

System.out.println(primeNumbers);

}

}

38.WAP to declare an array of size N and print it’s all elements in forward and backward direction.

class ReverseArray

{public static void main(String[] args)

{

int [] arr = new int [] {1, 2, 3, 4, 5};

System.out.println("Original array: ");

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

{

System.out.print(arr[i] + " ");

}

System.out.println();

System.out.println("Array in reverse order: ");

for (int i = arr.length-1; i >= 0; i--) {

System.out.print(arr[i] + " ");

}

}

}

39.WAP to declare an array of size N and print the sum of all elements and average.

import java.util.Scanner; //Qno.39

class SumAverage

{

public static void main(String[] args)

{

int n, i , average, sum = 0;

Scanner s = new Scanner(System.in);

System.out.print("Enter no. of elements you want in array:");

n = s.nextInt();

int a[] = new int[n];

System.out.println("Enter all the elements:");

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

{

a[i] = s.nextInt();

sum = sum + a[i];

}

System.out.println(" Sum = "+sum);

average = sum / n;

System.out.println(" Average = "+average);

}

}

40.WAP to read an array of size 10 and print it’s all elements in Ascending/Descending order.

import java.util.Scanner; //Qno.40

class AscendingOrd

{public static void main(String[] args)

{

int b, c;

Scanner s = new Scanner(System.in);

System.out.print("Enter no. of elements you want in array:");

b = s.nextInt();

int a[] = new int[b];

System.out.println("Enter all the elements:");

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

{

a[i] = s.nextInt();

}

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

{

for (int j = i + 1; j < b; j++)

{

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

{

c = a[i];

a[i] = a[j];

a[j] = c;

}

}

}

System.out.print("Ascending Order:");

for (int i = 0; i < b - 1; i++)

{

System.out.print(a[i] + " , ");

}

System.out.print(a[b - 1]);

System.out.println();

System.out.println("Descending Order:");

for (int i = 0; i > b - 1 ; i--)

{

System.out.println(a[i] + ", ");

}

System.out.print(a[b - 1]);

System.out.println();

}

}

41.WAP to read an array of size 10 and print Smallest, Largest, Second largest no.

class Size //Qno.41

{public static void main(String[] args)

{

int i,j,c,d,e,f;

int arr[]={1,2,3,4,5,6,7,8,9,10,100};

for(i=0;i<10;i++)

{

for(j=i+1;j<10;j++)

if(arr[i]>arr[j])

{

c=arr[i];

arr[i]=arr[j];

arr[j]=c;

}

}

d=arr[0];

e=arr[9];

f=arr[10];

System.out.println( d + " is smallest element. ");

System.out.println( e + " is second largest element. " );

System.out.println( f + " is largest element. " );

}

}

42.WAP to read two array of size 5 each and sum the elements of theses into third array.

43.WAP to read two array of size 5 each and concatenate both arrays into third array of size 10.

class Arr1 //Qno.43

{public static void main(String[] args)

{

int l[]= {2,3,4,5,6};

int m[]= {7,8,9,10,11};

int n[]= {0,0,0,0,0,0,0,0,0,0,0};

int j,k,o;

o = 0;

for(j=0 ;j<5 ;j++)

{

n[j] = l[j];

o++;

}

for(k = 0; k<5; k++)

n[k++] = l[j];

for(j = 0; j< 10; j++)

System.out.println(n[j] + " ");

}

}

44.WAP to find the binary equivalent of the entered number.

import java.util.Scanner; //Qno.44

class Bin

{public static void main(String[] args)

{

Scanner e=new Scanner(System.in);

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

int z =e.nextInt();

int s,u;

s=0;

int r[]=new int[1000];

while(z>0)

{

r[s++]= z%2;

z=z/2;

}

for(u= s-1; u>=0; u--)

System.out.print(r[u]);

}

}

45.WAP to declare a 2D array of size 5X5 and print it in matrix form.

class arr2d //Qno.45

{public static void main(String[] args)

{

int z [][]= {{0,1,2,3,4},

{5,6,7,8,9},

{10,11,12,13,14},

{15,16,17,18,19},

{20,21,22,23,24}};

int s,u;

for(s=0;s<5;s++)

{

for(u=0;u<5;u++)

{

System.out.print(z[s][u]);

System.out.print(" ");

}

System.out.println(" ");

}

}

}

46.WAP to declare a 2D array of size 5X5 and print its transpose.

class arr2d1 //Qno.46

{public static void main(String[] args)

{

int z [][]= {{0,1,2,3,4},

{5,6,7,8,9},

{10,11,12,13,14},

{15,16,17,18,19},

{20,21,22,23,24}};

int s,u;

for(s=0;s<5;s++)

{

for(u=0;u<5;u++)

{

System.out.print(z[u][s]);

System.out.print(" ");

}

System.out.println(" ");

}

}

}

47.WAP to declare two 2D array of size 5X5 each and print the sum of these two.

class arr2d2

{public static void main(String[] args)

{

int z [][]= {{0,1,2,3,4},

{5,6,7,8,9},

{10,11,12,13,14},

{15,16,17,18,19},

{20,21,22,23,24}};

int a [][] = {{20,21,22,23,24},

{15,16,17,18,19},

{10,11,12,13,14},

{5,6,7,8,9},

{0,1,2,3,4}};

int s,u;

int f[][] = new int[5][5];

for(s=0;s<5;s++)

{

for(u=0;u<5;u++)

{

System.out.print( f[s][u] = z[s][u] + a[s][u]);

System.out.println(f[s][u]);

}

}

}

}

48.WAP to declare a 2D array of size 5X5 and print it’s both diagonal (Left/Right) elements.

class arr2d3

{public static void main(String[] args)

{

int z [][]= {{0,1,2,3,4},

{5,6,7,8,9},

{10,11,12,13,14},

{15,16,17,18,19},

{20,21,22,23,24}};

int s,u;

System.out.println("Before changing diagonal: ");

for(s=0;s<5;s++)

{

for(u=0;u<5;u++)

{

if (s==u)

System.out.print( z[s][u] );

System.out.print(" ");

}

System.out.println(" ");

}

System.out.println("After changing diagonal: ");

for(s = 0; s<5; s++)

{

for(u = 0; u<5; u++)

{

if (s +u==4)

System.out.print( z[s][u] );

System.out.print(" ");

}

System.out.println(" ");

}

}

}

49.WAP to declare a 2D array of size 5X5 and print its Lower/Upper half triangular matrix.

class arr2d4

{public static void main(String[] args)

{

int z [][]= {{0,1,2,3,4},

{5,6,7,8,9},

{5,1,2,3,4},

{5,6,7,8,9},

{1,2,3,4,5}};

int s,u;

System.out.println("Upside down right triangle ");

for(s=0;s<5;s++)

{

for(u=0;u<5;u++)

{

if (s<u)

System.out.print(" " + " ");

else

System.out.print(z[s][u] + " ");

}

System.out.println(" ");

}

System.out.println("Right triangle ");

for(s = 1; s<5; s++)

{

for(u = 0; u<5; u++)

{

if (s>u)

System.out.print(" " + " ");

else

System.out.print(z[s][u] +" " );

}

System.out.println(" ");

}

}

}

50.WAP to declare a 2D array of size 5X5 and print its multiplication.

class arr2d5

{public static void main(String[] args)

{

int z [][]= {{0,1,2,3,4},

{5,6,7,8,9},

{5,1,2,3,4},

{5,6,7,8,9},

{1,2,3,4,5}};

int w[][] = {{6,7,8,9,3,},

{2,4,5,6,7},

{3,4,5,6,2},

{2,9,8,6,1},

{1,2,9,8,5}};

int q[][] = new int[5][5];

int s,u,t;

for(s=0;s<5;s++)

{

for(u=0;u<5;u++)

{

for(t =0; t<5; t++)

q[s][u]= z[s][t] \* w[t][u];

System.out.print(q[s][u]);

System.out.print(" ");

}

System.out.println(" ");

}

}

}