**اكتب برنامج باستخدام لغة الجافا يقوم بما يلي وذلك باستخدام التوابع:**

* قراءة عناصر مصفوفة ثنائية الأبعاد X4\*4
* طباعة عناصر المصفوفة بالشكل المناسب
* طباعة عدد العناصر الزوجية والفردية
* طباعة العناصر السالبة والموجبة
* طباعة عناصر القطر الرئيسي

package test;

import java.util.\*;

public class Test {

static void read(int a[][], int row, int col) {

System.out.println("please enter the elements of array");

Scanner s = new Scanner(System.in);

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

for (int j = 0; j < col; j++) {

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

}

}

}

static void print(int a[][], int row, int col) {

System.out.println( "the element of array" );

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

for (int j = 0; j < col; j++) {

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

}

System.out.println("");

}

}

static void odd\_even(int a[][], int row, int col) {

System.out.print( "the odd elements :" );

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

for (int j = 0; j < col; j++) {

if (a[i][j] % 2 == 0) {

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

}

}

}

System.out.println("");

System.out.print( " the even elements : " );

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

for (int j = 0; j < col; j++) {

if (a[i][j] % 2 == 1) {

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

}

}

}

System.out.println("");

}

static void positive\_negative(int a[][], int row, int col) {

System.out.print( "the positive elements :" );

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

for (int j = 0; j < col; j++) {

if (a[i][j] >= 0) {

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

}

}

}

System.out.println("");

System.out.print( " the negative elements : " );

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

for (int j = 0; j < col; j++) {

if (a[i][j] < 0) {

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

}

}

}

System.out.println("");

}

static void main\_diameter(int a[][], int row, int col) {

System.out.print( "the the elements of main diameter :" );

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

for (int j = 0; j < col; j++) {

if (i == j) {

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

}

}

}

System.out.println("");

}

public static void main(String[] args) {

int[][] a = new int[4][4];

int choose;

Scanner s1 = new Scanner(System.in);

do {

System.out.println( "to input elements of array press 1" );

System.out.println( "to print elements of array press 2" );

System.out.println( "to print odd and even numbers of array press 3" );

System.out.println( "to print positive and negative );

System.out.println("to print the elements of main diameter press 5" );

System.out.println( "to exit press 0" );

choose = s1.nextInt();

switch (choose) {

case 1:

read(a, 4, 4);

break;

case 2:

print(a, 4, 4);

break;

case 3:

odd\_even(a, 4, 4);

break;

case 4:

positive\_negative(a, 4, 4);

break;

case 5:

main\_diameter(a, 4, 4);

break;

}

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

} while (choose != 0);

}

}