Laboratorio 010 de Programación Orientada a Objetos

De acuerdo a los algoritmos mostrado desarrolle una aplicación que corresponda a la salida mostrada

create an array with random values	`double[] a = new double[N];`
	`for (int i = 0; i < N; i++)`
	`  a[i] = Math.random();`

print the array values, one per line	`for (int i = 0; i < N; i++)` `  System.out.println(a[i]);`

find the maximum of the array values	`double max = Double.NEGATIVE_INFINITY;`
	`for (int i = 0; i < N; i++)`
	`  if (a[i] > max) max = a[i];`

compute the average of the array values	`double sum = 0.0;`
	`for (int i = 0; i < N; i++)`
	`  sum += a[i];`
	`double average = sum / N;`

copy to another array	`double[] b = new double[N];`
	`for (int i = 0; i < N; i++)`
	`  b[i] = a[i];`

reverse the elements within an array	`for (int i = 0; i < N/2; i++)`
	`{`
	`  double temp = b[i];`
	`  b[i] = b[N-1-i];`
	`  b[N-i-1] = temp;`
	`}`

Salida programa :

```
run:
a[]
--------------------
a[0]=0.031582994721229274
a[1]=0.6157005228093427
a[2]=0.555281733942564
a[3]=0.6631109759400018
a[4]=0.7486282566848975

Referencia a = [D@4e25154f

Valor Maximo del arreglo = 0.7486282566848975
Promedio del arreglo = 0.522860896819607
b[]
--------------------
b[0]=0.031582994721229274
b[1]=0.6157005228093427
b[2]=0.555281733942564
b[3]=0.6631109759400018
b[4]=0.7486282566848975

b[]
Con elementos en orden revertido
b[0]=0.7486282566848975
b[1]=0.6631109759400018
b[2]=0.555281733942564
b[3]=0.6157005228093427
b[4]=0.031582994721229274

Producto Punto de a[] y b[] = 1.17218119774209
BUILD SUCCESSFUL (total time: 0 seconds)
```

```
/*
 * Plantilla



package arrays;

/**
 *
 * @author Usuario
 */
public class Arrays {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        final int N = 5;

        // inicializa valores  0 and 1
        double[] a = new double[N];
        for (int i = 0; i < N; i++) {

        }

        // print array values, one per line
        System.out.println("a[]");
        System.out.println("--------------------");
        for (int i = 0; i < N; i++) {

        }
        System.out.println();
        System.out.println("Referencia a = " + a);
        System.out.println();

        // Hallando el valor maximo
        double max = Double.NEGATIVE_INFINITY;
        for (int i = 0; i < N; i++) {

        }
        System.out.println("Valor Maximo del arreglo = " + max);


        // promedio
        double sum = 0.0;
        for (int i = 0; i < N; i++) {

        }
        System.out.println("Promedio del arreglo = " );

        // copiar otro arreglo
        double[] b = new double[N];
        for (int i = 0; i < N; i++) {

        }
    System.out.println("b[] ");
     System.out.println("--------------------");
        for (int i = 0; i < N; i++) {
```

```
            System.out.println("b"+"["+ i+"]="+b[i]);
        }
        // revertir el orden
        for (int i = 0; i < N/2; i++) {



        }

        // Imprimir los valores de loa arreglos uno por linea
        System.out.println();
        System.out.println("b[]");
        System.out.println("Con elementos en orden revertido");
        for (int i = 0; i < N; i++) {
            System.out.println("b"+"["+ i+"]="+b[i]);
        }

        System.out.println();


        // Producto punto de a[] y b[]
        double productoPunto = 0.0;
        for (int i = 0; i < N; i++) {

        }
        System.out.println("Producto Punto de a[] y b[] = " + ;

    }

}
```