

Clase: Programación Orientada a Objetos
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Practica : 10

Main

```
package com.szs.practica10;

public class mainFile {
    public static void main(String[] args){

        double valoresX[] = {30, 28, 32, 25, 25, 25, 22, 24, 35, 40};
        double valoresY[] = {25, 30, 27, 40, 42, 40, 50, 45, 30, 25};
        Promedio calc = new Promedio();

        double betaUno = calc.calcularRegresionLineal(valoresX, valoresY);
        double betaCero = calc.calcularPromedio(valoresY) - (betaUno * calc.calcularPromedio(valoresX));
        System.out.println("Beta0: " + betaCero);
        System.out.println("El modelo de regresion lineal y = " + betaUno + " + " + betaCero);
    }
}
```

Clase Promedio

```
package com.szs.practica10;

public class Promedio {

    public double calcularPromedio(double valores[]) {
        double promedio = 0;
        for(double i : valores)
            promedio += i;

        return promedio /= valores.length;
    }

    public double calcularRegresionLineal(double valoresX[], double valoresY[]) {

        double promedioX = calcularPromedio(valoresX);
        double promedioY = calcularPromedio(valoresY);
        double denom = 0;
        double num = 0;

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

            num += (valoresX[i] - promedioX) * (valoresY[i] - promedioY);
            denom += Math.pow(valoresX[i] - promedioX, 2);
        }

        return num / denom;
    }
}
```

Salida

```
Beta0: 74.11511789181692
El modelo de regresion lineal y = -1.3536754507628295 + 74.11511789181692

Process finished with exit code 0
```