**Hola mundo**

public class HolaMundo {  
 public static void main(String[] args) {  
 System.*out*.println("hOLA PERRA")**;** //sout ATAJO  
 }  
}

**ejemplo declarar una variable**

public class Variables {  
 public static void main(String[] args) {  
 //declarando una variable  
 int speed**;** //asignamos un valor a una variable  
 speed = **10;** System.*out*.println(speed)**;** int salary = **1000;** System.*out*.println(salary)**;** // crear una variable de tipo String  
 String employeeName = "juan el duro"**;** System.*out*.println(employeeName)**;** }  
**}**

**actualizando variables**

public class UpdatingVariables {  
 public static void main(String[] args) {  
 int salary = **1000;** //recive un bono de $200  
 //salary = salary + 200;  
 salary += **200;** System.*out*.println(salary)**;** //pension: $50 descuento  
 salary = salary - **50;** System.*out*.println(salary)**;** //2 horas extra $30 c/u  
 //cupon de comida: $45  
 salary = salary + (**30**\***2**) - **45;** System.*out*.println(salary)**;** //actualizando cadenas de texto  
 String employeeName = "Sebastian"**;** //concatenar texto  
 employeeName = employeeName + " Ricaurte Gonzalez"**;** System.*out*.println(employeeName)**;** employeeName= "Juan " + employeeName**;** System.*out*.println("tu nombre es: " + employeeName)**;** }  
}

**Convención de Nombres en Java, Técnica de Naming: Camel Case**

//UPPER CAMEL CASE los nombres empiezan en mayuscula = NamingJava  
public class NamingJava {  
 public static void main(String[] args) {  
 int celphone = **33337777;** int celPhone = **55553333;** System.*out*.println(celphone)**;** System.*out*.println(celPhone)**;** String $countryName = "Spain"**;** String \_backgroundColor = "Green"**;** String backgroun\_Color = "verde"**;** int POSITION = -**5;** int MAX\_WIDTH = **9999;** int MIN\_WIDTH = **1;** // LOWER CAMEL CASE lso nombres empiezan en minuscula = fullName  
  
 String fullName = "Jaun Sebastian ricaurte"**;** int sizeInCentimeters = **26;** }  
}

**Tipos de datos char y boolean y datos numericos**

ublic class DataTypes {  
 public static void main(String[] args) {  
  
 // tipo de dato byte=1byte, short=2bytes, int=4bytes, long=8bytes  
 int n = **1234567890;** long nL=**12345678901L;** //decimales float=4bytes, double=8bytes  
 double nD = **123.456;** float nF = **123.456F;** //tipo var  
 var salary = **1000;** //int  
 //pension 3%  
 var pension = salary\***0.03;**// double  
 var totalSalary = salary - pension**;** System.*out*.println(salary)**;** System.*out*.println(pension)**;** System.*out*.println(totalSalary)**;** var employeeName = "Juan Sebastian"**;** System.*out*.println("EMPLOYEE: " + employeeName + "SALARY: " + totalSalary)**;** }  
}

**Operadores de Asignación, Incremento y Decremento**

public class incrementDecrement {  
 public static void main(String[] args) {  
  
 int lives = **5;** lives = lives - **1;** System.*out*.println(lives)**;** //4  
  
 lives--**;** //Decremento  
 System.*out*.println(lives)**;** //3  
  
 lives++**;** // Incremento  
 System.*out*.println(lives)**;** //4  
  
 //Prefija  
 // gana un regalo por ganar una vida  
 int gift = **100** + lives++**;** //posfijo  
 System.*out*.println(gift)**;** System.*out*.println(lives)**;** //5  
 int gift2 = **100** + lives++**;** // prefijo  
 System.*out*.println(gift2)**;** }  
}

**Operaciones matemáticas**

public class MathematicOperations {  
 public static void main(String[] args) {  
 double x = **2.1;** double y = **3;** System.*out*.println(Math.*PI*)**;** System.*out*.println(Math.*E*)**;** //nos devuelve un numero entero hacia arriba  
 System.*out*.println(Math.*ceil*(x))**;** //nos devuelve un numero entero hacia abajo  
 System.*out*.println(Math.*floor*(x))**;** //nos devuelve un numero elevado a otro numero 2^3=8  
 System.*out*.println(Math.*pow*(x**,**y))**;** //nos devuelve el numero mayor entre los dos  
 System.*out*.println(Math.*max*(x**,**y))**;** //nos devuelve la raiz cuadrada  
 System.*out*.println(Math.*sqrt*(y))**;** //area de un circulo pi\*r2  
 System.*out*.println(Math.*PI* \* Math.*pow*(y**,2**))**;** //area de una esfera  
 //4\*PI\*r^2  
 System.*out*.println(**4** \* Math.*PI* \* Math.*pow*(y**,2**))**;** //vlomen de una esfera (4/3)\*pi\*r^2  
 System.*out*.println((**4**/**3**) \* Math.*PI* \* Math.*pow*(y**,3**))**;** }  
}

3.141592653589793

2.718281828459045

3.0

2.0

9.261000000000001

3.0

1.7320508075688772

28.274333882308138

113.09733552923255

84.82300164692441

**Cast en variables: Estimación y Exactitud y Casteo entre tipos de datos**

public class Casting {  
 public static void main(String[] args) {  
 // en un año ubicar 30 perritos  
 //cuántos perritos ubique al mes  
  
 double monthlyDogs = **30.0**/**12.0;** System.*out*.println(monthlyDogs)**;** //estimación  
 int estimatedMonthliDogs = (int) monthlyDogs**;** System.*out*.println(estimatedMonthliDogs)**;** //exactitud  
 int a = **30;** int b = **12;** System.*out*.println((double) a/b)**;** //Casteo entre tipos de datos  
 double c = (double) a/b**;** System.*out*.println(c)**;** char n = '1'**;** int nI = n**;** System.*out*.println(nI)**;** short nS = (short) n**;** System.*out*.println(nS)**;** }  
}

2.5

2

2.5

2.5

49

49

**Sentencia if**

public class ifStatement {  
 public static void main(String[] args) {  
 boolean isBluetoothEnabled = true**;** int fileSended = **3;** if (isBluetoothEnabled){  
 //Send file  
 fileSended++**;** System.*out*.println("archivo enviado")**;** }  
 }  
**}**

**Alcance de las variables y Sentencia ELSE**

public class ifStatement {  
 public static void main(String[] args) {  
 boolean isBluetoothEnabled = false**;** int fileSended = **3;** if (isBluetoothEnabled){  
 //Send file  
 fileSended++**;** System.*out*.println("archivo enviado")**;** } else {  
 fileSended--**;** System.*out*.println("por favor enceinde tu blurtooth, para iniciarl la transferencia")**;** }  
 System.*out*.println(isBluetoothEnabled)**;** System.*out*.println(fileSended)**;** }  
}

por favor enceinde tu blurtooth, para iniciarl la transferencia

false

2

public class ifStatement {  
 public static void main(String[] args) {  
 boolean isBluetoothEnabled = true**;** int fileSended = **3;** if (isBluetoothEnabled){  
 //Send file  
 fileSended++**;** System.*out*.println("archivo enviado")**;** } else {  
 fileSended--**;** System.*out*.println("por favor enceinde tu blurtooth, para iniciarl la transferencia")**;** }  
 System.*out*.println(isBluetoothEnabled)**;** System.*out*.println(fileSended)**;** }  
}

archivo enviado

true

4

**Operadores Lógicos y Expresiones booleanas**

public class LogicOperations {  
 public static void main(String[] args) {  
 int a = **8;** int b = **5;** //operadores asignación  
 System.*out*.println("a es igual a b? -> " + (a == b))**;** System.*out*.println("a es diferente a b? -> " + (a != b))**;** //operaciones relacionales  
  
 System.*out*.println("a es mayora b? -> " + (a > b))**;** System.*out*.println("a es menor a b? -> " + (a < b))**;** System.*out*.println("a es mayor o igual b? -> " + (a >= b))**;** System.*out*.println("a es menor o igual b? -> " + (a <= b))**;** System.*out*.println("/n")**;** if (a == b){  
 System.*out*.println("a es igual a b? -> " )**;** } else if ((a != b) && (a > b)) {  
 System.*out*.println("a es diferente a b? -> ")**;** } else if (a > b) {  
 System.*out*.println("a es mayora b? -> ")**;** }else if (a < b){  
 System.*out*.println("a es menor a b? -> ")**;** } else if (a >= b) {  
 System.*out*.println("a es mayor o igual b? -> ")**;** } else if (a <= b) {  
 System.*out*.println("a es menor o igual b? -> ")**;** }  
 }  
}

a es igual a b? -> false

a es diferente a b? -> true

a es mayora b? -> true

a es menor a b? -> false

a es mayor o igual b? -> true

a es menor o igual b? -> false

/n

a es diferente a b? ->

**Sentencia Switch**

public class SwitchStatement {  
 public static void main(String[] args) {  
  
 String colorModeSelected = "Dark"**;** //hagalo ocn 1  
  
 switch (colorModeSelected){  
 case "Ligth":  
 System.*out*.println("seleccionaste Light Mode")**;** break**;** case "Night": //Ambar  
 System.*out*.println("seleccionaste Night Mode")**;** break**;** case "Blue Dark":  
 System.*out*.println("seleccionaste Blue Dark Mode")**;** break**;** case "Dark":  
 System.*out*.println("seleccionaste Dark Mode")**;** break**;** default:  
 System.*out*.println("seleciona una opción")**;** }  
 }  
}

seleccionaste Dark Mode

**¿Para qué sirven las funciones?**

public class Funciones {  
 public static void main(String[] args) {  
 double y = **3;** //area de un circu lo pi\*r^2  
 System.*out*.println(*circleArea*(y))**;** //area de una esfera  
 //4\*PI\*r^2  
 System.*out*.println(*sphereArea*(y))**;** //vlomen de una esfera (4/3)\*pi\*r^2  
 System.*out*.println(*sphereVolumen*(y))**;** System.*out*.println("PESOS A DOALRES: " + *converToDolar*(**200,** "MXN"))**;** }  
 public static double circleArea(double r){  
 return Math.*PI* \* Math.*pow*(r**,2**)**;** }  
 public static double sphereArea(double r){  
 return **4** \* Math.*PI* \* Math.*pow*(r**,2**)**;** }  
 public static double sphereVolumen(double r) {  
 return (**4**/**3**) \* Math.*PI* \* Math.*pow*(r**, 3**)**;** }  
 public static double converToDolar(double quantity**,** String currency){  
 //MXN COP  
 switch (currency) {  
 case "MXN":  
 quantity \*= **0.052;** break**;** case "COP":  
 quantity = quantity \* **0.00031;** break**;** }  
 return quantity**;** }  
}

28.274333882308138

113.09733552923255

84.82300164692441

PESOS A DOALRES: 10.4

**Javadoc en funciones**

public class Funciones {  
 public static void main(String[] args) {  
 double y = **3;** //area de un circu lo pi\*r^2  
 System.*out*.println(*circleArea*(y))**;** //area de una esfera  
 //4\*PI\*r^2  
 System.*out*.println(*sphereArea*(y))**;** //vlomen de una esfera (4/3)\*pi\*r^2  
 System.*out*.println(*sphereVolumen*(y))**;** System.*out*.println("PESOS A DOALRES: " + *converToDolar*(**200,** "MXN"))**;** }  
 public static double circleArea(double r){  
 return Math.*PI* \* Math.*pow*(r**,2**)**;** }  
 public static double sphereArea(double r){  
 return **4** \* Math.*PI* \* Math.*pow*(r**,2**)**;** }  
 public static double sphereVolumen(double r) {  
 return (**4**/**3**) \* Math.*PI* \* Math.*pow*(r**, 3**)**;** }  
 */\*\*  
 \*descripcioón: Función que especifica su moneda convierte una cantidad  
 \* de dinero a dolar.  
 \*  
 \** ***@param*** *quantity cantidad de dinero  
 \** ***@param*** *currency tipo de moneda: solo acepta MXN o COP  
 \** ***@return*** *quantity Devuelve la cantidad actualizada en dolares  
 \* \*/* public static double converToDolar(double quantity**,** String currency){  
 //MXN COP  
 switch (currency) {  
 case "MXN":  
 quantity \*= **0.052;** break**;** case "COP":  
 quantity = quantity \* **0.00031;** break**;** }  
 return quantity**;** }  
}

**Bucle do While**

**While:** Primero evalúa la condición, despues ejecuta.

**Do While:** Primero Ejecuta, despues evalúa la condición

**Para que sea fácilmente reecordar:**

* do while dispara y despues pregunta.
* while pregunta y después dispara

import java.util.Scanner**;**public class DoWhileLoop {  
 public static void main(String[] args) {  
 int response = **0;** do {  
 System.*out*.println("slecciona el numero de la opción deseada")**;** System.*out*.println("1. Movies")**;** System.*out*.println("2. Series")**;** System.*out*.println("0. Salir")**;** //leer desde el teclado  
 Scanner sc= new Scanner(System.*in*)**;** //response = Integer.valueOf(sc.nextLine());  
 response = Integer.*parseInt*(sc.nextLine())**;** switch (response) {  
 case **0**:  
 System.*out*.println("Gracias por visitarnos")**;** break**;** case **1**:  
 System.*out*.println("Movies")**;** break**;** case **2**:  
 System.*out*.println("Series")**;** break**;** default:  
 System.*out*.println("Selecione una opción correcta")**;** }  
 } while (response !=**0**)**;** System.*out*.println("se termino el programa")**;** }  
}

slecciona el numero de la opción deseada

1. Movies

2. Series

0. Salir

1

Movies

**Operador Ternario y Bucle While**

public class WhileLoop {  
  
 static boolean *isTurnOnLigth* = false**;** public static void main(String[] args) {  
  
 *turnOnOffLight*()**;** int i = **1;** while (*isTurnOnLigth* && i<=**10**){  
 *printSOS*()**;** i++**;** }  
 }  
 //void no devolver nada, solo imprime el mensaje  
 public static void printSOS(){  
 System.*out*.println(". . . \_ \_ \_ . . .")**;** }  
 public static boolean turnOnOffLight(){  
 //evaluar otra forma de if  
 /\*  
 if (isTurnOnLigth){  
 isTurnOnLigth = false;  
 }else{  
 isTurnOnLigth = true;  
 }  
 return isTurnOnLigth;  
 \*/  
 //operador ternario otra for de hacerlo del if  
 // isTurnOnLigth = ()?valor1:valor2; valor 1 es verdadero y si valor 2 es cuando es falso  
 // isTurnOnLigth = (isTurnOnLigth)?false:true;  
 //sTurnOnLigth = !isTurnOnLigth; esta formal o da el sistema mmm  
 *isTurnOnLigth* = !*isTurnOnLigth***;** return *isTurnOnLigth***;** }  
}

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**Bucle For**

public class ForLoop {  
 static boolean *isTurnOnLigth* = false**;** public static void main(String[] args) {  
 *turnOnOffLight*()**;** for (int i = **1;** i <= **10 ;** i++) {  
 *printSOS*()**;** }  
 }  
  
 public static void printSOS() {  
 System.*out*.println(". . . \_ \_ \_ . . .")**;** }  
  
 public static boolean turnOnOffLight() {  
 *isTurnOnLigth* = !*isTurnOnLigth***;** return *isTurnOnLigth***;** }  
}

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**. . . \_ \_ \_ . . .**

**Declarando Arreglos, Arrays**

public class Arrays {  
 public static void main(String[] args) {  
  
 String[] androidVersions = new String[**17**]**;** String days[] = new String[**7**]**;** String[][] cities = new String[**4**][**2**]**;** //4\*2=8  
 /\*  
 \* +------------------------+  
 \* | Country | City |  
 \* --------------------------  
 \* | México | CDMX |  
 \* | México | Guadalajara |  
 \* | Colombia | Bogotá |  
 \* | COlombia | Medellín |  
 \* +------------------------+  
 \* \*/  
  
 int [][][] numbers = new int [**2**][**2**][**2**]**;** int [][][][] numers4 = new int [**2**][**2**][**2**][**2**]**;** }  
}

**Índices y búsqueda de elementos en Arrays**

public class Arrays {  
 public static void main(String[] args) {  
  
 String[] androidVersions = new String[**17**]**;** String days[] = new String[**7**]**;** String[][] cities = new String[**4**][**2**]**;** //4\*2=8  
 /\*  
 \* +------------------------+  
 \* | Country | City |  
 \* --------------------------  
 \* | México | CDMX |  
 \* | México | Guadalajara |  
 \* | Colombia | Bogotá |  
 \* | COlombia | Medellín |  
 \* +------------------------+  
 \* \*/  
  
 int [][][] numbers = new int [**2**][**2**][**2**]**;** int [][][][] numers4 = new int [**2**][**2**][**2**][**2**]**;** androidVersions[**0**] = "Apple Pie"**;** androidVersions[**1**] = "Bannana Bread"**;** androidVersions[**2**] = "Cupcake"**;** androidVersions[**4**] = "Donut"**;** System.*out*.println(androidVersions[**0**])**;** System.*out*.println(androidVersions[**1**])**;** System.*out*.println(androidVersions[**2**])**;** System.*out*.println(androidVersions[**3**])**;** System.*out*.println()**;** cities [**0**][**0**] = "Colombia"**;** cities [**0**][**1**] = "Medellin"**;** cities [**1**][**0**] = "Colombia"**;** cities [**1**][**1**] = "Bogota"**;** cities [**2**][**0**] = "Mexico"**;** cities [**2**][**1**] = "Guadalajara"**;** cities [**3**][**0**] = "México"**;** cities [**3**][**1**] = "CDMX"**;** System.*out*.println(cities[**0**][**0**])**;** System.*out*.println(cities[**0**][**1**])**;** System.*out*.println(cities[**1**][**0**])**;** System.*out*.println(cities[**1**][**1**])**;** System.*out*.println(cities[**2**][**0**])**;** System.*out*.println(cities[**2**][**1**])**;** System.*out*.println(cities[**3**][**0**])**;** System.*out*.println(cities[**3**][**1**])**;** String[][][][] animals = new String[**2**][**3**][**2**][**2**]**;** animals[**1**][**0**][**0**][**1**] = "Monkey"**;** System.*out*.println()**;** System.*out*.println(animals[**1**][**0**][**0**][**1**])**;** }  
}

Apple Pie

Bannana Bread

Cupcake

null

Colombia

Medellin

Colombia

Bogota

Mexico

Guadalajara

México

CDMX

Monkey

**Archivos de la clase for**

public class Arrays {  
 public static void main(String[] args) {  
  
 String[] androidVersions = new String[**17**]**;** String days[] = new String[**7**]**;** String[][] cities = new String[**4**][**2**]**;** //4\*2=8  
 /\*  
 \* +------------------------+  
 \* | Country | City |  
 \* --------------------------  
 \* | México | CDMX |  
 \* | México | Guadalajara |  
 \* | Colombia | Bogotá |  
 \* | COlombia | Medellín |  
 \* +------------------------+  
 \* \*/  
  
 int [][][] numbers = new int [**2**][**2**][**2**]**;** int [][][][] numers4 = new int [**2**][**2**][**2**][**2**]**;** androidVersions[**0**] = "Apple Pie"**;** androidVersions[**1**] = "Bannana Bread"**;** androidVersions[**2**] = "Cupcake"**;** androidVersions[**3**] = "Donut"**;** for (int i = **0;** i < androidVersions.length **;** i++) {  
 System.*out*.println(androidVersions[i])**;** }  
 /\*  
 length tare la cantidad de elemtos de el arrays  
 for (int i = 0; i <= 3 ; i++)  
 lo mismo de arriba mas corto  
 System.out.println(androidVersions[0]);  
 System.out.println(androidVersions[1]);  
 System.out.println(androidVersions[2]);  
 System.out.println(androidVersions[3]);  
 \*/  
   
 System.*out*.println()**;** cities [**0**][**0**] = "Colombia"**;** cities [**0**][**1**] = "Medellin"**;** cities [**1**][**0**] = "Colombia"**;** cities [**1**][**1**] = "Bogota"**;** cities [**2**][**0**] = "Mexico"**;** cities [**2**][**1**] = "Guadalajara"**;** cities [**3**][**0**] = "México"**;** cities [**3**][**1**] = "CDMX"**;** for (int i = **0;** i < cities.length**;** i++) {  
 for (int j = **0;** j < cities[i].length**;** j++) {  
 System.*out*.println(cities[i][j])**;** }  
 }  
 /\*  
 System.out.println(cities[0][0]);  
 System.out.println(cities[0][1]);  
 System.out.println(cities[1][0]);  
 System.out.println(cities[1][1]);  
 System.out.println(cities[2][0]);  
 System.out.println(cities[2][1]);  
 System.out.println(cities[3][0]);  
 System.out.println(cities[3][1]);  
 \*/  
  
 String[][][][] animals = new String[**2**][**3**][**2**][**2**]**;** animals[**1**][**0**][**0**][**1**] = "Monkey"**;** System.*out*.println()**;** System.*out*.println(animals[**1**][**0**][**0**][**1**])**;** for (int i = **0;** i <= **1;** i++) {  
 for (int j = **0;** j <= **0 ;** j++) {  
 for (int k = **0;** k <= **0 ;** k++) {  
 for (int l = **0;** l <= **1 ;** l++) {  
 System.*out*.println(animals[i][j][k][l])**;** }  
 }  
 }  
 }  
 }  
}

**Archivos de la clase foreach**

public class Arrays {  
 public static void main(String[] args) {  
  
 String[] androidVersions = new String[**17**]**;** String days[] = new String[**7**]**;** String[][] cities = new String[**4**][**2**]**;** //4\*2=8  
  
 int [][][] numbers = new int [**2**][**2**][**2**]**;** int [][][][] numers4 = new int [**2**][**2**][**2**][**2**]**;** androidVersions[**0**] = "Apple Pie"**;** androidVersions[**1**] = "Bannana Bread"**;** androidVersions[**2**] = "Cupcake"**;** androidVersions[**3**] = "Donut"**;** for (String androidVersion : androidVersions) {  
 System.*out*.println(androidVersion)**;** }  
  
 System.*out*.println()**;** cities [**0**][**0**] = "Colombia"**;** cities [**0**][**1**] = "Medellin"**;** cities [**1**][**0**] = "Colombia"**;** cities [**1**][**1**] = "Bogota"**;** cities [**2**][**0**] = "Mexico"**;** cities [**2**][**1**] = "Guadalajara"**;** cities [**3**][**0**] = "México"**;** cities [**3**][**1**] = "CDMX"**;** for (String[] pair : cities) {  
 for (String name : pair) {  
 System.*out*.println(name)**;** }  
 }  
  
 String[][][][] animals = new String[**2**][**3**][**2**][**2**]**;** animals[**1**][**0**][**0**][**1**] = "Monkey"**;** System.*out*.println()**;** System.*out*.println(animals[**1**][**0**][**0**][**1**])**;** for (int i = **0;** i <= **1;** i++) {  
 for (int j = **0;** j <= **0 ;** j++) {  
 for (int k = **0;** k <= **0 ;** k++) {  
 for (int l = **0;** l <= **1 ;** l++) {  
 System.*out*.println(animals[i][j][k][l])**;** }  
 }  
 }  
 }  
 }  
}