"FOR"
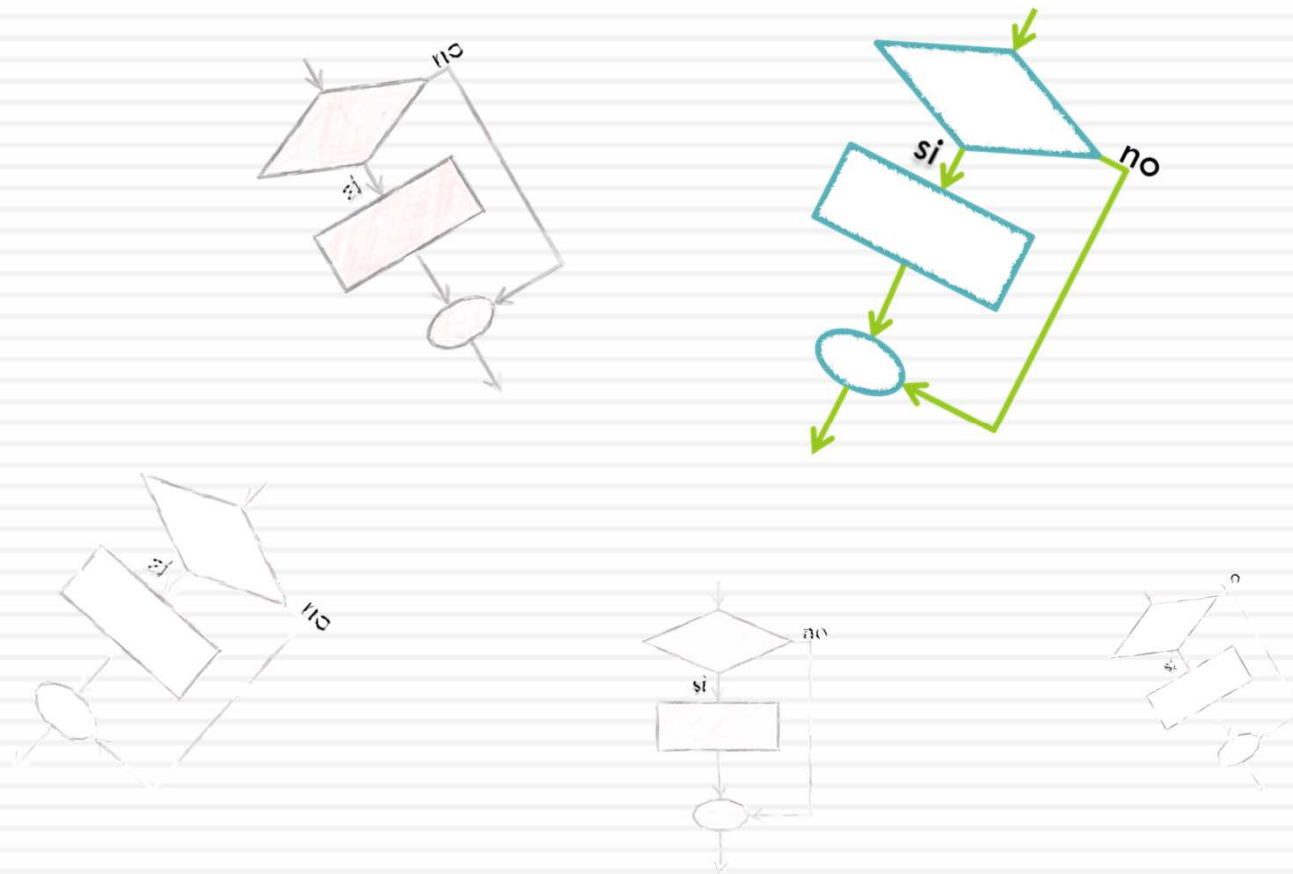
Java Básico

Estructura repetitiva: for

For

□ Funciona similar al while.
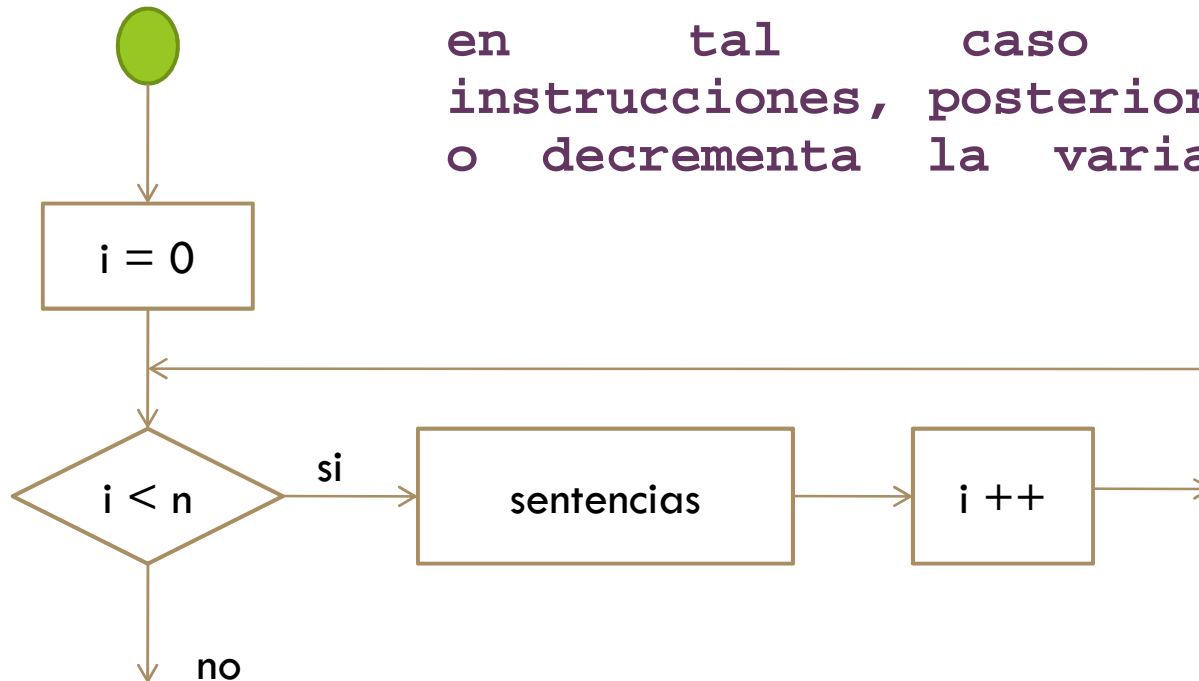
□ Es muy útil para recorrer arreglos.

□ Sintaxis:

```
for (inicialización ; condición ; incremento){

        // Bloque de código que se repite.
}
```
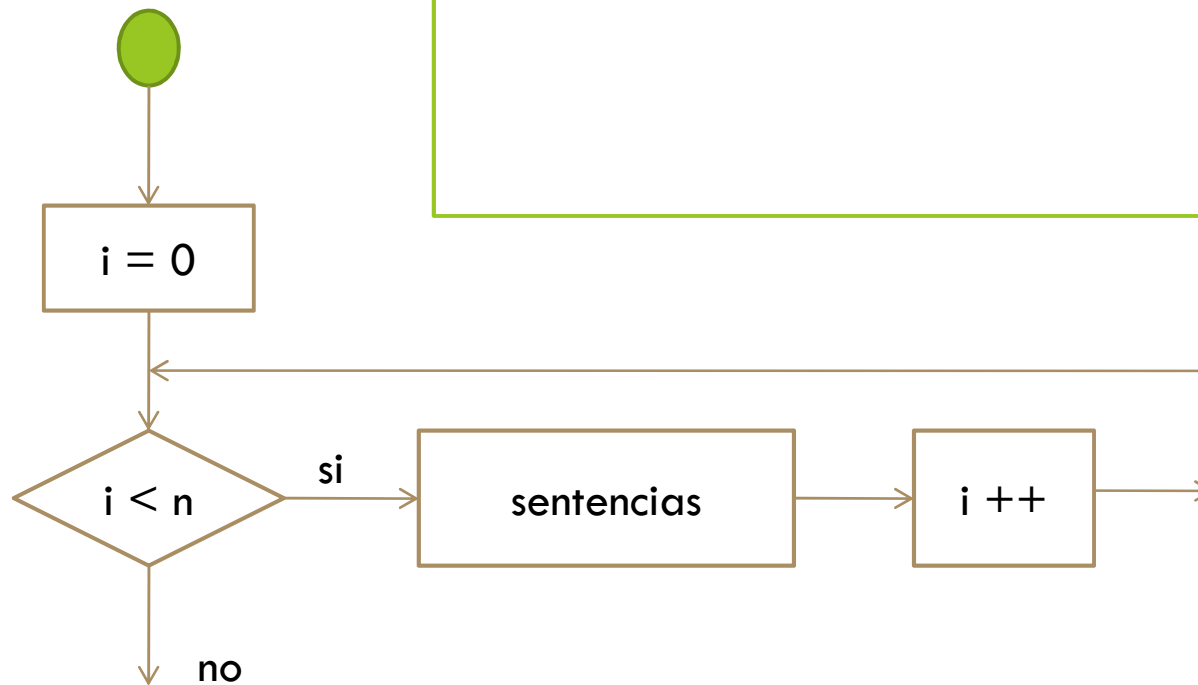
For

Inicializa el valor del contador, verifica si la condición se cumple y en tal caso ejecuta las instrucciones, posteriormente incrementa o decrementa la variable contador.

i = 0

i < n

si

sentencias

i ++

no

For

```
for (int i = 0; i < 10 ; i++ ){
        System.out.println( "valor de i = " + i);
}
```

i = 0

i < n — si → sentencias → i ++

no

Ciclo while

```
public static void main (String [] args){

    int [] vector = new int [10];

    int i = 0;
    while (i<10){
        vector[i] = 10;
        i++;
    }
}
```

i = 0

i<10

true

false

Vector[i] = 10

i++

Fin

Ciclo for

```
public static void main (String [] args){

    int [] vector = new int [10];

    for (int i = 0; i<10; i++){
        vector[i] = 10;
    }
}
```


i = 0

i<10

true

Vector[i] = 10

i++

false

Fin

Ciclo for

```
public static void main (String [] args){

    int [] vector = new int [10];

    for (int i = 0; i<10; i++){
        vector[i] = 10;
    }
}
```

i = 0

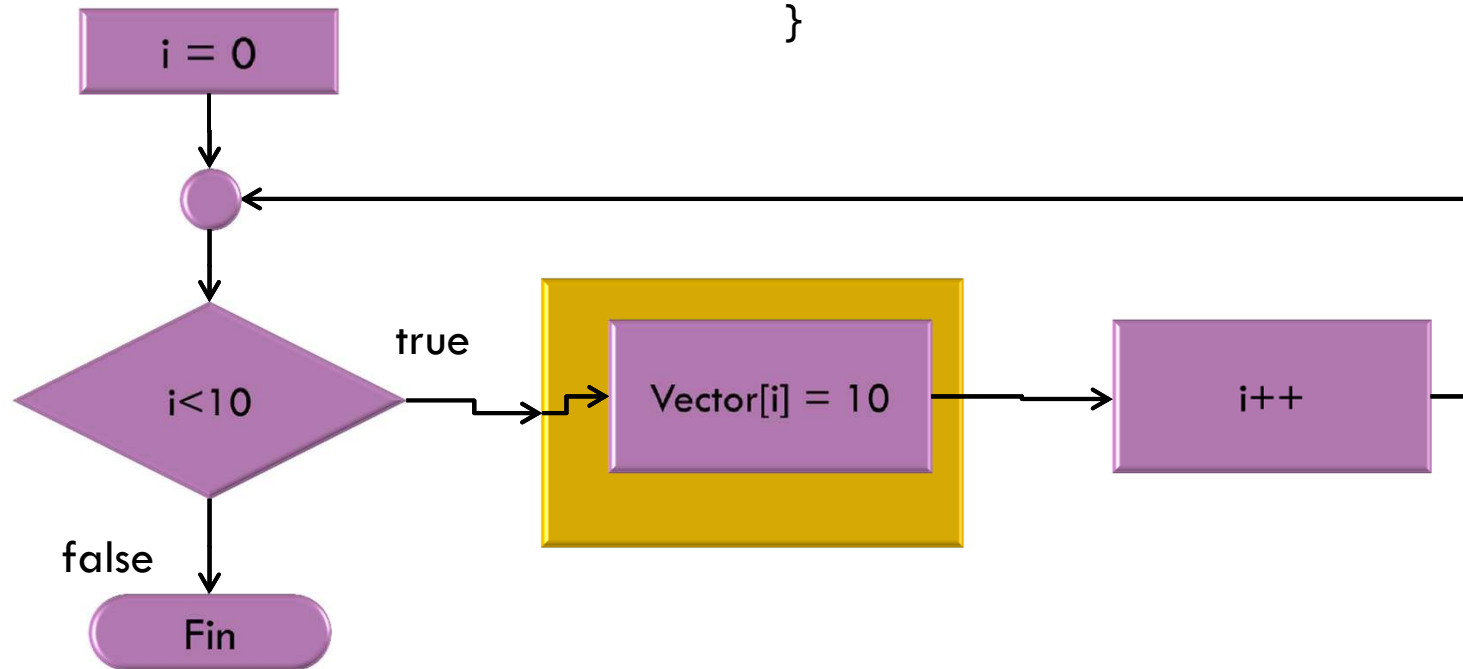i<10

true

Vector[i] = 10

i++

false

Fin

Ciclo for

```
public static void main (String [] args){

    int [] vector = new int [10];

    for (int i = 0; i<10; i++){
        vector[i] = 10;
    }
}
```

i = 0

i<10

true

false

Vector[i] = 10

i++

Fin

Ciclo for

```
public static void main (String [] args){

    int [] vector = new int [10];

    for (int i = 0; i<10; i++){
        vector[i] = 10;
    }
}
```
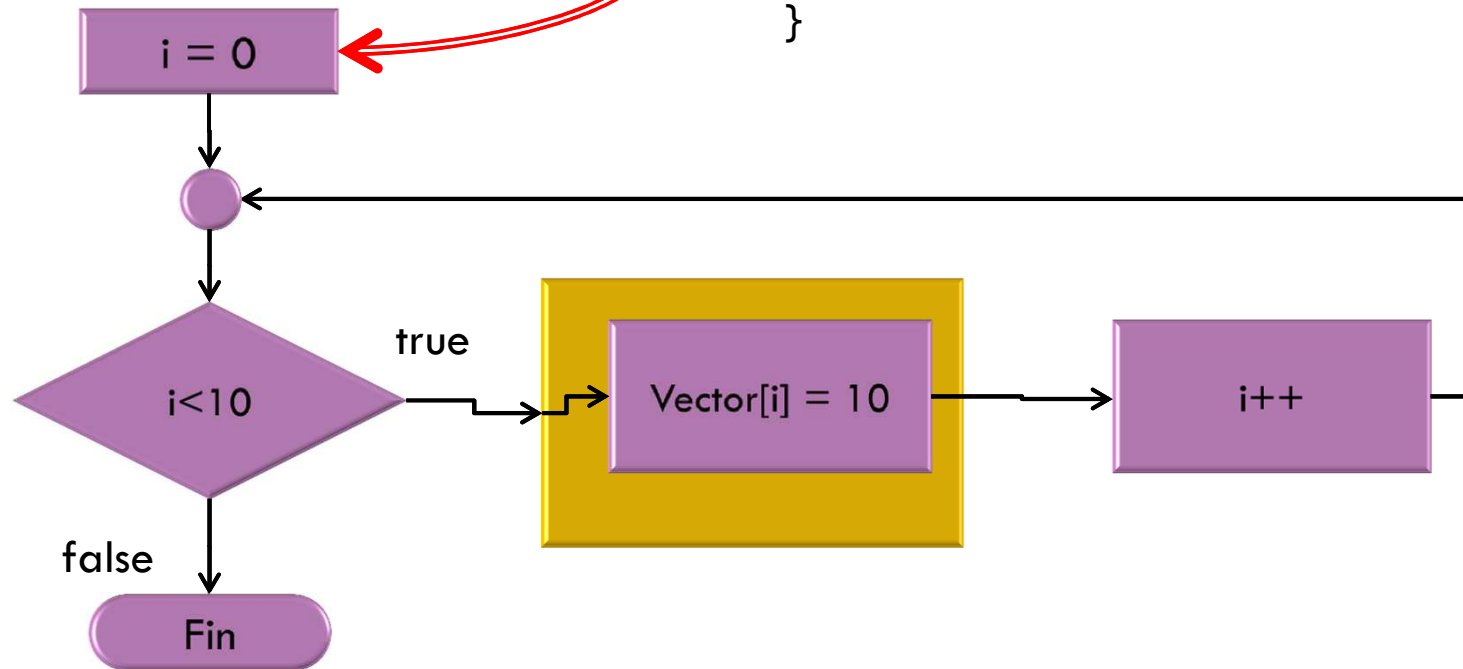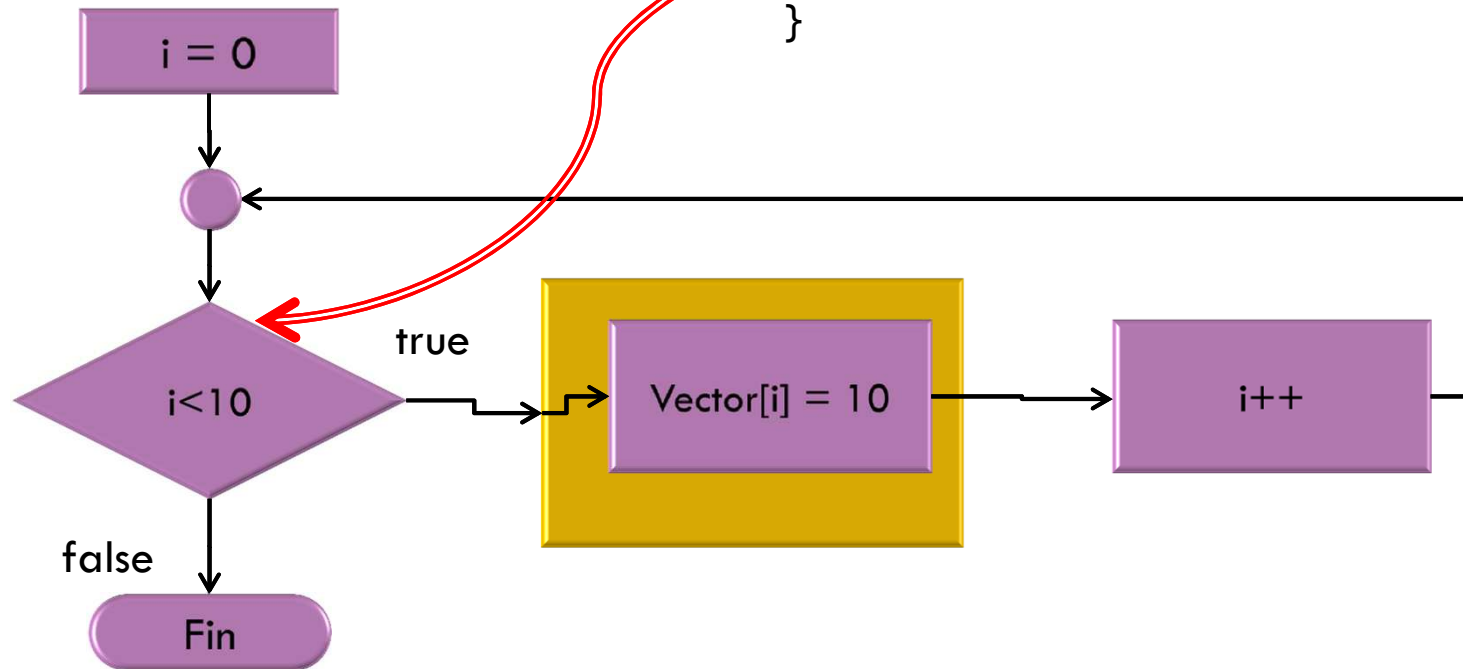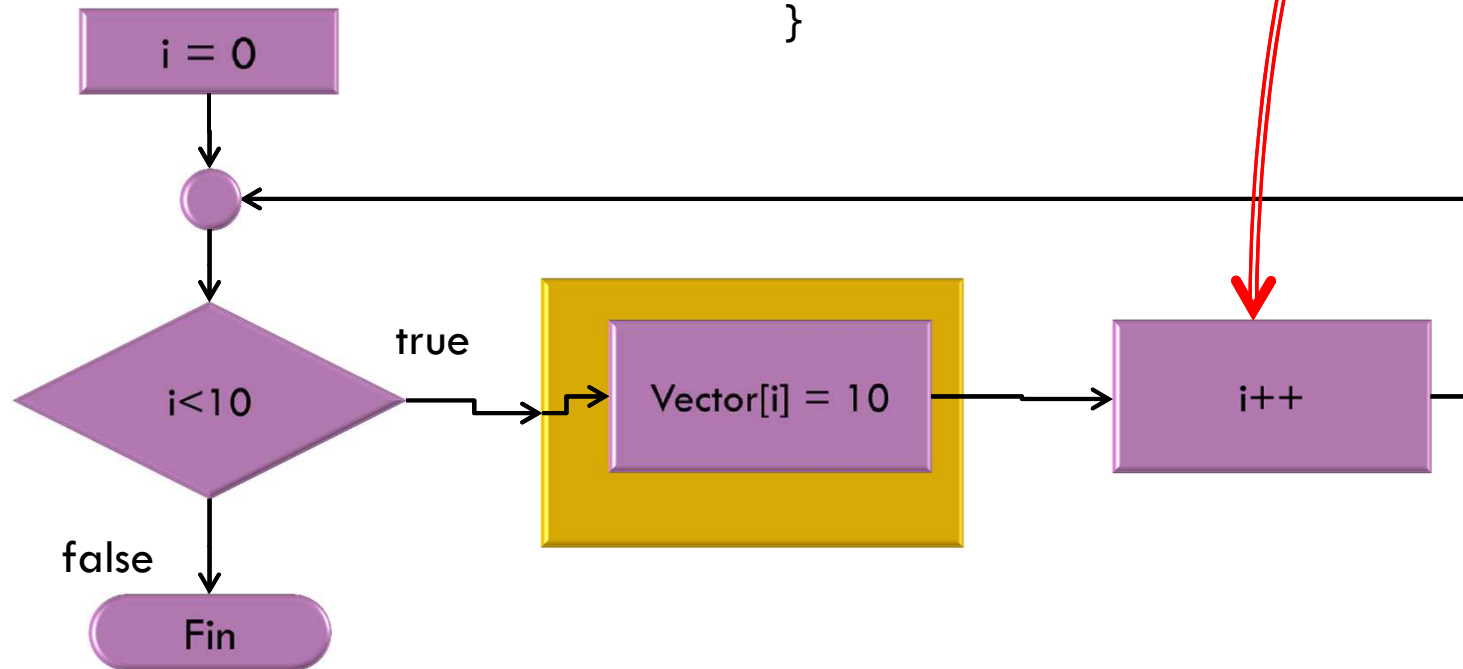

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19/03/2013

Ciclo for

```
public static void main (String [] args){

    int [] vector = new int [10];

    for (int i = 0; i<10; i++){
        vector[i] = 10;
    }
}
```

i = 0

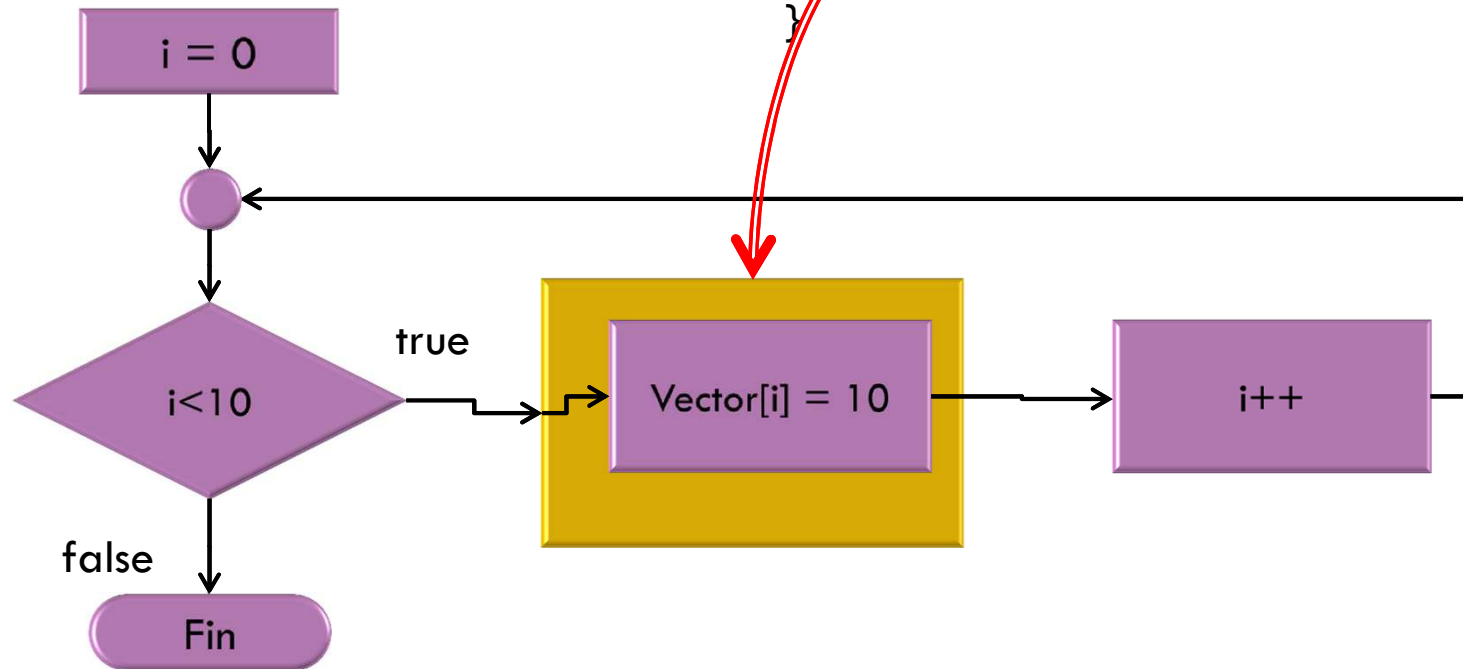i<10 → true → Vector[i] = 10 → i++

false → Fin

```
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=longitudSerie; i++){
        System.out.print (2*i+", ");
    }
}
```

Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```java
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```

Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```java
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```

longitudSerie	50

i = 0

i<long /2

true

Imprime 2*i
Imprime 3*i

i++

false

Fin

Ejemplo:
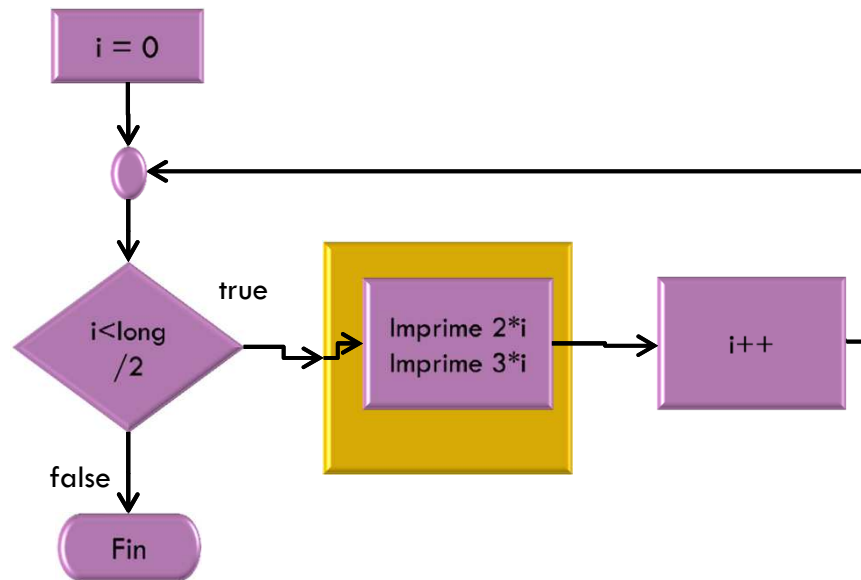# Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```java
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```

longitudSerie	50
i	1

i = 0

i<long /2

true

Imprime 2*i
Imprime 3*i

i++

false

Fin

Ejemplo:
Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```java
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```
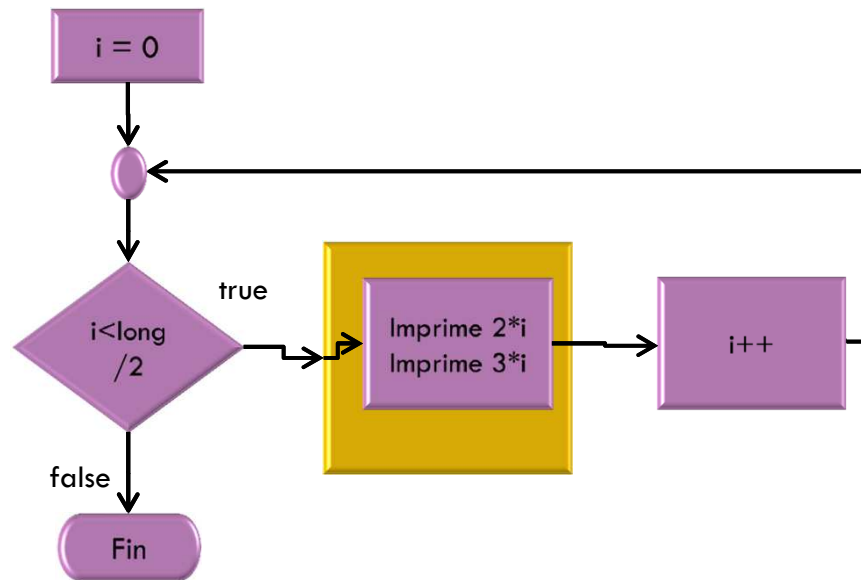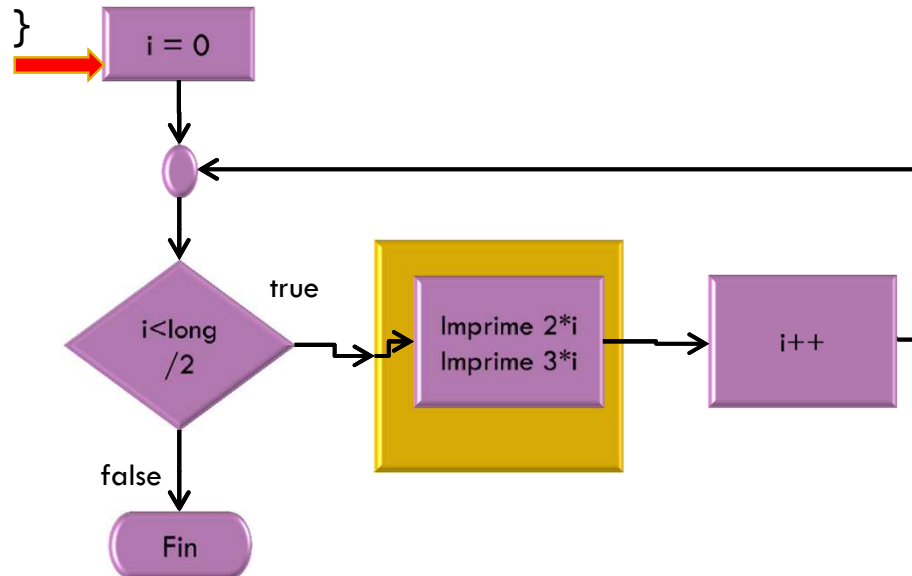
longitudSerie	50
i	1

i = 0

true

i<long /2

true

Imprime 2*i
Imprime 3*i

i++

false

Fin

Ejemplo:
Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```
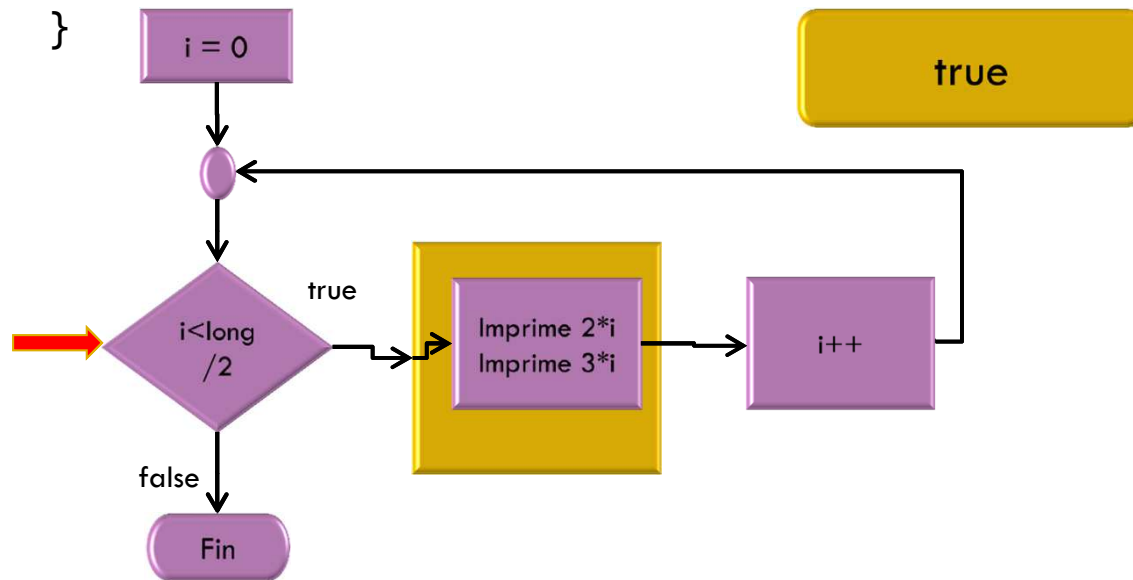
longitudSerie	50
i	1

i = 0

i<long /2

true

Imprime 2*i
Imprime 3*i

i++

false

Fin

2, 3,

Ejemplo:
Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```java
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```
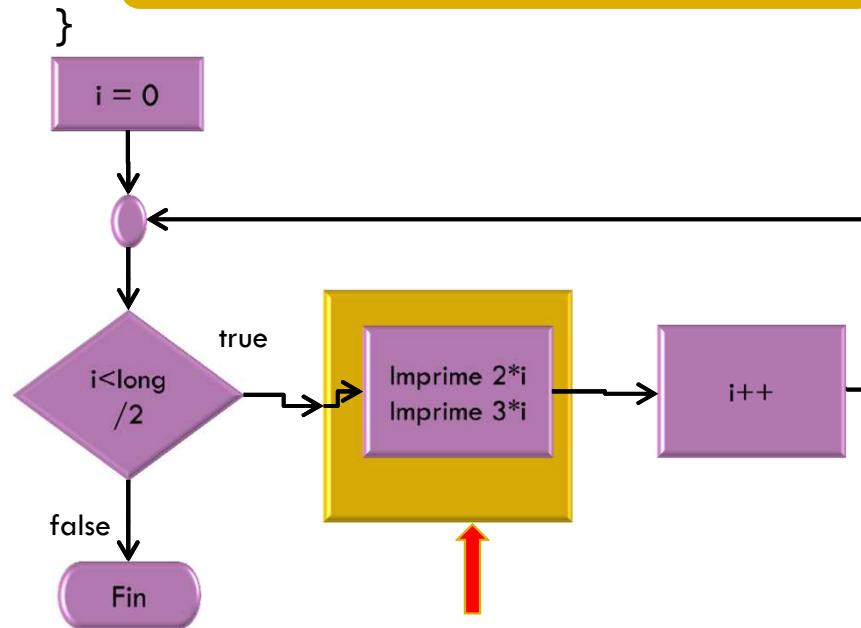
longitudSerie	50
i	2

i = 0

i<long /2

true

Imprime 2*i
Imprime 3*i

i++

false

Fin

2, 3,

Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```java
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```
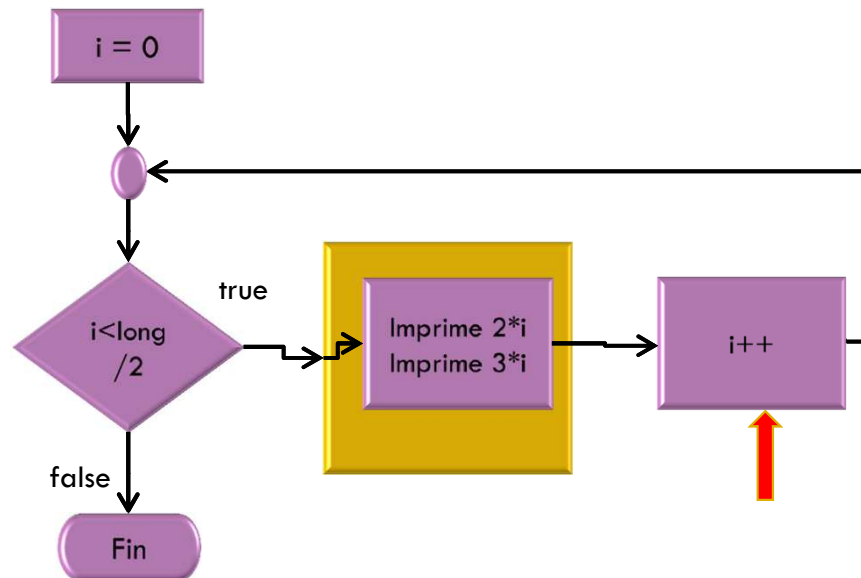
longitudSerie	50
i	2

i = 0

true

i<long/2

true

Imprime 2*i
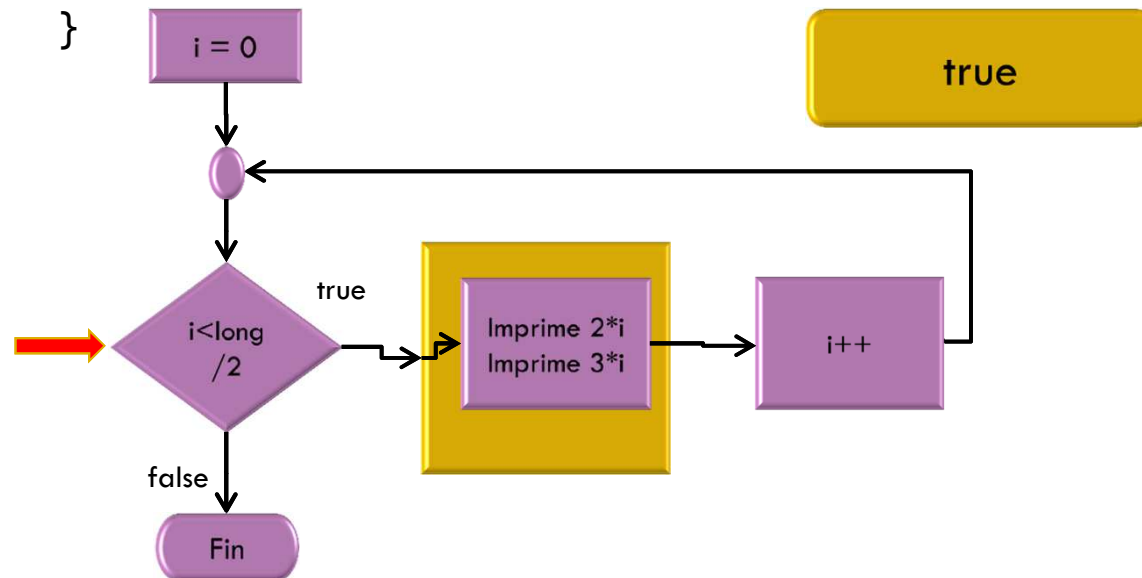Imprime 3*i

i++

false

Fin

2, 3,

Ejemplo:
Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```java
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```

longitudSerie	50
i	2

i = 0

i<long /2

true

Imprime 2*i
Imprime 3*i

i++

false

Fin

2, 3, 4, 6,

Ejemplo:
Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```
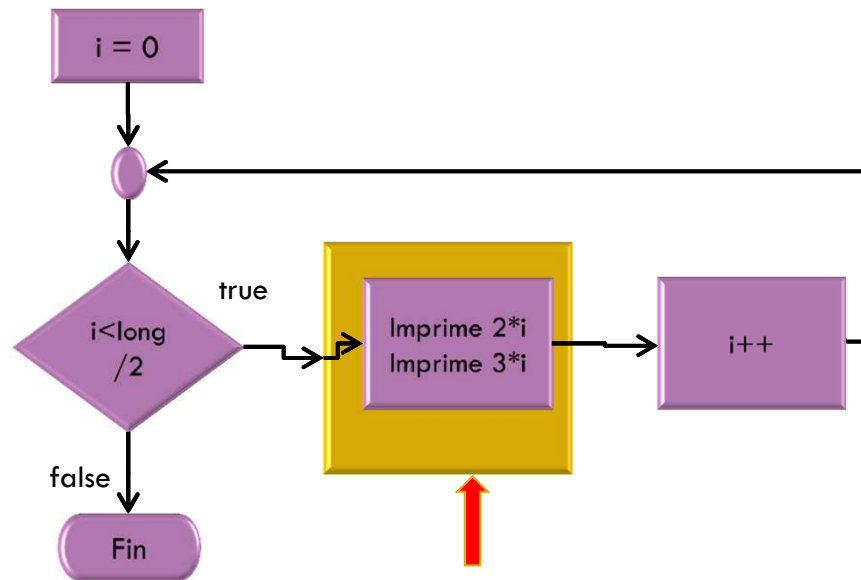
longitudSerie	50
i	3

i = 0

i<long/2

true

Imprime 2*i
Imprime 3*i

i++

false

Fin

2, 3, 4, 6,

Ejemplo:
Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```java
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```
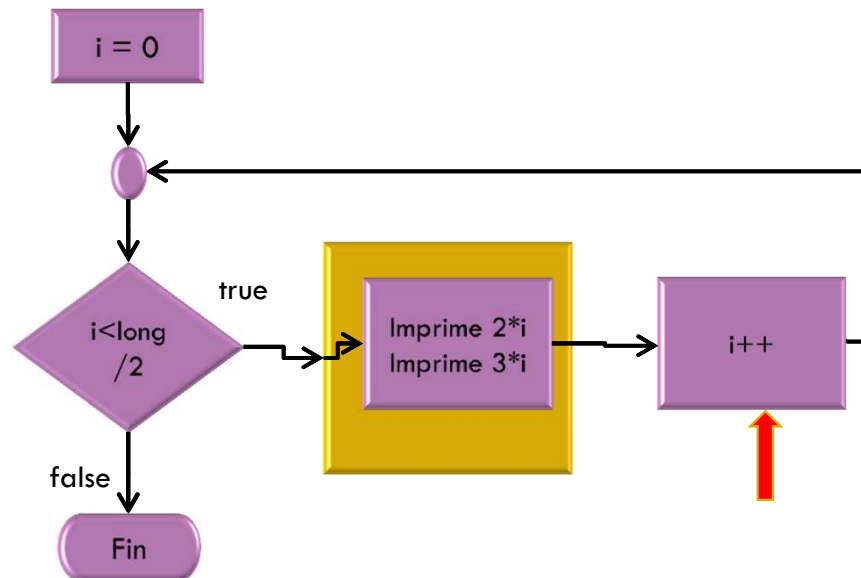
longitudSerie	50
i	3

i = 0

true

2, 3, 4, 6,

i<long /2

true

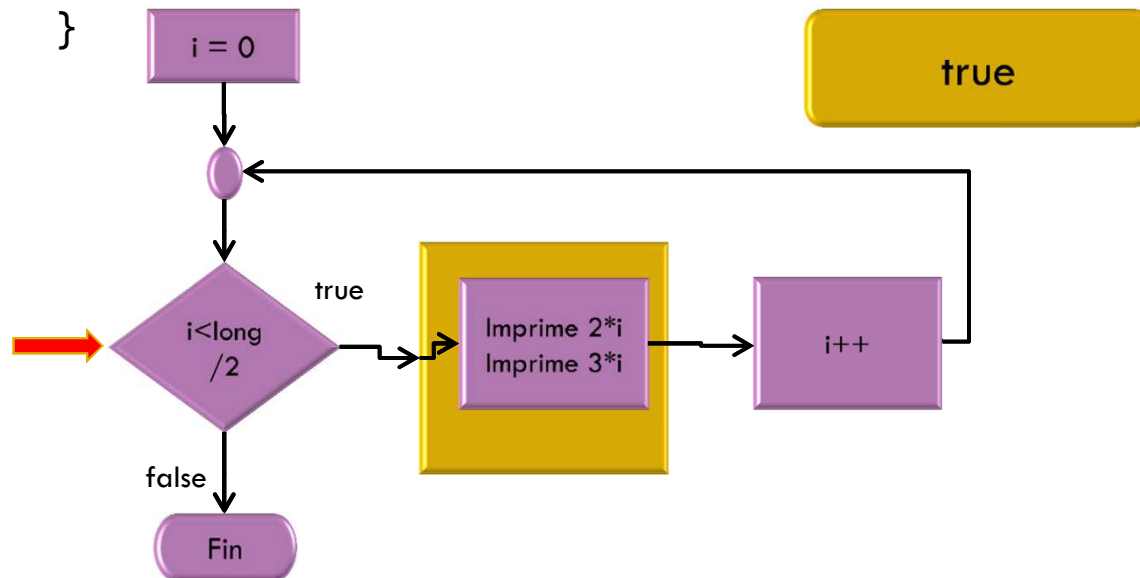Imprime 2*i
Imprime 3*i

i++

false

Fin

Ejemplo:
Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```java
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```

longitudSerie	50
i	3

i = 0

i<long/2

true

Imprime 2*i
Imprime 3*i

i++

false

Fin

2, 3, 4, 6, 6, 9

Ejemplo:
Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```java
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```
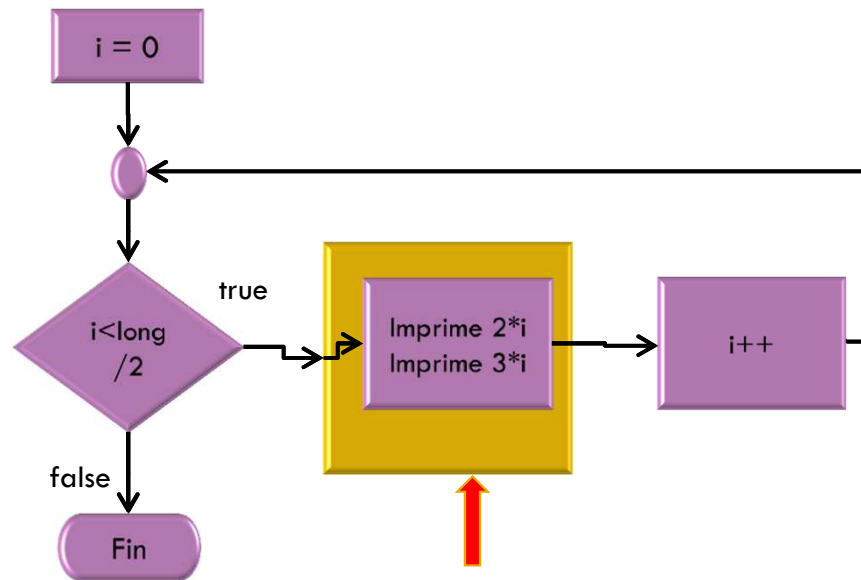
longitudSerie	50
i	4

i = 0

i<long /2

true

Imprime 2*i
Imprime 3*i

i++

false

Fin

2, 3, 4, 6, 6, 9,

Ejemplo:
Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```java
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```
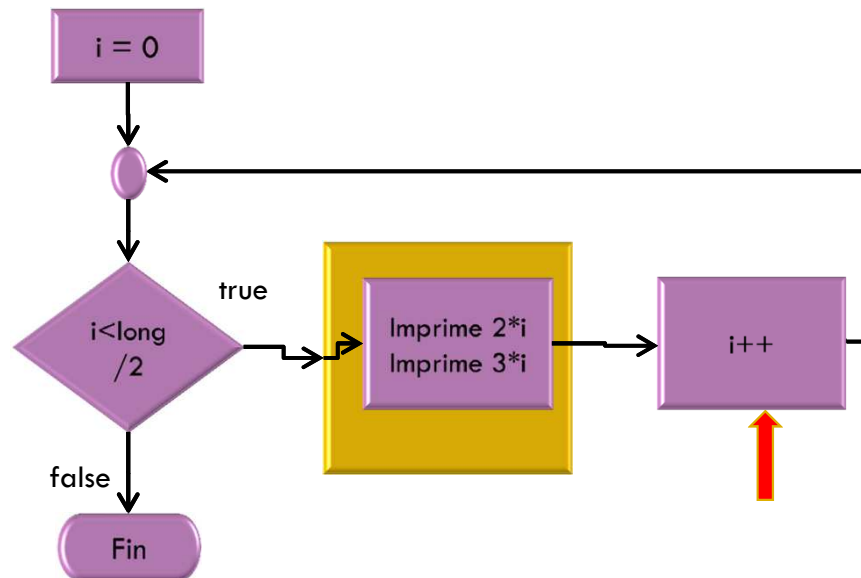
longitudSerie	50
i	25

i = 0

false

i<long /2

true

Imprime 2*i
Imprime 3*i

i++

false

Fin

2, 3, 4, 6, 6, 9, 8, 12, 10,
15, 12, 18, 14, 21, 16, 24,
18, 27, 20, 30, 22, 33, 24,
36, 26, 39, 28, 42, 30, 45,
32, 48, 34, 51, 36, 54, 38,
57, 40, 60, 42, 63, 44, 66,
46, 69, 48, 72, 50, 75,
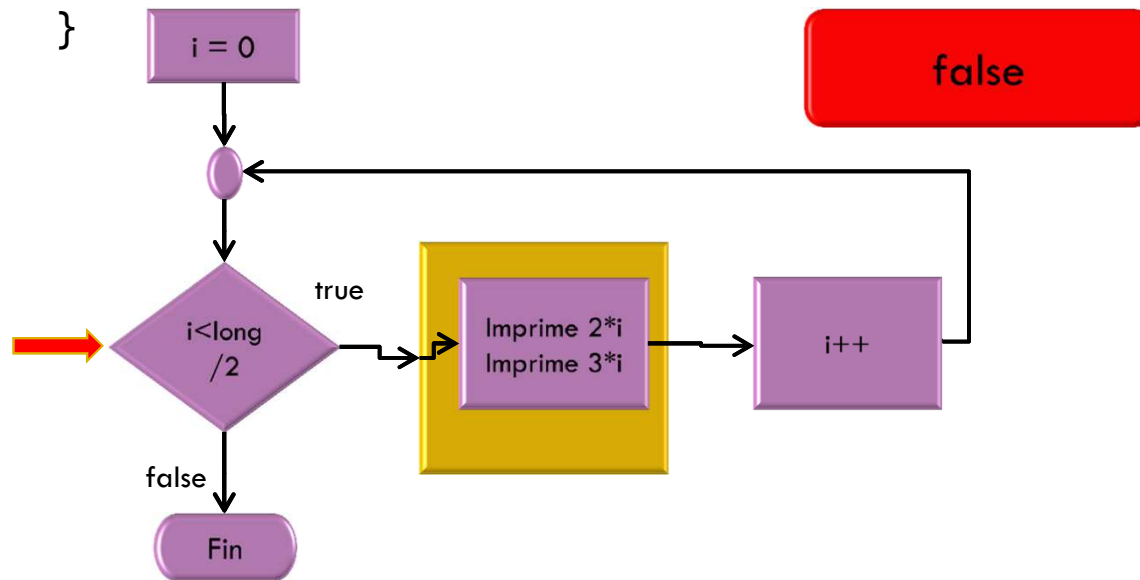BUILD SUCCESSFUL (total
time: 1 second)

Ejemplo:
Mostrar la serie: 2, 3, 4, 6, 6, 9, 8, 12, 10,

```java
public static void main (String [] args){

    int longitudSerie = 50;

    for (int i = 1; i<=(longitudSerie/2); i++){
        System.out.print (2*i+", ");
        System.out.print (3*i+", ");
    }
}
```

longitudSerie	50
i	25

i = 0

i<long/2

true

Imprime 2*i
Imprime 3*i

i++

false

Fin

```
2, 3, 4, 6, 6, 9, 8, 12, 10,
15, 12, 18, 14, 21, 16, 24,
18, 27, 20, 30, 22, 33, 24,
36, 26, 39, 28, 42, 30, 45,
32, 48, 34, 51, 36, 54, 38,
57, 40, 60, 42, 63, 44, 66,
46, 69, 48, 72, 50, 75,
BUILD SUCCESSFUL (total
time: 1 second)
```
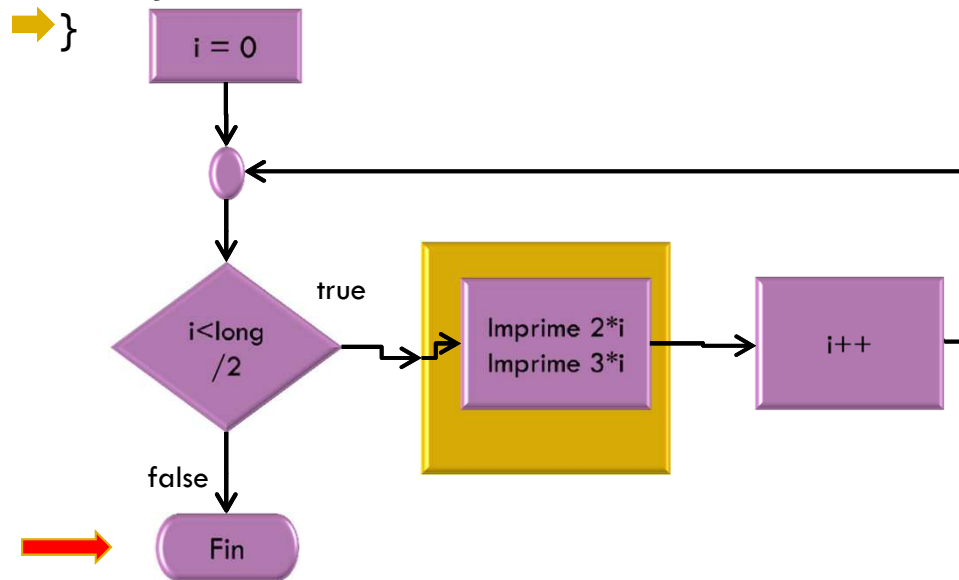
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19/03/2013

Ejercicio

- Declarar un arreglo llamado "a" de 100 posiciones.

- Utilizar un ciclo for para llenar el arreglo con valores del 100 al 1.

- Mostrar el arreglo en pantalla.

a[0]	100
a[1]	99
a[2]	98
a[3]	97
a[4]	96
a[5]	95
a[6]	94
a[7]	93
a[8]	92
a[9]	91
...	...

```java
public static void main (String [] args){

    int [] a = new int [100];

     for (... ; ... ; ... ){

     }


    for (int i = 0; i<100; i++){
        System.out.println (a[i]);
    }
}
```