FOR Loops

1. FOR loops
2. FOR loops sections
3. Debugging FOR loops

FOR loops

1. FOR loops

WHILE

```
while (condicion) {
  //code block
  // will execute as long as condition is true
}
```

DO-WHILE

```
do{
//code block
 //will execute  until condition is false
} while (condicion) ;
```

1. FOR loops

What's inside the mistery box?

1. FOR loops

```
System.out.println(“Beep”);
System.out.println(“Beep”);
System.out.println(“Beep”);
System.out.println(“Beep”);

… // 20 times!!
```

1. FOR loops

```
int numOfBeeps = 20;

int i = 1;

while (i<=numOfBeeps){
  System.out.println("Beep");
  i++;
}
```

1. FOR loops

```
int numOfBeeps = 20;

int i = 1;

while (i<=numOfBeeps){
  System.out.println("Beep");
  i++;
}
```

Loop counter

1. FOR loops

```
int numOfBeeps = 20;

int i = 1;

while (i<=numOfBeeps){
  System.out.println("Beep");
  i++;
}
```

Loop condition

1. FOR loops

```
int numOfBeeps = 20;

int i = 1;

while (i<=numOfBeeps){
  System.out.println("Beep");
  i++;
}
```

Loop increment

1. FOR loops

```
int numOfBeeps = 20;

int i = 1;

while (i<=numOfBeeps){
  System.out.println("Beep");
  i++;
}
```

Loop counter

Loop condition

Loop increment

1. FOR loops

```
for ( ; ; ) {
 //code block
 // will execute as long as loop condition is true
}
//more code
```

Loop counter

Loop condition

Loop increment

1. FOR loops

```
for ( loop counter ; loop condition ; loop increment) {
 //code block
 // will execute as long as loop condition is true
}
//more code
```

Loop counter

Loop condition

Loop increment

1. FOR loops

```
int numOfBeeps = 20;

for (int i=1;  i<= numOfBeeps ; i++ ) {
 //code block
 // will execute as long as loop condition is true
}
//more code
```

1. FOR loops

```
int numOfBeeps = 20;

for (int i=1;  i<= numOfBeeps ; i++ ) {
   System.out.println("Beep");
}
//more code
```

1. FOR loops

```
int numOfBeeps = 20;

int i = 1;

while (i<=numOfBeeps){
  System.out.println("Beep");
  i++;
}
```

WHILE

```
int numOfBeeps = 20;

for (int i=1;  i<= numOfBeeps ; i++ ) {
  System.out.println("Beep");
}
```

FOR

FOR loops sections

LOOP COUNTER SCOPE

```
int numOfBeeps = 20;

for (int i=1;  i<= numOfBeeps ; i++ ) {
  System.out.println("Beep #"+i);
}
//more code

//Prnts:
//Beep #1
//Beep #2
//...
//Beep #20
```

LOOP COUNTER SCOPE

```
for (int i=1;  i<= 3 ; i++ ) {
  i = i - 1;
  System.out.println(i);
}
//more code
```

INFINTE LOOP!!

LOOP COUNTER SCOPE

```
int numOfBeeps = 20;

int sum = 0;
for (int i=1;  i<= numOfBeeps ; i++ ) {
   System.out.println(“Beep # ”+i);
   sum = sum +i;
}
System.out.println(sum+ “ Beeps”);
//more code
```

LOOP COUNTER SCOPE

```
int numOfBeeps = 20;

int sum = 0;
for (int i=1;  i<= numOfBeeps ; i++ ) {
   System.out.println(“Beep # ”+i);
   sum = sum +i;
}
System.out.println(sum+ “ Beeps”+i);
//more code
```

LOOP COUNTER VALUES

```
int numOfBeeps = 20;

for (int i=15;  i<= numOfBeeps ; i++ ) {
  System.out.println(“Beep # ”+i);
}
//more code

//Prints
//Beep #15
//Beep #16
//..
//Beep #20
```

LOOP INCREMENT

```
int numOfBeeps = 20;

for (int i=0;  i<= numOfBeeps ; i++ ) {
  System.out.println(“Beep # ”+i);
}
//more code

//Prints
//Beep #0
//Beep #1
//..
//Beep #20
```

LOOP INCREMENT

```
int numOfBeeps = 20;

for (int i=0;  i<= numOfBeeps ; i++ ) {
  System.out.println(“Beep # ”+i);
}
//more code

//Prints
//Beep #0
//Beep #1
//..
//Beep #20
```

LOOP INCREMENT

```
int numOfBeeps = 20;

for (int i= numOfBeeps;  i>=0; i-- ) {
   System.out.println(“Beep # ”+i);
}
//more code

//Prints
//Beep #20
//Beep #19
//..
//Beep #0
```

LOOP INCREMENT

```
int numOfBeeps = 20;

for (int i= 0;  i<= numOfBeeps; i+=2 ) {
  System.out.println(“Beep # ”+i);
}
//more code

//Prints
//Beep #0
//Beep #2
//..
//Beep #20
```

LOOP INCREMENT

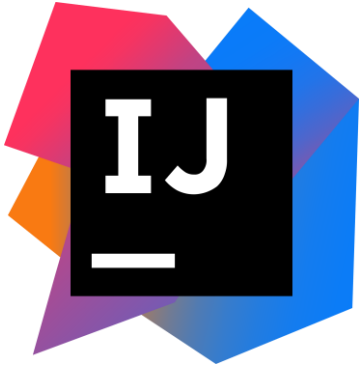
```
int numOfBeeps = 20;

for (int i= 1;  i<= numOfBeeps; i*=5 ) {
  System.out.println(“Beep # ”+i);
}
//more code

//Prints
//Beep #1
//Beep #5
```

Debugging FOR loops

3. Debugging FOR loops



“Lo importante es no dejar de hacerse preguntas“

Albert Einstein