Loops in Java are useful tools to repeat code without the need for a lengthy, bloated program. The most common of these loops are the for loop, while loop, do while loop, and enhanced for loop. Each of these loops has their own unique form of execution, but all have similarity to one another logically.

A for loop is one of the most common loops, and is especially useful when iterating a fixed or variable number of times. A for loop always starts by declaring a variable, which is usually what you will use to iterate the loop, though it is not necessary to do so. It is more common to create a variable of some kind to operate within the loop, but an outside variable can be used if the loop is part of a more complex system. All elements of this type of loop are separated by a semicolon. The variable section is followed by whatever logical statement you want to make. It can be as complex or as simple as you want, though it usually has relation to the variable used in the first part of the loop. Any statement that returns a Boolean (true or false) value can be used in this section, but only a statement that evaluates as true allows the loop to continue.

The last segment of the for loop is the post-loop action. It is typically used to change the variable that the logical section uses to determine if the loop is allowed to continue. However, it can be used for any purpose, as changing the variable can be done within the contained block of code in the loop. An example of a for loop that prints the numbers from 1 to 10 would be:

for (int i = 1; i <= 10; i++){

System.out.println(i);

}