

Writing Prompt #1: What are the different loops Java provides us with?

Java provides us four types of loops: **for loop**, **while loop**, **do while loop** and an **enhanced for loop**. A loop repeats (iterates) a section of code until a certain condition is met. Each loop is used for different purposes. A **FOR LOOP** is good for repeating code if you know the exact number of iterations needed. A **WHILE** loop is similar to a **FOR** loop, except you have less knowledge of how many iterations are needed. A **DO WHILE LOOP** is just like a **WHILE LOOP** except it always has at least one iteration as it checks the condition at the end of the loop instead of the beginning. Finally, there is the **ENHANCED FOR LOOP** which performs an iteration for each item in a collection (a list or an array).

Writing Prompt #2: What is the syntax of one of the loops in your above answer? How and when should you use this loop? Give an example.

As stated above, a **for loop** is great for repeating code if you know the number of times you need a portion of code to repeat. The syntax of a basic **for loop** is as follows:

```
for( initialize counter variable; condition; adjust counter variable) {  
    [code to perform]  
}
```

Here is an example of a **for loop** followed by a description:

```
for (int i=0; i < 10; i++) {  
    System.out.print(i + " "); ← code prints the current value of i and a space to the console  
}//end for loop
```

- In the above example the counter variable `i` is set to zero. (`int i=0;`)
- The loop will execute the code in the curly braces while `i` is less than 10 (`i < 10`)
- `i` is incremented by 1 (`i++`)

Sources:

Promineo Tech Video "Loops" by Nick Surwyn