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Week 2: Research

1. Java provides three types of loops: "for", "while", and "do-while".

2. "for" loop

    Syntax:

    ```
    for (initialization; condition; iteration) {
       // code to be executed
    }
    ```

    Usage:
    The "for" loop is used when a block of code needs to be executed repeatedly for a fixed number of times or until a specific condition is met. The three parts of the "for" loop are as follows:

    Initialization: This part is executed only once when the loop starts. It initializes the loop variable to a starting value.

    Condition: This part is checked before each iteration of the loop. If the condition is true, the loop continues to execute. Otherwise, the loop terminates.

    Iteration: This part is executed after each iteration of the loop. It increments or decrements the loop variable.

    Example:
    Suppose we want to print the numbers from 1 to 10. We can use a "for" loop to accomplish this task as shown below:

    ```
    for (int i = 1; i <= 10; i++) {
       System.out.println(i);
    }
    ```

    The output of this code will be the numbers from 1 to 10, each on a new line.

    Sources:
    -   https://docs.oracle.com/javase/tutorial/java/nutsandbolts/for.html
    -   Learnings provided by Promineo Tech