Flow Control

For Loop

```
// print out numbers from 0 to 9
// using while loop

int i = 0;
while (i < 10) {
  System.out.println(i);
  i++;
}
```

```
// print out numbers from 0 to 9
// using for loop

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

The Syntax of For Loop

```
for (initialization; condition; update) {
  // executes while condition is true
}
```

Order of the execution

1. execute `initialization` statement (only once)
2. check the `condition`
3. if condition is true execute the code, otherwise exit the loop
4. execute `update` statement
5. repeat step 2

```
// it's possible to omit any one of the statements
// but you still have to keep your ;'s in place


// infinite loop
for ( ; ; ) { }


// you can use more than one index in a for loop, separated by comma
for (int i = 0, j = 0; (i + j) < 5; i++, j++) {
        System.out.println("i=" + i + ", j=" + j);
}
```

```
i=0, j=0
i=1, j=1
i=2, j=2
```

everything else works the same as in while loop

(break, continue, nested loops, unreachable code, breaking with return, etc.)