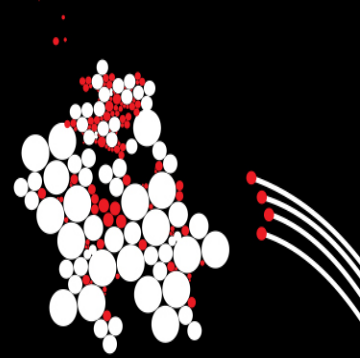
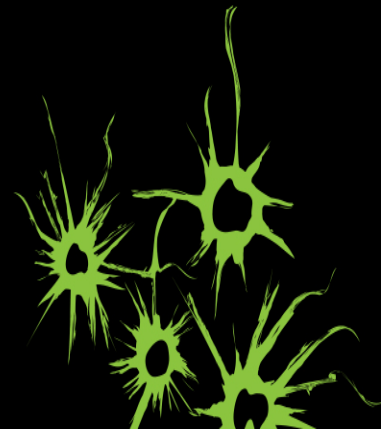


UNIVERSITY OF TWENTE.



PROGRAMMING: LOOPS

FAIZAN AHMED



LOOPS

- Repetitive executions of statement(s)
- There two ways to do that
 - while loop
 - do-while loop
 - for loop

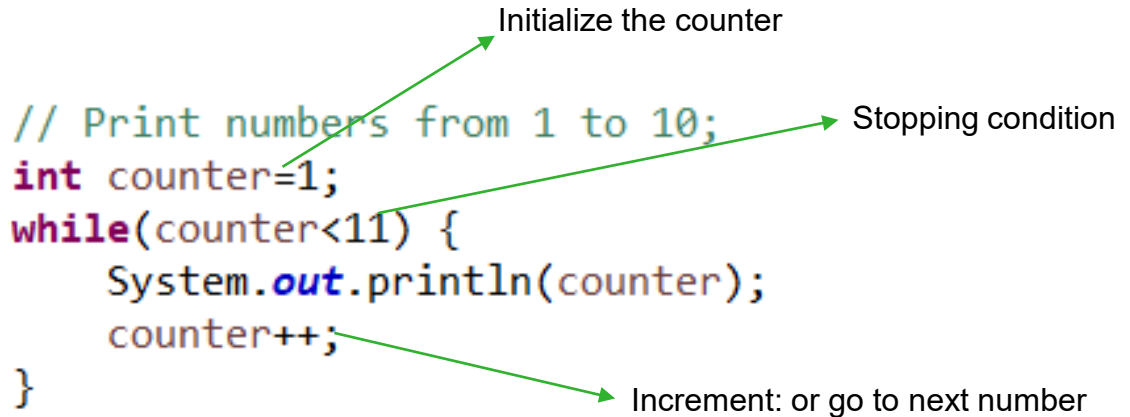
LOOPS: WHILE LOOP

```
// Print numbers from 1 to 10;  
int counter=1;  
while(counter<11) {  
    System.out.println(counter);  
    counter++;  
}
```

Initialize the counter

Stopping condition

Increment: or go to next number



Be aware of ***infinite-loop***

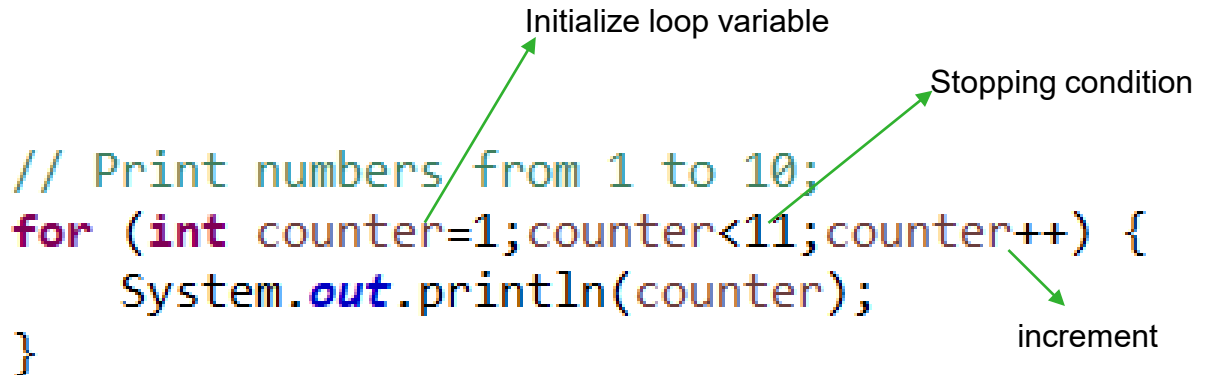
LOOPS: FOR LOOP

```
// Print numbers from 1 to 10;  
for (int counter=1; counter<11; counter++) {  
    System.out.println(counter);  
}
```

Initialize loop variable

Stopping condition

increment

The diagram illustrates the three components of a Java for loop. Three green arrows point from text labels to specific parts of the code: 'Initialize loop variable' points to 'counter=1', 'Stopping condition' points to 'counter<11', and 'increment' points to 'counter++'.

LOOPS: BREAK STATEMENT

- break- breaks the execution of the loop

```
// Print numbers from 1 to 10;  
int counter=1;  
while(true) { // looks like an infinite loop  
    System.out.println(counter);  
    if (counter>=11) {  
        break;  
    }  
    counter++;  
}
```

LOOPS: CONTINUE STATEMENT

- continue-skips the current iteration

```
// Skip even numbers.
int counter=1;
while(counter<11) {
    if(counter%2==0) {
        counter++;
        continue;
    }
    System.out.println(counter);
    counter++;
}
```

```
// Skip even number
for(int counter=1;counter<11;counter++) {
    if(counter%2==0) {
        continue;
    }
    System.out.println(counter);
}
```