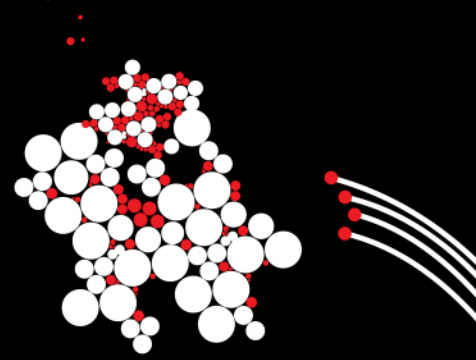
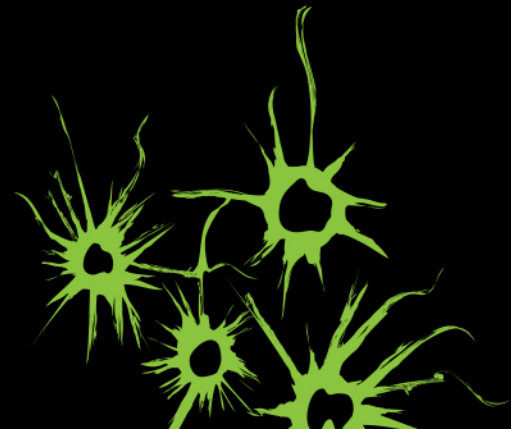


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PROGRAMMING: METHOD AND SCOPING

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SCOPING: BLOCKS

- Code between { and }
- Defines a **scope** for variable definitions

Example

```
//This block exchanges the values of x and y
{
    int temp;    // Temporary variable
    temp = x;    // Save a copy of the value of x in temp
    x = y;       // Copy value of y into x
    y = temp;    // Copy value of temp into x
}
```

- Java is a **free-format language** → indentation has no meaning!

SCOPING: LOOP VARIABLE

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

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

SCOPING: METHOD

```
public class Factorial {  
    public static void main(String[] args) {  
  
        int n=5;  
        int factorial=factorial(n);  
        System.out.println("The factorial of of "+5+" is: "+ factorial);  
    }  
    // This methods calculates the factorial of the number n.  
    private static int factorial(int n) {  
        int factorial=1;  
        for (int i = 1; i <=n ; i++) {  
            factorial=factorial*i;  
        }  
        return factorial;  
    }  
}
```