

CURS JAVA SE

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A Java method is a collection of statements that are grouped together to perform an operation.

```
modifier returnType nameOfMethod (Parameter List) {  
    // method body  
}
```

- **Modifier:** It defines the access type of the method and it is optional to use.
- **ReturnType:** Method may return a value.
- **nameOfMethod:** This is the method name. The method signature consists of the method name and the parameter list.
- **Parameter List:** The list of parameters, it is the type, order, and number of parameters of a method. These are optional, method may contain zero parameters.
- **Method body:** The method body defines what the method does with statements.

Until now:

```
public static void main(String[] args) {  
    System.out.print("Suma: ");  
    int a = 3;  
    int b = 5;  
    System.out.println(a+b);  
}
```

Working with methods

```
public static void main(String[] args) {  
    suma();  
}
```

```
public static void suma(){  
    System.out.print("Suma: ");  
    int a = 3;  
    int b = 5;  
    System.out.println(a+b);  
}
```

Exemplu - definirea unei metode de tip void cu argumente:

```
public void suma(int a, int b){  
    System.out.println("Suma:" + (a+b));  
}
```

Astfel se poate refolosi codul:

```
suma(3, 5);  
suma(7,10);
```

Exemplu - definirea unei metode care returneaza un tip de date:

```
public int suma(int a, int b){  
    int x = a+b;  
    return x;  
}
```

Astfel se poate refolosi codul:

```
System.out.println(suma(int 20, int 10));  
System.out.println(suma(int 5, int 3));
```

Exemplu metoda - calcul ipotenuza unui triunghi:

```
public static double calculeazaIpotenuza(int a, int b) {  
    double ip = Math.sqrt(a * a + b * b);  
    return ip;  
}
```

Exercitiu:

Sa se scrie o metoda care calculeaza media aritmetica a trei numere intregi. Sa se afiseze rezultatul in consola. Cele trei numere se vor introduce prin intermediul tastaturii.

Exercitiu:

Scrieti o metoda care primeste 3 argumente: nume, inaltime, gen si varsta. Metoda calculeaza si returneaza greutatea ideala. Sa se afise greutatea ideala pentru 4 persoane. Hint:

Ideal weight male = $(\text{height} - 100 - ((\text{height} - 150) / 4) + ((\text{age} - 20) / 4)$

Ideal weight female = $(\text{height} - 100 - ((\text{height} - 150) / 2) + ((\text{age} - 20) / 6)$

Exercitiu:

Fie urmatoarele siruri:

{7, 5, 2 1, 3};

{13, 2, 2, 5, 3, 4}

{10, 2, 2, 4, 5}

{1,3,7}

Scrieti o metoda pentru a calcula produsul elementelor dintr-un sir. Refolositi metoda.

Exercitiu:

Scrieti o metoda care primeste doi parametri - latime si inaltime. Sa se afiseze urmatoarele forme:

```
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```