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Custom Method

Methods

- It’s a function
- Grouping a series of code fragments to perform a task
- Allows us to reuse the function rather than repeating same set of statements

```
displayMessage();

eat();

sleep();

play()

...
```

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Declaring A Method

Access Modifier

Static Modifier

Return Type

Method Name

Parenthesis

```
public    static    void    displayMessage(){

    //Method Body
    System.out.println("Hello World!");
    System.out.println("I love Java");


}
```

Method Body

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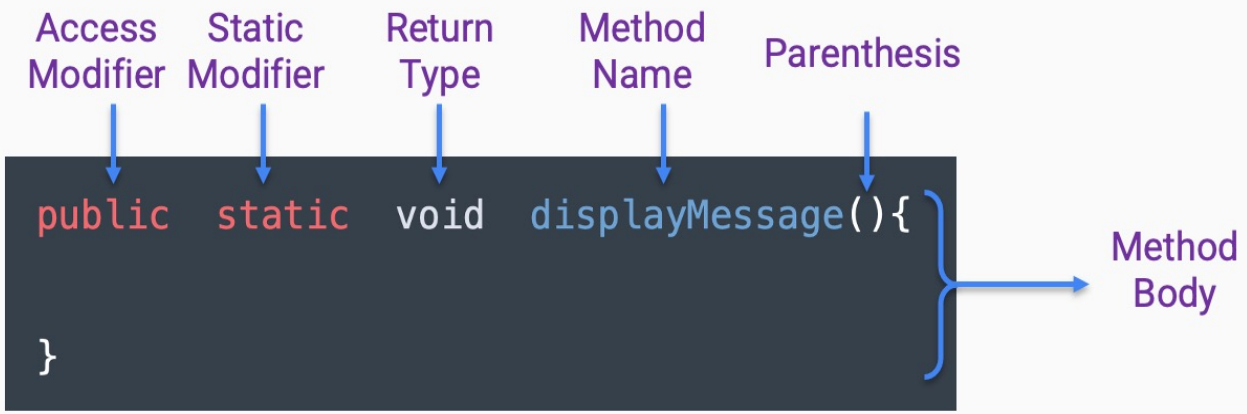
Components Of Method



- Access Modifier: determines the visibility, public is open to the world and always accessible.
- Static Modifier: Allows us to call the method through the class name.
- Return Type: determines if the method returns a value. If return type is void, method does not return any value.
- Method Name: Descriptive name of the function, The same rules that apply to variable names also apply to method names.
- Parenthesis: method name is always followed by a set of parenthesis, can be capable of receiving arguments.

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Calling a Method

- When we need to script to perform the task the method does
- The method executes the code in that code block
- When it has finished, the code continues to run from the point where it was initially called

```
2  public static void displayMessage(){
3      System.out.println("Hello");
   }

   //Code before hello...

1  displayMessage();

4  //Code after hello...
```

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Calling a Method

```java
displayMessage();
```

```java
public static void displayMessage(){

    //Method Body
    System.out.println("Hello World!");
    System.out.println("I love Java");


}
```

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Parameters

Passing Argument to Method

- When we declare a method, parameters can be given
- Parameters passed to the method act like variables
- Used for providing additional information the method must have to perform its task

Parameter

```
public static void displayValue(int num){

    System.out.println("The value is " + num);

}
```

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Calling Method That Need Information

- Must specify the values the method should use
- Values need to be given in the parentheses that follows method name
- The values we passed to the method are called arguments
- Arguments can be provided as values or as variables.

Argument

```
displayValue(5);
```

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Calling Method That Need Information

```
displayValue(5);
```

The argument 5 is copied into the parameter variable num

```
public static void displayValue(int num){

    System.out.println("The value is " + num);

}
```

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Return Methods

Return Methods

- Method can return a value by using a return statement
- Return type of the method can not be void, need to be a data type

Return Type

```
public static int sum(int num1,int num2){

    int result;
    result = num1 + num2;

    return result;

}
```

Return Expression

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Calling a Value Returning method

```
total = sum(value1,value2);

public static int sum(int num1,int num2){

    int result;
    result = num1 + num2;

    return result;

}
```

20

40

60

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