DataTypes

Goals

Creating simple programs to get familiar with datatypes

Notes

1. Create a new project for each assignment.
2. Generally, defining logic in the `main` method is actually something that is advised **against**. However, to reduce complexity at the start, we have chosen to do so in the first few exercises.

Assignments

Assigment 1

1. Create a simple program
2. Print `"Hello, World!"` (`System.out.println("Hello, World!");`)

You created your first working program!

Assignment 2

1. Create a simple program
2. In your main method, create a variable called `number`. Give it the type `int` and the value `8`.
3. Now, create another variable called `number2` with the value `20`.
4. Create another variable called `result` and store the result of the multiplication `number * number2` in it.
5. Now, print the variable `result` to the console.

Assignment 3

1. Make a `String` with the name `name`, and initialize it with your name.
2. Print your name to the console
3. Make a variable `age` and give it the value of your age.
4. Print your name to the console, along with the text: `"Hi, I am <your name>, and I am <your age>."`. To do this, use `System.out.println()`, and then string concatenation (`"Hi, I am " + <somevariable>`).

Assignment 4

1. Make a `boolean` with the name `test`, set the value to `false`
2. Print the value to console.
3. Set the value to `true`
4. Print the value to console.
5. Set the value to `!test` (`test = !test;`)
6. Print the value to console.

Methods

Assignment 5

1. Create a method, call it `multiply`.
2. The method should accept two `int` parameters, called `number1` and `number2`.
3. The method should `return` the result of the multiplication between `number1` and `number2`.
4. What should the return type of the method be?
5. Play around with this method in your `main` method.
6. For example, print the result of the multiplication `5 * 6`, `8 * 20`, `156 * 300`.

Assignment 6

1. Create a class `Person`.
2. The class should have a `name` and an `age` property. Think carefully about the dataTypes!
3. Make a method `printIntroduction` that prints the following sentence: `Hi, my name is <name> and I am <age> years old`.
4. Create a few `Person` objects in the `main` method and print the introduction for each of them.

Assignment 7

1. Create a class `Door`
2. The `Door` has three properties: `width`, `height`, and `open` (boolean)
3. Make a method `openDoor` which sets `open` to `true`. Also, print a message "Opening door".
4. Make a method `closeDoor` which sets `open` to `false`. Also, print a message "Closing door".
5. Make a method `printOpen` which prints whether the door is open or not (print `"The door is open: true/false`.)
6. Make a method `calculateSurface` which calculates the surface of the door (`width * height`).
7. Make a door, open it, close it, print the open state and print the surface.