Java start-up

The article is designed for students and anyone else who is interested in Java development

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Introduction

Java is one of the most popular object oriented programming languages. Being familiar with Java means that you will have a good job, and a good toolbox in your pocket to be successful in your career.

Download and install Java

The most recent version of Java can be downloaded from the following address:

https://www.oracle.com/java/technologies/downloads/#jdk21-windows

Download and install it. Please note that, typically, developers change the installation folder to `c:\dev\java\...`

It is more convenient as it is simple and consistent with multiple different versions of java if needed.

Download and install IntelliJ IDEA

The most convenient ide for java developers is IntelliJ IDEA. IntelliJ IDEA has a multitude of functionalities available and is designed to keep your focus on the code with features like code completion, inline debugging, quick fixes, and a variety of keyboard shortcuts.

http://jetbrains.com/idea

You'll be provided with two available editions to download: The free Community edition and the paid Ultimate edition. We'll be installing the Community edition.

Installation process is straightforward.

Install the application and run it.

Creating the first project

Create the new project and select the java version we just installed as the java virtual machine for the project.

The new project will contain the sample file.

Run the sample file and investigate it.

Find the comments and edit them.

Workshop

Assignment #1: Print Your Name:

Objective: Write a program that prints your name to the console.

Requirements: Use a System.out.println statement to output your name.

Assignment #2: Simple Math Operations:

Objective: Create a program that performs simple math operations on two numbers.

Requirements: The program should add, subtract, multiply, and divide two numbers and print the results. Use variables to store the numbers and results.

Assignment #3: Area of a Circle:

Objective: Write a program that calculates the area of a circle.

Requirements: The program should ask the user to input the radius of the circle and then calculate and display the area. Use the formula `area = Math.PI * radius * radius`.

Assignment #4: Convert Minutes to Seconds:

Objective: Develop a program that converts minutes into seconds.

Requirements: The program should take a number of minutes as input and output the equivalent number of seconds.

Assignment #5: Print a Pattern:

Objective: Create a program that prints a simple pattern, such as a triangle of asterisks.

Requirements: Use nested loops to print a triangle pattern. For example, a three-level triangle would look like this:

```
*
**
***
****
```

Downloading and installing Git

The git should be downloaded from the following web address:

https://git-scm.com/download/win

The installation is straightforward.

Sign up in github (if you are not alreadyt) and create the repository `oop2024spring`. All files we will put in this repository during the semester.

Upload assignment files into our repository and send me the address of your repository.