

# **Data Structures and Algorithms in Java**

Programming Environment

## Outline

① Programming Environment

② Working on a Programming Assignment

Programming Environment

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Linux, Mac, or Windows operating system configured with the software needed for the course

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Tools we will use

- Visual Studio Code (aka VSCode)
- File manager
- Terminal
- Web browser



# Programming Environment

Applications

Mon, Jan 27 9:47 AM

File Edit Selection View Go Run Terminal Help

EXPLORER

DSAJ

- > .vscode
- > data
- > lib
- > META-INF
- > out
- > src
  - > dsa
    - Average.java
    - BinaryDump.java
    - BSTOrders.java
    - Copy.java
    - Count.java
    - CouponCollector.java
    - CouponCollectorRedux.java
    - DateFormats.java
    - DegreesOfSeparation.java
    - DivisorPattern.java
    - Drunks.java
    - DynamicConnectivity.java
    - ErrorHandling.java
    - Factorial.java
    - Fibonacci.java
    - FibonacciSequence.java
    - FileIndex.java
    - Filter.java
    - Flip.java
    - Flips.java
    - FlipsMax.java
    - FrequencyCounter.java
    - Functions.java
    - Grade.java
    - Grep.java
    - Harmonic.java
    - HarmonicRedux.java
    - HelloWorld.java
    - HexDump.java
    - XthFromLast.java
    - LeapYear.java
- > OUTLINE
- > TIMELINE
- > JAVA PROJECTS

src > J HelloWorld.java > ...

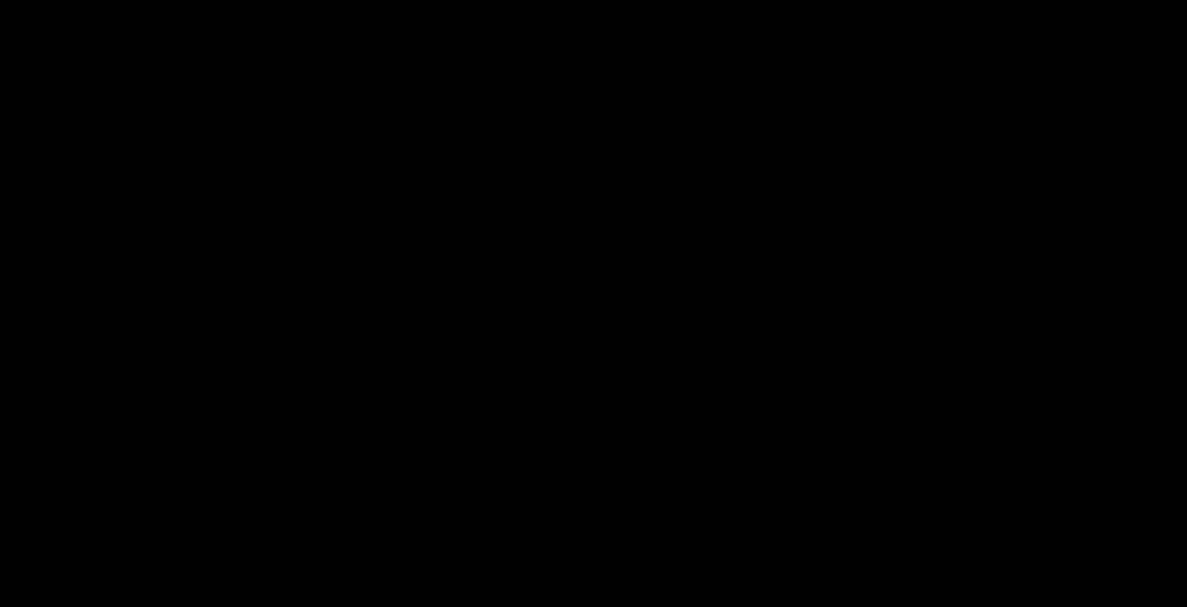
```
1 // Writes the message "Hello, World" as standard output.
2
3 import stdlib.Stdout;
4
5 public class HelloWorld {
6     // Entry point.
7     // Run | Debug
8     public static void main(String[] args) {
9         StdOut.println("Hello, World");
10     }
11 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
siyer@darwin:~/workspace/dsaj$ javac -d out src/HelloWorld.java
siyer@darwin:~/workspace/dsaj$ java HelloWorld
Hello, World
siyer@darwin:~/workspace/dsaj$
```

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## Working on a Programming Assignment





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Download and unzip the assignment (eg, `simple_programs.zip`) under `~/workspace`

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To compile a program (eg, `src/GreatCircle.java`), execute the following command in the VSCode terminal

```
× ~/workspace/simple_programs
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1 $ javac -d out src/GreatCircle.java
```

To run the generated program out/GreatCircle.class, execute the following command

```
× ~/workspace/simple_programs
```

```
1 $ java GreatCircle 48.87 -2.33 37.8 -122.4  
2 8701.387455462233
```

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Use the web browser to sign on to Gradescope and upload your assignment files (\*.java and notes.txt)