

# **PSLG Session 1: Print, Math Package**

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# Agenda

Introduction to PSLG

Print Statements

Math Package

- `Math.random()`
- `Math.min()` & `Math.max()`

# Introduction to PSLG

PSLG is a peer supported learning group that helps students taking on modules that have historically been considered difficult.



## Print Statements

Purpose:

- creates an output that can be read from the terminal

Syntax:

`System.out.println();`

`System.out.print();`

Tips:

- Print statements can contain raw strings or variables  
e.g.: `System.out.println("Hello World");` is a raw string

## Problem 1:

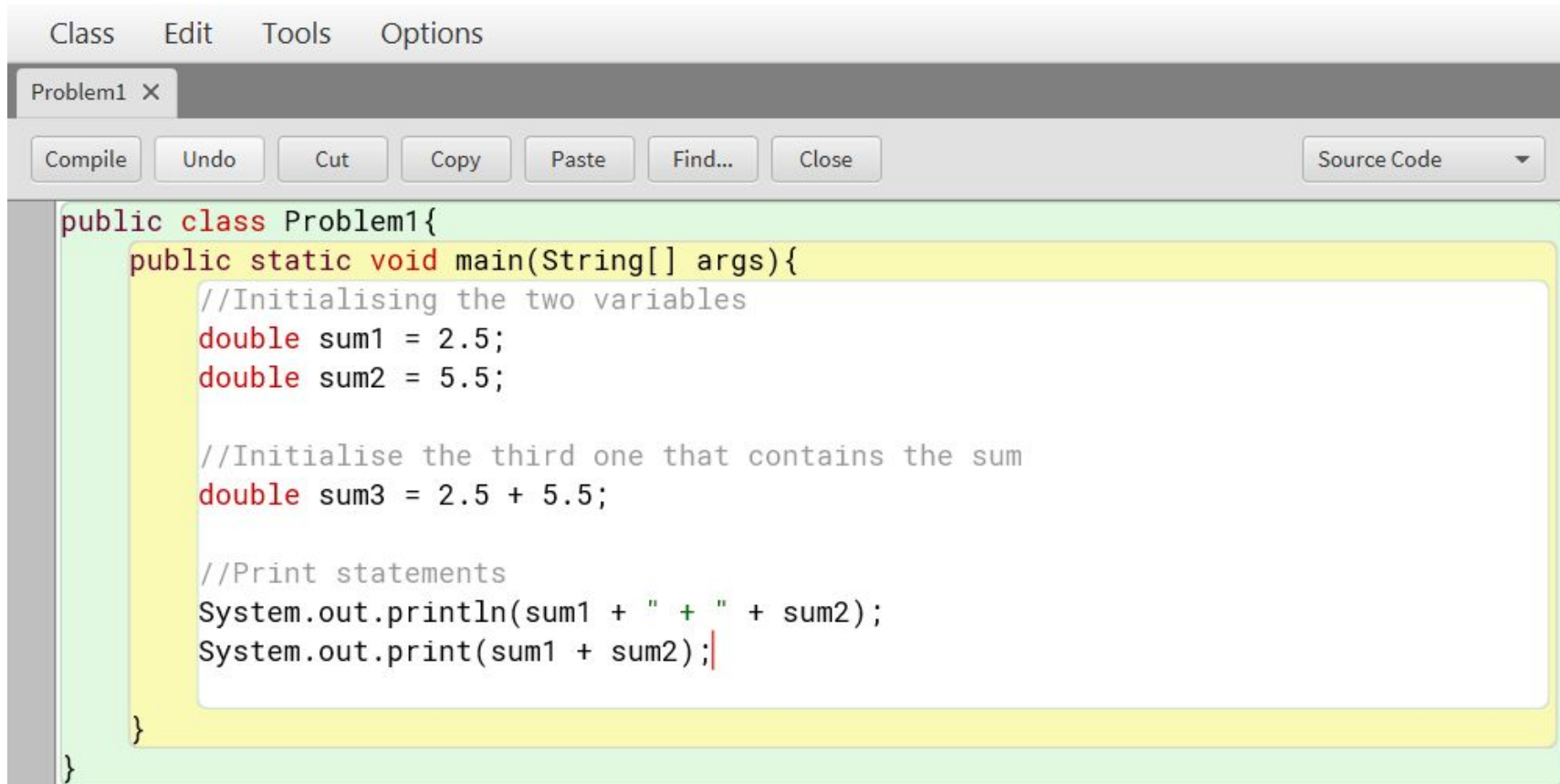
Create a java class called problem 1 and make a main method.

Declare two variables that contain the values 2.5 and 5.5 and initialise a third variable that contains the sum of the first two

Print the initial variables in the same line and the sum on a new line.

Work in groups to complete this question.

# The Solution



The screenshot shows a Java IDE window titled "Problem1". The menu bar includes "Class", "Edit", "Tools", and "Options". The toolbar contains buttons for "Compile", "Undo", "Cut", "Copy", "Paste", "Find...", "Close", and a "Source Code" dropdown. The code editor displays the following Java code:

```
public class Problem1{  
    public static void main(String[] args){  
        //Initialising the two variables  
        double sum1 = 2.5;  
        double sum2 = 5.5;  
  
        //Initialise the third one that contains the sum  
        double sum3 = 2.5 + 5.5;  
  
        //Print statements  
        System.out.println(sum1 + " + " + sum2);  
        System.out.print(sum1 + sum2);  
    }  
}
```

# Math.random()

## Purpose:

Math.random() returns a randomly generated number between 0 and 1

adding to Math.random() will increase the lower bound of the range

multiplying will increase the upper-bound of the range

## Syntax:

```
int random = (int) ((Math.random()*upperbound)+lowerbound);
```

## Problem Two

Create a class named `problem2` and make a main method.

Initialise a variable and make the variable generate a random number between 1 and 100

Print the number and the result of the number divided by 2 one after another.



# The Solution



A screenshot of a Java IDE window titled "Problem2 X". The window has a menu bar with "Class", "Edit", "Tools", and "Options". Below the menu bar is a toolbar with buttons for "Compile", "Undo", "Cut", "Copy", "Paste", "Find...", "Close", and a "Source Code" dropdown menu. The main editor area displays the following Java code:

```
public class Problem2{  
    public static void main(String[] args){  
        //Creating the random variable  
        int random = (int) ((Math.random()*100)+1);  
  
        //Creating our equation  
        int result = random / 2;  
  
        //Print our result  
        System.out.println("Our result is: " + result);  
    }  
}
```

# Math.min and Math.max

## Purpose:

Finds the maximum (Math.max) or minimum (Math.min) number between two numeric data-types (Integer, float or double)

## Syntax:

Math.max(10, 9.5); would return 10

Math.min(4, 5.5); would return 4

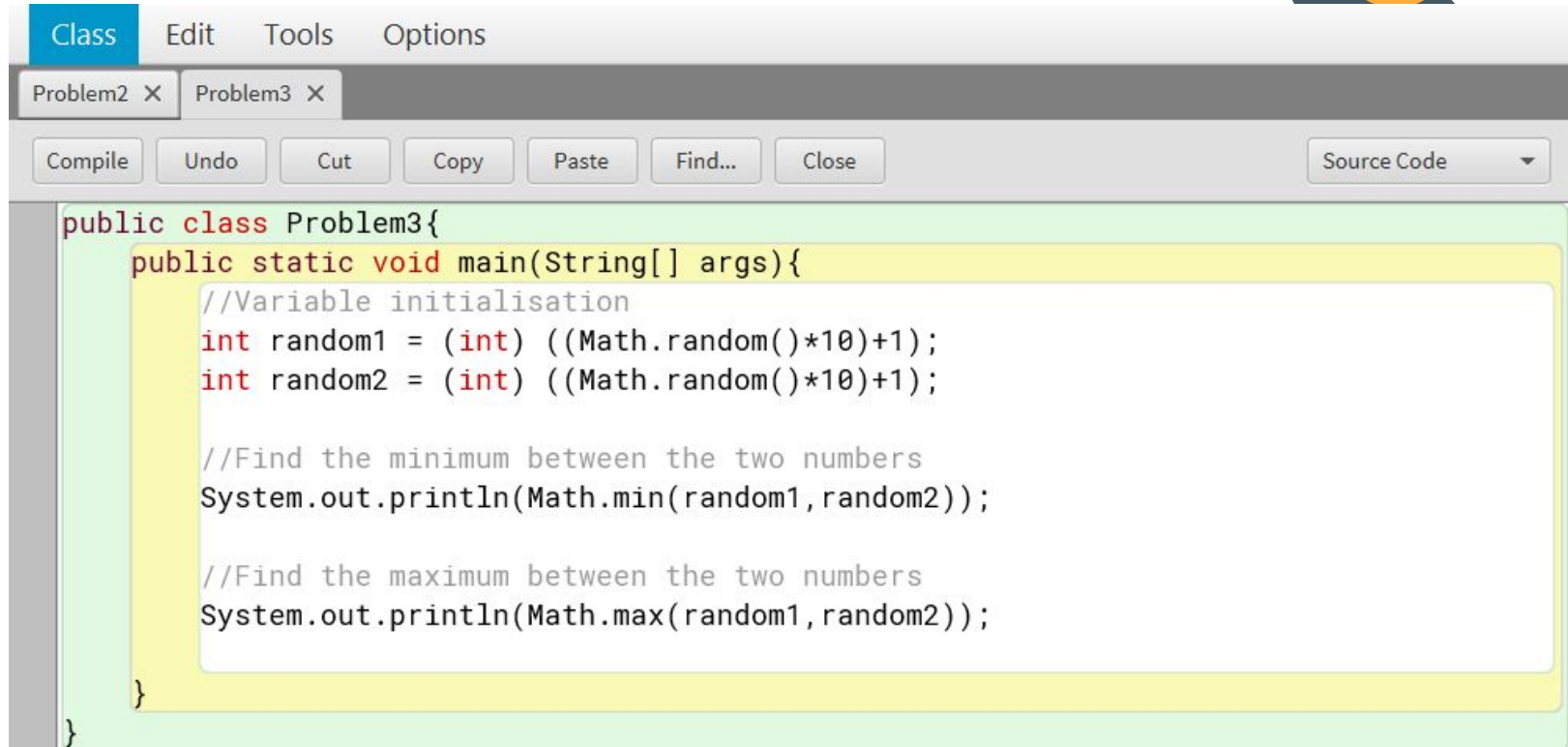
## Problem 3

Create a class called `problem3` and make a main method.

Declare two variables and make each variable contain a randomly generated number between 1 and 10.

Print the minimum between the two numbers and the maximum between them, one after another.

# The Solution



The screenshot shows an IDE window with a menu bar (Class, Edit, Tools, Options) and a toolbar (Compile, Undo, Cut, Copy, Paste, Find..., Close). Two tabs are open: Problem2 and Problem3. The Problem3 tab is active, displaying the following Java code:

```
public class Problem3{  
    public static void main(String[] args){  
        //Variable initialisation  
        int random1 = (int) ((Math.random()*10)+1);  
        int random2 = (int) ((Math.random()*10)+1);  
  
        //Find the minimum between the two numbers  
        System.out.println(Math.min(random1,random2));  
  
        //Find the maximum between the two numbers  
        System.out.println(Math.max(random1,random2));  
    }  
}
```