

Homework 2

CSC-121, Fall 2025

Submission Instructions: Create a single text file for your answers (Use .txt or .pdf) with your name and ID number at the top. Include code written for any programs, and type-written answers to non-coding questions. Submit the file on Canvas to complete the assignment. You may work in groups or use genAI help, but written answers must be in your own words.

Q1. Warm up!

Write a program that will display your name on the first line; your favorite band on the second line; and the names of three songs you like that the band plays on the third line. Place a comment with today's date at the top of the file. Although these items should be displayed on separate output lines, *use only a single println statement in your program!* Also, each line after your name should be indented with a tab. (Hint: Use escape sequences for tabs and newlines.)

Example output:

```
Scotty Hoag
    Favorite Band: Blue Oyster Cult
    Songs I Like: Burnin' For You, The Reaper, Godzilla
```

Q2. Reading Code

The following program will not compile because the lines have been mixed up.

```
System.out.print("Success\n");
}  
public class Success  
{  
System.out.print("Success\n");  
public static void main(String[] args)  
System.out.print("Success ");  
}  
// It's a mad, mad program.  
System.out.println("\nSuccess");  
{
```

When the lines are arranged properly, the program should display the following output on the screen:

Program Output

Success

Success Success

Success

Rearrange the lines in the correct order. Test the program by entering it on the computer, compiling it, and running it.

Q3. Primitive Data Types

In class we talked about some of Java's primitive data types:

Primitive Data Types: byte, short, int, long, float, double, bool, char

Each data type is meant to serve a different purpose, but some are very similar to each other. In a sentence or two, explain what the difference is between each of the following data types and when you should use one or the other.

1. float VS. double
2. int VS short
3. int VS long
4. char VS byte

Q4. Land Calculation

1. One acre of land is equivalent to 43,560 square feet. Write a program that calculates the number of acres in a tract of land with 389,767 square feet. Create variables in your program for the number of feet in an acre, the size of the tract of land, and the number of acres. Print the results.

Hint: Divide the size of the tract of land by the size of an acre to get the number of acres.

2. Should any of the three variables you made in part 1. be set as constants with `final`? Explain why or why not for each.

Q5. Multiple choice and True/False

1. Every complete statement ends with a _____.

- a. period
- b. parenthesis
- c. semicolon
- d. ending brace

The following data:

72

'A'

"Hello World"

2.8712

...are all examples of _____.

- a. variables
- b. literals
- c. strings
- d. none of these

3. A group of statements, such as the contents of a class or a method, are enclosed in _____.

- a. braces {}
- b. parentheses ()
- c. brackets []
- d. any of these will do

4. Which of the following are not valid assignment statements? (Indicate all that apply.)

- a. total = 9;
- b. 72 = amount;
- c. profit = 129
- d. letter = 'W';

5. Which of the following are not valid `println` statements? (Indicate all that apply.)

- a. `System.out.println + "Hello World";`
- b. `System.out.println("Have a nice day");`
- c. `out.System.println(value);`
- d. `println.out(Programming is great fun)`