**JOBSHEET 13**

**Function Part 1**



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**Class**

1I

**Department**

Information Technology

**Study Program**

D4 Informatics Engineering

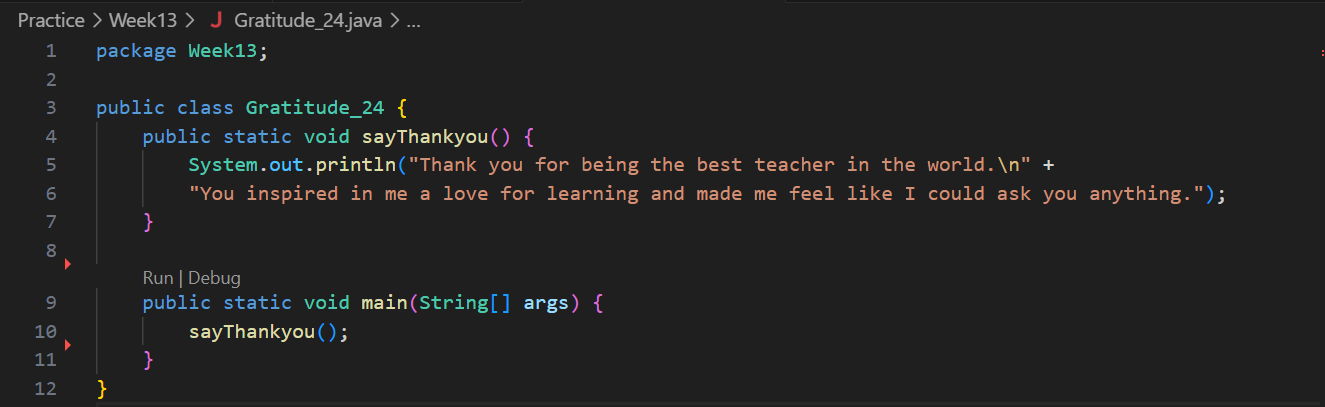
Labs Activity

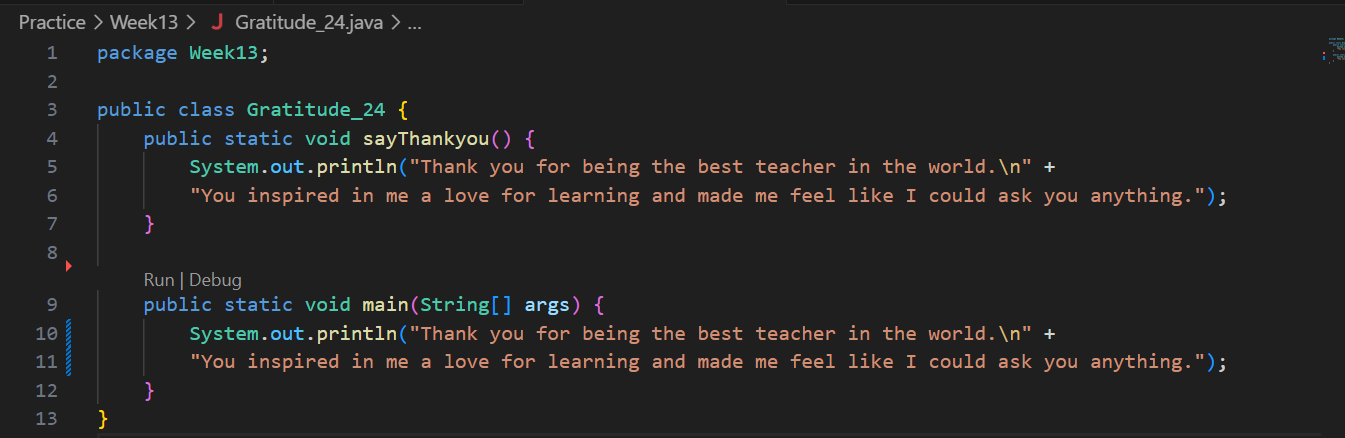
**Question! (Experiment 1)**

1. Does function with no parameter always have void datatype?
2. Is it possible for sentence “**Thank you for…..dst**” to be displayed, without using **sayThankyou()** function? Modify the program so that it displays the sentence without using function!
3. What are the benefits of using functions in a program?

**Answer!**

1. No, because there is no relation between parameter and void datatype.
2. It is possible. We should copy the sentence into the main function.





1. Makes a code modular and more effective.

**Question! (Experiment 2)**

1. What is the use of a parameter in a function?
2. Is parameter similar to variable? Please explain!
3. In the Java programming language, is parameter only used for passing input data? What about output data?

**Answer!**

1. Parameters allow to input or pass values into a function and receive information from the calling code.
2. By the declaration are same, but the function are different.
3. Specific use of parameters

**Question! (Experiment 3)**

1. Explain when do we need to create a function that requires a return value?
2. Can a **System.out.println** statement be added inside a function with a return value? What is its impact?
3. Can a function without a return value be called inside the main function without being passed to a variable? Like in experiment 1? Explain!

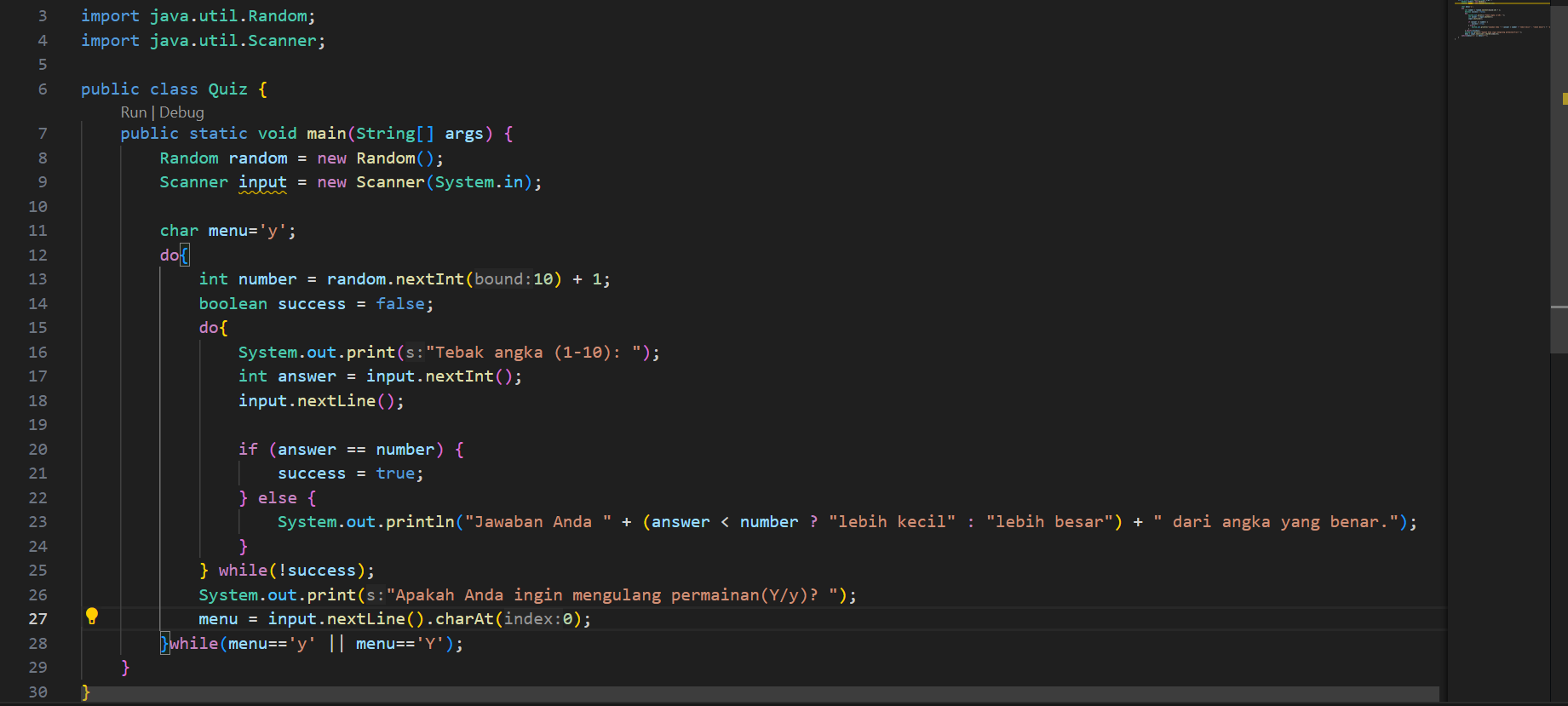
**Answer!**

1. i=0 diubah menjadi i=1 untuk memastikan bahwa segitiga dimulai setelah memasukkan nilai N. Lalu, System.out.println(); setelah perulangan dalam untuk memindah ke baris berikutnya setelah setiap baris dari segitiga.
2. A

**Question! (Experiment 4)**

1. Based on experiment 4, which function will execute first? Please explain!
2. Which is the correct way to write a function inside a class? Above the main function or below the main function? Please explain!
3. Modify the above program by adding the function sayAdditionalGreetings() with a String input parameter. The sayAdditionalGreetings() function contains additional remarks or greetings that you want to convey to the greeting recipient.

**Answer!**

1. Memasukkan karakter selain ‘Y’ atau ‘y’ saat ditanya “Apakah Anda ingin mengulang permainan?”
2. 

**Question! (Experiment 5)**

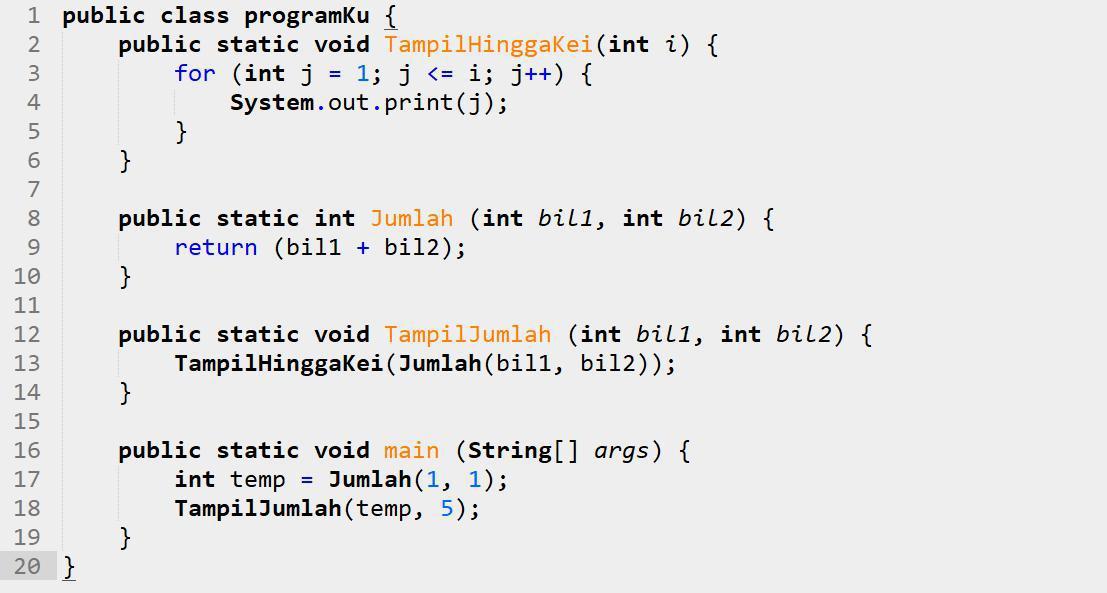
1. Explain why the parameter in experiment 5 is written as **int... a**!
2. Mention the example of varargs in implementing code to solve real-world problems! (at least 3)
3. Can we use two different data types for varargs in one function? Provide an example!

**Answer!**

1. Agar bisa menyimpan value yang berbeda
2. GPA average, parking
3. Tidak bisa

**Question! (Experiment 6)**

1. Explain the execution steps for experiment 6 above!
2. What is the output of the program below, then explain the steps of the program!



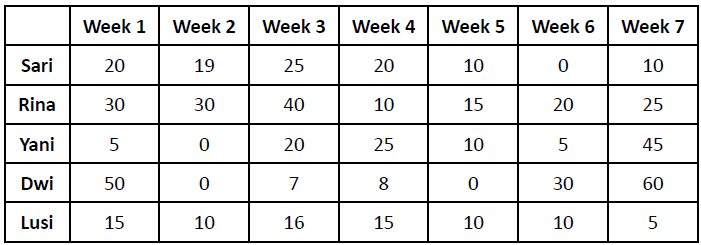
1. When do we need to create a function with and without parameters? When do we need to create a function with and without return value? Explain!

**Answer!**

1. i=0 diubah menjadi i=1 untuk memastikan bahwa segitiga dimulai setelah memasukkan nilai N. Lalu, System.out.println(); setelah perulangan dalam untuk memindah ke baris berikutnya setelah setiap baris dari segitiga.
2. A

**Assignment**

1. Create a new class named CubeStudentIDNumber that has function to calculate area and volume!
2. Create a program to manage the weekly grades (there are 7 weeks) of 5 students. The data must be implemented using 2 dimensional array as follows:



Add functions to retrieve information from the above data with the following details:

a. Function to input students’ grade data.

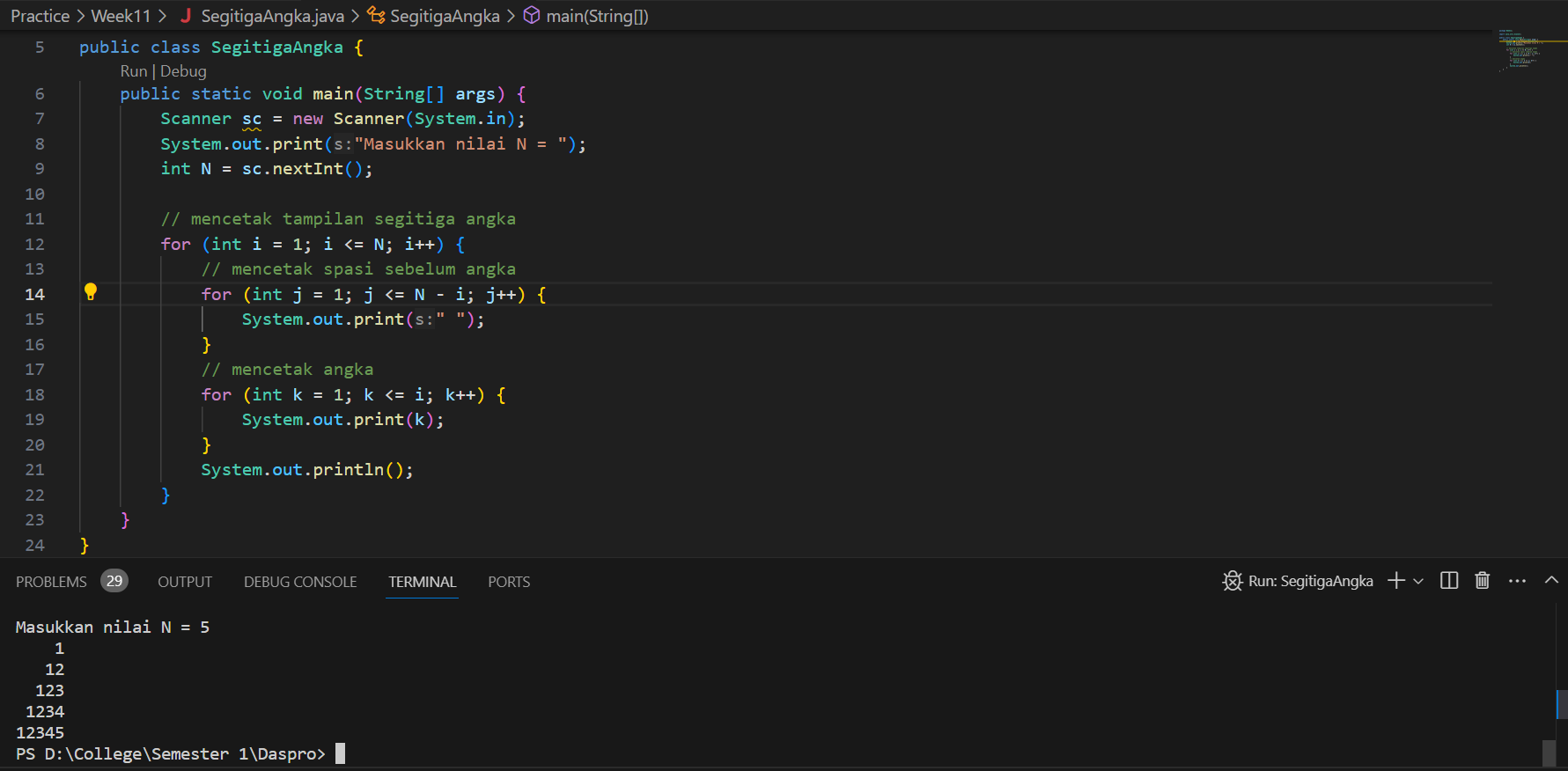
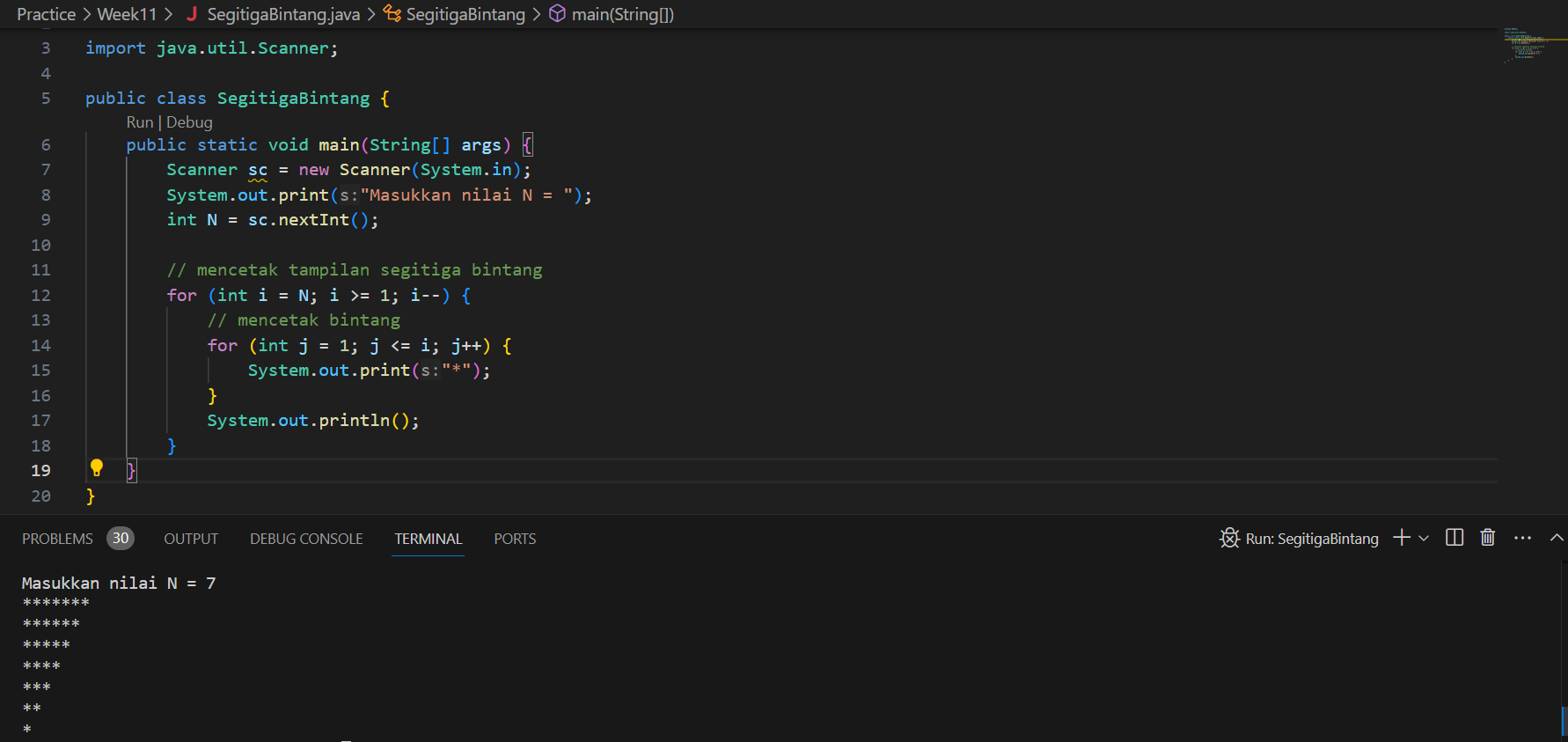
b. Function to display all student grades from the first week to the seventh week.

c. Function to find the week that has the highest grade from all students.

d. Function to find the student with the highest grade (also display the grade information for each week).

1. Modify assignment number 2 above by getting the user input to determine the number of students and the number of weeks!

**Answer!**

1. 
2. 
3. 