

Homework 3 - If statements

In this assignment we are going to explore if, else if, and else statements.

Part 1

The goal of this is to create a program which will take age as an input and output the grade they were in.

Less than 6 ----- You are probably not enrolled in school
6 ----- You are probably in grade 1
7 ----- You are probably in grade 1 or 2
8 ----- You are probably in grade 2 or 3
9 ----- You are probably in grade 3 or 4
10 ----- You are probably in grade 4 or 5
11 ----- You are probably in grade 5 or 6
12 ----- You are probably in grade 6 or 7
13 ----- You are probably in grade 7 or 8
14 ----- You are probably in grade 8 or 9
15 ----- You are probably in grade 9 or 10
16 ----- You are probably in grade 10 or 11
17 ----- You are probably in grade 11 or 12
18 ----- You are probably in grade 12
Greater than 18 - You are probably no longer in school

Sample Output

How old are you: 9 You are probably in grade 3 or 4

Part 2

In this part the goal is to enter a number (n) and print check if it is divisible by 2, 3, 5, 10, 100, and n. Print out this statement every time it is true "n is divisible by val". Lastly don't let any statement be printed out more than once

Sample output (1)

Enter a number: 8
8 is divisible by 2
8 is divisible by 8

Sample output (2)

Enter a number: 1500
1500 is divisible by 2
1500 is divisible by 3
1500 is divisible by 5
1500 is divisible by 10
1500 is divisible by 100
1500 is divisible by 1500

Part 3

In this part you are going to design a calculator. The program will ask the user for input of the first 2 numbers. Then it will print out all of the possible commands, which can be seen below in the sample run. The last input needed will be a command which is the operation to perform. When entering the command it should not be case sensitive.

finally output the mathematical expression in the form firstNumber secondNumber = result where can be +, -, *, /

Note: There should be a tab before each of the commands in list commands. A simple way to add a tab in a print statement in Java is with "\t"

Sample output

Enter the first number: 4
Enter the second number: 7
List of addition commands
1) add
2) sum

3) addition

4) +

List of subtraction commands

1) sub

2) subtract

3) subtraction

4) -

List of multiplication commands

1) times

2) multiplication

3) multiply

4) *

List of integer division commands

1) div

2) divide

3) /

Enter command: +

$4 + 7 = 11$