Homework 2

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# Homework problem 1

## Requirements

The program created for problem 1 computes and displays the sum of two numbers: 5 and -20. It literally displays: 5 + -20 = -15

## Design

One way to create this program is by declaring an integer r and assign it the value of the computation of the two numbers. Then write a print line containing a statement of the desired calculation with the integer r replacing what a programmer could have just written in as the answer.

## Iterative developments steps

1. Create a new class in Eclipse.
2. Designate an integer r for the value of the sum of the numbers 5 and -20.
3. Write a print line displaying the calculation and the result.

## Tests

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description of test | input | expected result | actual result | cause |
| method1 normal input | N/A | 5 + -20 = -15 | 5 + -20 = -15 | I am a boss |

# Homework problem 2

## Requirements

This question asks the programmer to make a program that displays five command-line arguments.

## Design

Begin by setting the arguments in the command line. Write the print line statements for each individual argument.

## Iterative developments steps

1. Set the arguments in the command line
2. Write print line statements for the arguments

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description of test | input | expected result | actual result | cause |
| method1 normal input | u  v  w  x  y  z | u  v  w  x  y  z | u  v  w  x  y  z | Correct code |

# Homework problem 3

## Requirements

This program is designed to display the value of integers, calculate the quotient of two integers, calculate the remainder of the quotient, calculate the quotient of two doubles, and calculate the rounded result of the quotient.

## Design

Begin by declaring integer variables, assigning those variables values, and displaying those variables. Calculate the quotient of x and y and display the answer of the quotient. Calculate the remainder of that quotient without using the modulus operator. This can be achieved by using the equation: [remainder(x/y)] = x-y\*(x/y). Display the remainder. Reassign x as a double n and recalculate the quotient to get the decimal form of the quotient. Display the decimal value. Use the Math.round(); command to find the rounded result of the quotient. Display the rounded value.

## Iterative developments steps

1. Declare and assign the integer variables x and y, using int <variables>. Display the value of the variables using the System.out.println(“Value of <variable> is: “+<variable>); method.
2. Calculate the quotient of the variables using the “/” arithmetic operator. Display the result using the System.out….. command.
3. Calculate the remainder using the equation: [remainder(x/y)] = x-y\*(x/y). Display using the System out…. command.
4. Reassign the variable x as a “double n” and recalculate the quotient. Display this new quotient as the decimal value using the System.out….. command.
5. Use the “Math.round();” command to calculate the rounded value of the quotient. Display using the System.out….. command.

## Tests

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description of test | input | expected result | actual result | cause |
| method1 | N/A | Value of x is: 8  Value of y is: 3  Quotient of x/y is: 2  Remainder of x/y is: 2  Decimal value…: 2.666  Rounded value…: 3.0 | Value of x is: 8  Value of y is: 3  Quotient of x/y is: 2  Remainder of x/y is: 2  Decimal value…: 2.666  Rounded value…: 3.0 | Correct code |

# References

# Introduction to Programming Using Java by Anthony J. Dos Reis

# Lauren Ernst

# Joe Schmitt

# Marielle Billig