PROGRAM CONTROL STATEMENTS

Exercise 3

Akademia Finansów i Biznesu Vistula
Studia globalnych możliwości

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TASK 1 – SIMPLE CALCULATOR, USING FROM INPUT - OUTPUT OPERATIONS

Please create a program that will calculate sum, difference, product and a quotient for two user-entered numbers (example variable names: firstNumberBielecki, secondNumberBielecki).

Variables entered by the user should be assigned to the float type.

All calculations (sum, difference, product, and quotient) are calculated at once (the user does not choose the action to be performed).

The result of the calculation should be displayed in two decimal places.

TASK 2 – CALCULATION OF THE BMI INDEX (IF-ELSE–IF LADDER)

Please create a program that will calculate the BMI (I encourage you to use the Math.pow () method) after user enters his height and weight (example variable names: heightBielecki, weightBielecki) - the variables passed by the user are assigned to the float type.

After calculating the BMI value, thanks to the if-else-if ladder statement, the value will be assigned to the appropriate range and the correct message will appear on the console. Intervals of BMI index:

- 16.00 – starvation
- 16.00 - 16.99 – emaciation
- 17.00 - 18.49 – underweight
- 18.50 - 22.99 – normal, low range
- 23.00 - 24.99 – normal, high range
- 25.00 - 27.49 – overweight, low range
- 27.50 - 29.99 – overweight, high range
- 30 - 34.9 – 1st degree obesity
- 35 - 39.9 – 2nd degree obesity
- 40 – 3rd degree obesity

TASK 3 – CALCULATION OF THE ELEMENTS OF THE EQUATION SQUARE (USING THE SWITCH INSTRUCTIONS)

Please write a program that will calculate the roots of the quadratic equation ax2+bx+c= 0 using the switch selection statement, where variables a, b, c are real numbers entered from the keyboard.

Variables a, b, c, x1 and x2 should be displayed on the screen with an accuracy of two decimal places.

Hints:

1. We check if the user has not entered zero as "a".
2. We calculate the delta and determine the number of elements.
3. Depending on the number of roots in the switch statement, we execute specific actions (we calculate x1 or x1 and x2).

TASK 4 – SUMMARY OF EVEN NUMBERS FROM 1 TO 100 - USING A FOR LOOP

Please write a program that sums even numbers from 1 to 100, you must use for loop.

TASK 5 – FINDING THE BIGGEST AND THE SMALLEST NUMBERS FROM THE SET OF NUMBERS DRAWN BY A LOOP WHILE

Please write a program which will use the while loop to find the largest and smallest number from the set of 10 randomly drawn integers from 1 to 100.

Hint: In this task, please do not use an array or other collection.

THANK YOU

Więcej na:

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