

## Laboratory 03

*The source code should be uploaded to the UPEL platform at the end of the class. DO NOT upload any executable, compressed files, subdirectories, or temporary files. There should be only one file (the source code) for each problem. Please, name the files as 1.c, 2.c, etc.*

**1.** Write a program that takes as input a class score. Output the grade for the class based on the following guideline:

Exactly 100 is A+

90 and above is A

80 and above is B

70 and above is C

60 and above is D

Anything less than 60 is F

Anything more than 100 or less than 0 is invalid input.

**2.** Write a C program to check whether a triangle can be formed by the given value for the angles, entered from the keyboard.

**3.** A number is called an Armstrong number if the sum of the cubes of the digits of the number is equal to the number. For example  $153 = 1^3 + 5^3 + 3^3$ . Write a C program that asks the user to enter a number and returns if it is Armstrong or not.

**4.** Write a program that will calculate and show the annual electric bill. The power price depends on the consumption, if the annual consumption is  $< 2000$  kWh, then the price is 0.96 PLN/kWh, the excess over 2000 kWh is priced at 1.55 PLN/kWh and the excess over 5000 kWh is priced at 2.30 PLN/kWh. The annual consumption should be entered from the keyboard.