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| **INTRODUCTION TO PROGRAMMING IN C (IS-FEE-10061S)**  **WEEK 02** | | | |
| **First Name** | **Last Name** | **Date** | **Points** |
|  |  | **07.03.2024** |  |

**Comments:**

* complete the data in the table above
* paste the program codes in the marked places
* send the file by the end of the day on which the next class will take place

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| **Program no. 1** |
| Given **R = 100 ** and **U = 8 V**, compute and print the value of current **I** flowing through the resistor. Example of program execution:  **Current I [A]: 0.08** |
| **Program code:** |
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| **Teacher's comments:** |
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| **Program no. 2** |
| Direct current (**I**) flows through the resistor (**R**). Write a program that computes the voltage drop (**U**) across the resistor and the power (**P**) emitted in the resistor. The resistance (**R**) and current (**I**) values enter using **scanf()** function. Example of program execution:  **Enter R [Ohm]: 470**  **Enter I [A]: 0.25**  **------------------------**  **Voltage U [V]: 117.5**  **Power P [W]: 29.375** |
| **Program code:** |
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| **Teacher's comments:** |
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| **Program no. 3** |
| Write a program that computes coefficients (**a**, **b**) of the equation **y = ax + b** of the line passing through two points: **(x1,y1)** and **(x2,y2)**. Coordinates of points enter using **scanf()** function. Example of program execution:  **Point no. 1**  **x1: 0**  **y1: 2**  **Point no. 2**  **x2: 3**  **y2: 1**  **---------------------------**  **Coefficient a: -0.333333**  **Coefficient b: 2.000000** |
| **Program code:** |
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| **Teacher's comments:** |
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| **Program no. 4** |
| Using **scanf()** function enter three integer numbers (**x**, **y**, **z** - **int** type) and compute:    Pay special attention to the correctness of the division and square root operations. Example of program execution:  **x: 2**  **y: 3**  **z: 2**  **x+y = 5**  **x-y = -1**  **x\*y = 6**  **x/y = 0.666667**  **x/(y+z) = 0.4**  **x\*y/z = 3**  **sqrt(x) = 1.41421** |
| **Program code:** |
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| **Teacher's comments:** |
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| **Program no. 5** |
| Write a program that computes the resonant frequency **fr** of an RLC circuit. The resistance, the inductance **L** and the capacitance **C** enter using **scanf()** function.    Example of program execution:  **Resistance R [Ohm]: 10**  **Inductance L [H]: 0.1**  **Capacitance C [F]: 1.0e-6**  **--------------------------------**  **Frequency fr [Hz]: 503.54397** |
| **Program code:** |
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| **Teacher's comments:** |
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