|  |
| --- |
| **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

|  |
| --- |
| **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:** |
|  |
| **Teacher's comments:** |
|  |

|  |
| --- |
| **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:** |
|  |
| **Teacher's comments:** |
|  |

|  |
| --- |
| **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:** |
|  |
| **Teacher's comments:** |
|  |

|  |
| --- |
| **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:** |
|  |
| **Teacher's comments:** |
|  |

|  |
| --- |
| **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:** |
|  |
| **Teacher's comments:** |
|  |