

University of Mila
Faculty of Science and Technology
Department of Process Engineering

Practical Work 03

Course : Introduction to Programming

Level: 1st year ST - ENG & LMD

Semester 02

By:

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Academic Year: 2025/2026

Exercise N° 01: Mathematical Functions

Question 01: Write a C program to create a function **multiplyNumbers()** that takes two integers as arguments and returns their product. Call this function from the **main()** function and print the result.

Question 02: Write a C program to create a function **multiplyNumbers()** that takes two integers as arguments and returns their product **using pointers**.

Exercise N° 02: Advanced Swap Functions

Question 01: Write a C program to create a function **swapThree()** that swaps the values of three integers. Test this function in the **main()** function by swapping three numbers.

Question 02: Write a C program to create a function **swapThree()** that swaps the values of three integers **using pointers**. Test this function in the **main()** function by swapping three numbers.

Exercise N° 03: Statistical Functions

Question 01: Write a C program to create a function **MaxMinThree()** that finds the maximum and minimum between three numbers. Test this function in the **main()** function.

Question 02: Write a C program to create a function **findMin()** that takes three integers as arguments and returns the smallest of the three.

Exercise N° 04: Number Classification

Question: Write a C program to create a function that checks whether a number is prime or not. Call this function from the **main()** function and print the result.

Exercise N° 05: Range Printing with Functions

Question 01 (Optional): Write a C program to print all prime numbers between 1 to n.

Question 02: Write a C program to print all prime numbers between 1 to n using functions.

Exercise N° 06: Advanced Recursion

Question 01: Write a recursive function **power()** that takes two integers as input (base and exponent) and returns the result. Use this function in the **main()** function to compute 2^{10} .

Question 02 (Optional): Write a C program to print Fibonacci series up to N using recursion.

Question 03: Write a C program to find the sum of natural numbers from 1 to N using recursion.