Operators, Flow Control Statements

C++ in QF I - a course by Paweł Sakowski

Przemysław Kurek

Chair of Political Economy
Faculty of Economic Sciences
University of Warsaw

Labs 02

Last time we learned:

- How to create a simple program in C++.
- What are **variables** and **variable types**.
- How to **declare** variables and **assign** values to them.
- That **constant** values can be assigned to variables.

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Today we will learn:

- How the program is created? What is the **compiler** and the **machine language**.
- What are **comments** and why we should use them.
- More about **operators**.
- What are **flow control statements**.
- Usage of **selection statements**: `if`, `if else`, `else if`.
- Usage of **iteration statements (loops)**: `while`, `for`.

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Examples:

1. Write a program, that decides if the number is positive or negative. Take 0 into consideration.
2. Rewrite second example to ask the user for numbers until the user prints 0.
3. Print the multiplication table on the screen. Format it nicely.
4. Write a program to investigate how operators ++ and -- exactly work.

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Exercises

1. Write a program that will calculate future value of a deposit. First ask the user about length of time horizon, interest rate and initial deposit amount.
2. Write a program that will calculate number of months after which the initial deposit is trippled. Don't use loops.
3. Write a program that will calculate number of months after which the initial deposit is trippled. Use loops.
4. Write a program that will simulate throwing a dice or coin and calculate the average result. Ask the user whether he/she wants to throw a dice or coin and how many times does he/she want to throw. hint: `rand() % m + 1` returns an integer between 1 and m.
5. Write program that will print Christmas Tree using loops.

Thank you!

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