Programming Languages 1
Lesson 1

Information about the course

By taking the course in neptun the students accept all rules and regulations of the University and the course. The rules of the University is available online on the page of the University and the rules of the course are written below and available online on the page of the course.

Time of classes:
> Tuesday 12:00-14:00, (IK-TEOKJ-2-107)

Criteria to pass course
- Students must not miss more than 3 classes in the semester
- Students must not late more than 20 minutes from classes. In the opposite case the student is registered as being absent from the class (However (s)he is still allowed to stay in the class).
- The knowledge of the students will be measured in two tests and at the end of the semester the worse from these two can be retaken
- Students pass a test if their result is not lower then 50%.
- Students get signature if they pass 2 tests and the average of these two tests is not lower than 60%.
- If a student fails both the first and the second test, (s)he can retake the worse exam with special conditions. Namely the average of the retake exam, and the better exam from the first two, has to reach 60%.
- If both tests are under 30% the student has to get at least 90% on the retake to pass.
- **There is only one retake test in the semester.**

Examples:
> exam 1: **60%**, exam 2: **60%** -> **passed**, no retake exam is needed
> exam 1: **60%**, exam 2: **40%** -> 60% is needed on retake. retake exam: **75%** -> **passed**
> exam 1: **90%**, exam 2: **30%** -> 50% is needed on retake. retake exam: **40%** -> **failed**
> exam 1: **20%**, exam 2: **20%** -> 90% is needed on retake. retake exam: **92%** -> **passed**
> exam 1: **20%**, exam 2: **40%** -> 80% is needed on retake. retake exam: **75%** -> **failed**

Note that if a student fail only one test and pass the other the result on the retake has to be at least 50% no matter of the result of the passed test. (See the 3rd example above.)

Personal advices:

Programming Languages 1 is a fundamental course of your education. Many other subjects build on it, and students are only allowed to take them if they pass Prog. Lang. 1. In most of the cases home practice is a must to fulfill the criteria to pass.
You can ask for help both at office hours and any time via e-mail BEFORE the tests. Following the rules of the course above, after writing the first and the second test there is only one chance to retake.

Exercises:

1. Write a C program that reads 3 `int` numbers from the keyboard and after it prints out if a triangle can be formed with these values as side lengths of it. Note that a triangle can only be formed if the sum of any two values from the three is greater than the third one.
    1. Create a new project named triangle, and add name the main file `triangle.c`.
    2. Learn how the `if` statement works.
    3. Write a program that reads the numbers and prints them back.
    4. Modify the program so that it does what the exercise tells to do.

2. Write a C program that reads a number (`int`) from the keyboard. The program has to print out what is the name of the month that is represented by that number. If the number is not between `1` and `12` do not do anything. (e.g. for 3 print out March, for 6 print our June etc...)
    1. Create a new project and save the main file as `seasons.c`.
    2. Learn how the `switch` statement works (including "break")

    3. Write the program using `switch`.

3. Write a C program that reads numbers from the keyboard until it gets `0`. After getting `0` the program has to print out the sum and the average of the read numbers.
    1. Start as in the above two cases. The name of the main file is `sumavg.c`
    2. Learn how the `while` statement works.
    3. Learn how real numbers are stored in C.

    4. Learn how the "`/`" (divide) operator works.
    5. Write the program using the information above.