# Lab 2

## Observing assembly in GDB p.2

Goal of this lab is to apply what we've learned about stack and stack frames. In particular, during this lab you'll observe how functions are called and how C code translates to assembly.

### Tasks

1. There are few executables in "1. Assembly" directory. Go through all of them while doing this exercise
2. Try to:
    a. disass all functions using /m flag. Spend most of your time understanding how different pieces of code translate to assembly.
    b. step through all the code, especially focusing on function prologues and epilogues. With every step, explore current stack state
        i. My favourite instructions for stack introspection are:
        ii. x/32gx $rsp
        iii. x/128bx $rsp
        iv. Look at what happened with old data
            1. x/32gx $rsp-0x10
3. In binary number 3 there is structure declared and pushed on stack next to normal variables. Can you describe the difference between structure's and variables memory layout? What might be the reason for the difference?