classwork 2

task 1

1. Run a program from the lecture-2-1 (chapter 2-1 in the book).
2. Declare a background_task class with the operator and needed functions.
3. Declare the instance of the class
4. Call the functions with three ways as described in the book:
    a. Pass instance of the class with a function call operator to the `std::thread` constructor
    b. Add the extra parentheses to prevent interpretation as a function declaration, allowing `my_thread` to be declared as a variable of type `std::thread`.
    c. Use the new uniform initialization syntax with braces rather than parentheses, which also declare a variable.

task 2

1. Continue the example from the lecture-2-1 (chapter 2-1 in the book).
2. Declare the functions out of the class background_task
3. Remove the class
4. Call the functions using lambda expressions in a new thread

task 3

1. Run the example in Listing 2.1 (chapter 2-1-1 in the book) use following modifications:
    a. Put the statements in void oops() into main();
    b. Declare a new function do_something and print the received variable;
    c. Decrease the loop iterations to 10.
2. Pay attention to the output messages. Run several times. Do you recognize a problem ?
3. Fix it