

Homework 3

Problem 1

Consider the `loop` function in `hw3.c`. If you compile it using GCC with `-O1` option, you will get the assembly code as shown in `hw3.s`. Now, we all know that GCC can do **some** optimization works under `-O1` option. In this homework, you should find out what exactly it does.

Please read the assembly code carefully and write a new version of `loop` function to show what GCC `-O1` does and explain why it can help to optimize the code in a document.

Notice that you may have your own way to optimize the code but you should **only** show how GCC `-O1` does this job in your new version of `loop`.

You should hand in your code and the document via email (ouc14@fudan.edu.cn) before **23:59, Thu, Nov. 17**.