Lab3 Better Angels

Task

task 1: read and understand

In lab 3, you will get a piece of machine code in 'foo.txt'. Your first task is to translate machine code into assembly code.

Store your program in 'translate.txt'.

task 2: guess

This code is some other's program in lab2. Guess the owner of the program by the last 4 lines of the program.

Write down the owner's student id in 'id.txt'.

task 3: optimize

The code in lab2 is a L-version program. Of course it's performance is not very well. In this part, you need to optimize other's program.

(Rewriting is also a legitimate optimization method)

Store the optimized code in 'optimized.txt'.

task 4(optional): feedback

Contact the owner, say anything you like. (Don't swear. If the other party's program is too difficult to understand, please also keep polite.)

Score

read (20%)

After finishing part 1, you will get 20% score.

Guess (20%)

Getting correct student id will earn 20% score.

Optimizeing(40%)

In this section, a score of 40% can be achieved if optimization is completed.

Here we will test the following 10 data sets.

N = 24, 144, 456, 1088, 1092, 2096, 4200, 8192, 12000, 14000

The ratio of the average number of execution cycles before and after these 10 sets of optimizations will be used as a prize(the ratio has nothing to do with your score), and the student with the largest optimization will receive a surprise gift.

Report (20%)

- Same as lab1

Submission

The completed program should be structured in the directory as shown in the figure,

```
chivier@acad ~/Projects/tmp/pb17000144_ics/lab3 (main*) [06:09:01]
> tree
.
├── foo.txt
├── id.txt
├── optimized.txt
├── report_pb17000144.pdf
└── translate.txt
```

Prof. An

Use git to submit your program.

Prof. Miao & Zhang

Please pack the lab3 folder and zip it to Name_ID_lab3.zip/tar/rar/...

After that upload to the nut cloud and the link will be placed on the course homepage.

2021.12.18 23:00 (UTC+8 China Standard Time)