

# **TALLINN UNIVERSITY OF TECHNOLOGY**

School of Information Technologies  
Department of Computer Systems  
Study Center for Computer Systems

Levan Salia 145368-MVEB61  
IAG0582 Programming II

Homework N1  
Variant B02

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## Declaration of originality

I hereby certify that I am the sole author of this thesis and that no part of this thesis has been published or submitted for publication. All works and major viewpoints of the other authors, data from other sources of literature and elsewhere used for writing this paper have been referenced

Name :      Levan Salia

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## Table of contents

Declaration of originality-----	2
Task-----	4
Detailed description of program-----	5
Screenshots-----	6
List of references-----	7

## Task

variant B02

1. A gambling establishment is looking for profitable clients to invite them for a special event. The data is read from a file into a structure:
  - a. First name
  - b. Last name
  - c. Phone number
  - d. Total winnings
  - e. Total losses
2. The output should contain only those customers who make more than the average profit for the establishment, including their win-loss ratios, total loss and contact information.
3. List the clients who've lost the most first.
4. Output should be stored in a file and displayed on the screen

## Detailed description of the program

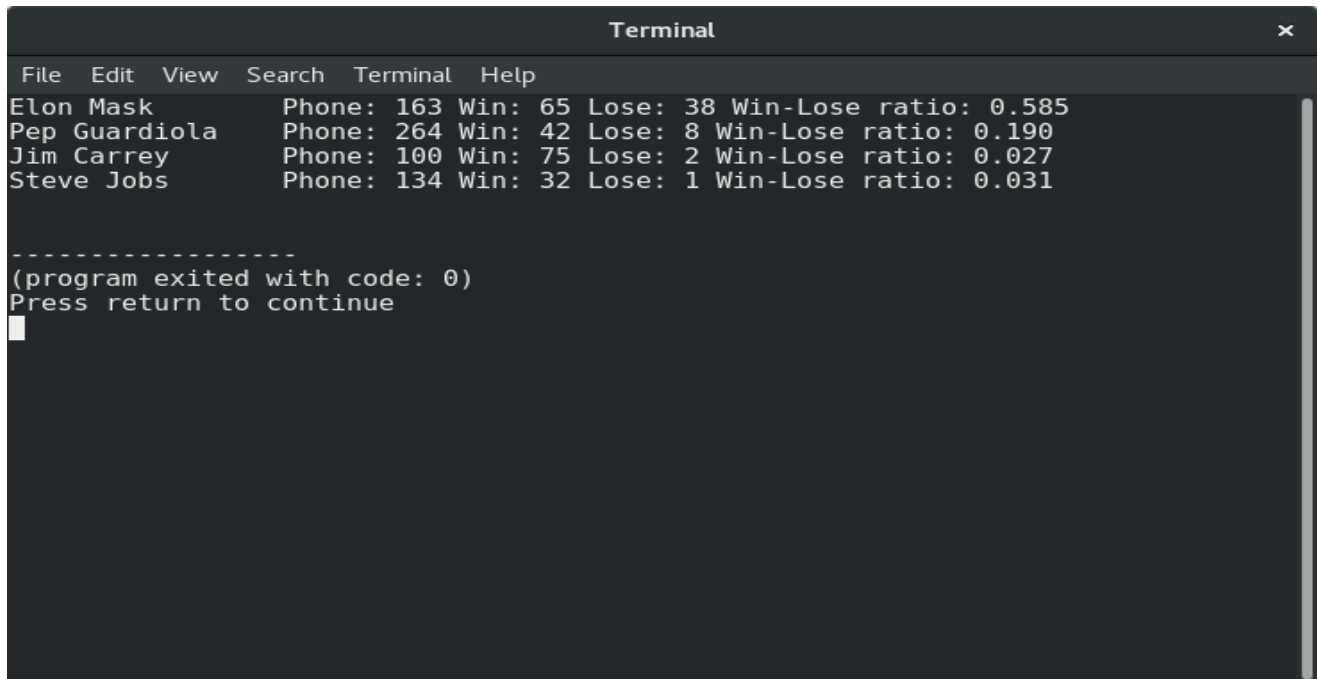
At the beginning, program reads the data from input file, which provides information about client and stores this information in the structure "persons". Reading is done by function "ReadData", which takes persons and file pointer as arguments. This function also calculated win-lose ratio of all persons and stores in their structure as "ratio". After that, function calculateAverage is called, which calculates difference between wins and losses for all the clients. And then returns average number of profit.

Once we know average profit, we call method "Output", which takes "persons" and average profit as arguments. At first, it creates new file to store information in it, then it sorts all the persons based on their losses in decreasing order. While sorting is finished, new loop is started to find the persons, whose average profit is more than all persons average profit. When found, all the information about that client and plus win-loss ratio is displayed.

All the output is displayed on terminal and stored in .txt file called "Output.txt".

## Screenshots

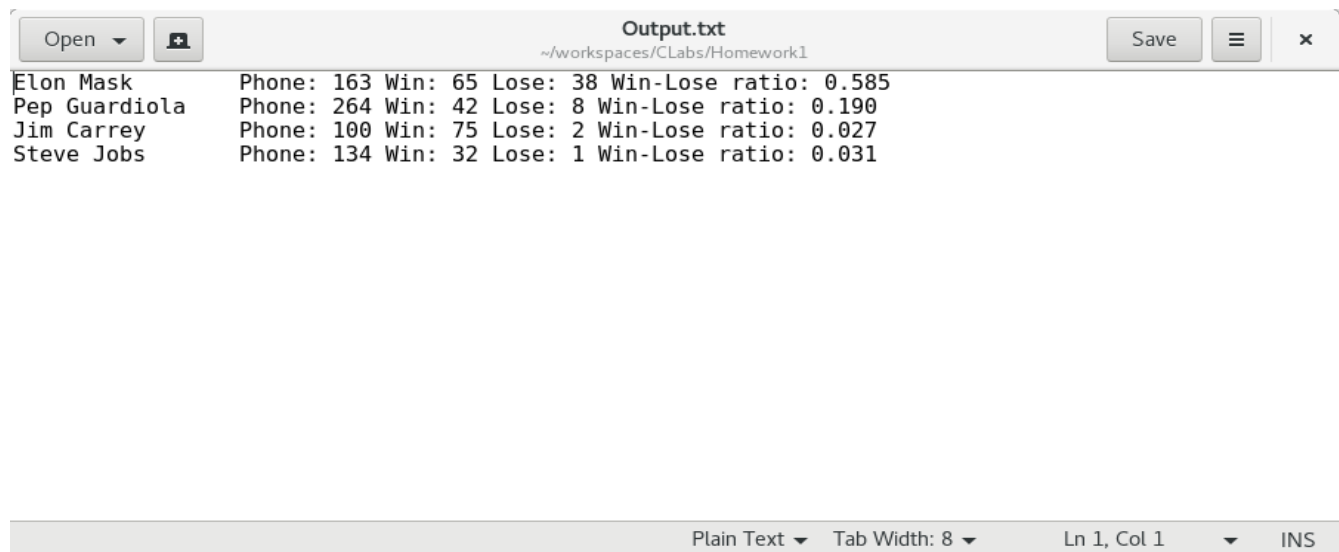
### Output in terminal

A screenshot of a terminal window titled "Terminal". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The output text is as follows:

```
Elon Mask      Phone: 163 Win: 65 Lose: 38 Win-Lose ratio: 0.585
Pep Guardiola  Phone: 264 Win: 42 Lose: 8 Win-Lose ratio: 0.190
Jim Carrey     Phone: 100 Win: 75 Lose: 2 Win-Lose ratio: 0.027
Steve Jobs     Phone: 134 Win: 32 Lose: 1 Win-Lose ratio: 0.031

-----
(program exited with code: 0)
Press return to continue
```

### Stored data in file

A screenshot of a text editor window titled "Output.txt" with the path "~/workspaces/CLabs/Homework1". The window has "Open", "Save", and menu icons. The text content is identical to the terminal output:

```
Elon Mask      Phone: 163 Win: 65 Lose: 38 Win-Lose ratio: 0.585
Pep Guardiola  Phone: 264 Win: 42 Lose: 8 Win-Lose ratio: 0.190
Jim Carrey     Phone: 100 Win: 75 Lose: 2 Win-Lose ratio: 0.027
Steve Jobs     Phone: 134 Win: 32 Lose: 1 Win-Lose ratio: 0.031
```

The status bar at the bottom shows "Plain Text", "Tab Width: 8", "Ln 1, Col 1", and "INS".

## List of references

- \* <http://blue.pri.ee/ttu/programming-ii/code-samples/homework-code-sample/>