

SPŠE Ječná

Information technology

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Student grade tracker

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1 Aim of the work

I wanted to create a program that will store and track your grades. I found my motivation in the lack of a good software on such a topic.

When I first started working on the project, my vision was a lot simpler. The bigger the project got, the more ideas came to my mind. At first I thought of making just a regular software for storing grades, but it came to creating graphs, changing themes etc.

Now in the final version there is even a file system for storing data.



In this picture you can see how the help command has evolved from one of its earliest version to the newest.

2 Software

In order to use this software, you need at least Java 16 and [JFreeChart 1.5.3](#) library installed.

3 Description

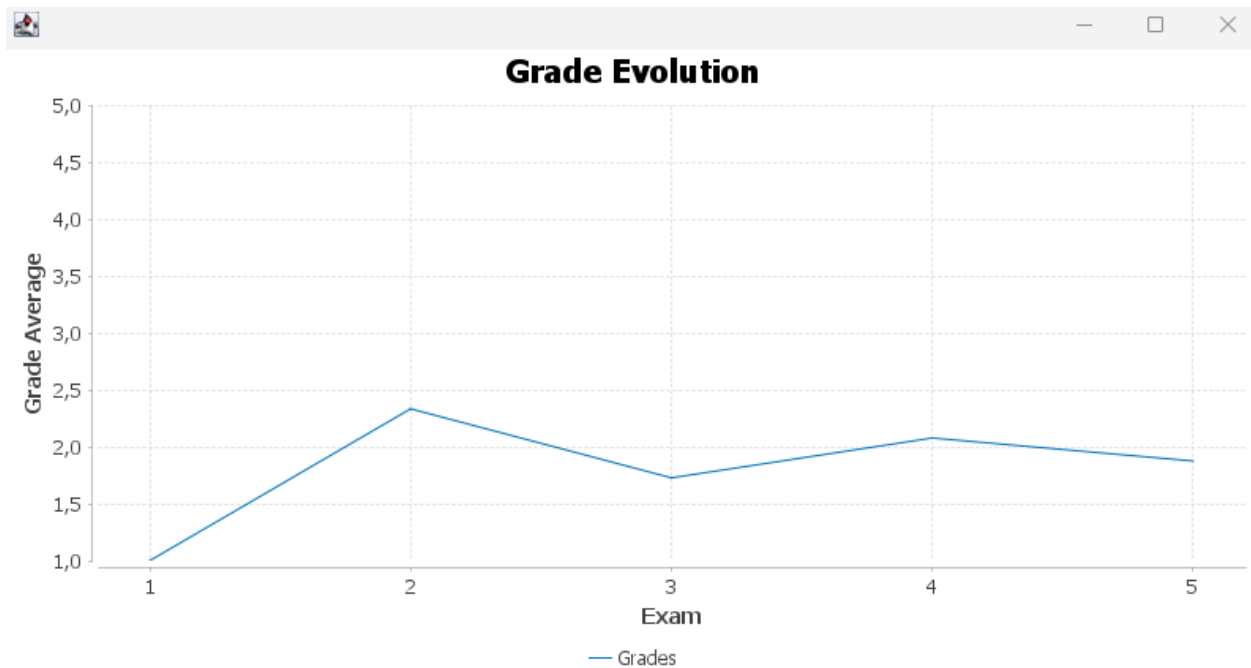
All of the functions are accessed through commands. The user interface is made up of one window and multiple themes to choose from.

Here is the list of all the commands available: help, list, subject add/remove, mark add/remove, graph, calculate, theme, list/create/ delete/save/load (file) and quit.

4 Manual

Graph is created using JFreeChart library and it takes all of the grades and shows the weighted average after every grade.

Here below you can see how it looks.



With the command `calculate` you can see what grade you need to get to achieve a certain desired average that you input. This function is especially useful if you are trying to get to a certain average and you aren't sure what grade you would have to get to achieve it.

The `theme` command changes how the window looks. Here are all the color options: white, black, red, green, blue, gray, yellow, orange, magenta, cyan, pink.

While every theme changes the font color, white and black also changes the color of the background, so you can combine different themes together.

The `list` command shows all of the subjects and their grades. It also shows information about the weighted average of each subject and information about honors.

The `file system` works in a directory in which are text files with data stored. You can create and delete those text files through commands `create/delete`. The `list files` shows all the files in directory.

`Save` and `load` works intuitively and they save/load your subjects into a text file. If those files were to be corrupted, you wouldn't be able to load from them and was forced to delete or repair them manually.

5 Conclusion

I would say that I have worked on this project continuously over the months. The biggest obstacles that I've faced were the file system, popup window and graph.

While I wanted to implement colored text for easier grade recognition, I would have to import another library, which would not be ideal as I'm trying to keep the program as simple as possible.