GEBZE TECHNİCAL UNIVERSITY  
  
CSE344

## System Programming

# Homework 1 Report

### How to Run?

Open the terminal and navigate to the source directory. Then, compile the program by typing “**make**” and execute it using “**./gtuStudentGrades**”. Once executed, the program will produce output as specified by its functionality. To clean up generated files, use “**make clean**”, which will remove the executable and any temporary files.

### Displaying Informatıon

To display information about available commands, simply type “**gtuStudentGrades**” without any additional arguments. This command will output the following usage information.

A computer screen shot of a black screen

Description automatically generated

### File Creatıon

To create a file, execute the program with the command **gtuStudentGrades <filename>.**  Replace **<filename>** with the desired name for the file to be created.

### Add Student Grade

Use the command “**addStudentGrade** **<Name> <Grade>** to add a student's grade. Replace **<Name>** with the student's full name **(including both name and surname)**, and **<Grade>** with the corresponding grade. Error handling is done for mistyped commands.

A screen shot of a computer

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The file after this operations;

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### Search Student Grades

To search for a student's grades, run the command **searchStudent <Name>**. Replace **<Name>** with the full name of the student you want to search for. Still invalid commands are detected and if the student is not in the list user is informed.

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### Show All Grades

Use the command **showAll <filename>** to display all student grades stored in the specified file.

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### Sort All Grades

Execute the command **sortAll "<filename>"**, followed by choosing the sorting criteria (1 for sorting by name, 2 for sorting by grade) and the sorting order (1 for ascending, 2 for descending) when prompted.

A screenshot of a computer program

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### List 5 First Entries

To list the first 5 entries of the grades, run **listGrades <filename>.**

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### List Entries in a Specified Page

Execute the command **listSome** **<numOfEntries> <pageNumber> <filename>.** Replace **<numOfEntries>** with the number of entries per page, **<pageNumber>** with the desired page number, and **<filename>** with the file containing the grades.

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### Logging

Parent process keep the log of commands and saves the PID’s of both children and itself. Here’s content of the log file.

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