

# System Programming HW1 Report

***Şehmus Acar***

***161044085***

## Programme Operation

```
acar@DESKTOP-IEVDRBN:/mnt/d/hw1$ make
gcc -Wall -g -o 161044085_sehmus_acar_HW1 161044085_sehmus_acar_HW1.c
./161044085_sehmus_acar_HW1
Enter the command ('q' to quit / 'gtuStudentGrades' to help):
```

*Type 'make' in the command line and the programme runs.*

## Creating a txt

```
Enter the command ('q' to quit / 'gtuStudentGrades' to help):
> gtuStudentGrades "grades.txt"
File created or already exists: grades.txt
```

*The user creates the desired file name by typing gtuStudentGrades "desiredfilename.txt".*

## Add Student Grade

- *addStudentGrade "Name Surname" "AA" ---command append student and grade to the end of the file.*
- *If the file name is not specified, it gives the error in the image.*

```
> addStudentGrade "Sehmus Acar" "AA" "grades.txt"
Added Student: Sehmus Acar AA
> addStudentGrade "Sehmus Acar" "AA"
Error: You must specify a file name. Correct usage: addStudentGrade "name" "grade" "fileName"
```

## Search Student

*searchStudent "Name Surname" --- command return student name surname and grade.*

```
Enter the command ('q' to quit / 'gtuStudentGrades' to help):
> searchStudent "Sehmus Acar" "grades.txt"
Student found :
Sehmus Acar AA
> searchStudent "Cemil Ak" "grades.txt"
Student not found.
```

## Print All of Entries in the File

*showAll "grades.txt" --- command print all of the entries in the file.*

```
> showAll "grades.txt"
John Smith AA
Emily Johnson BB
Michael Davis CC
Sarah Wilson DD
David Brown FF
Jessica Martinez AA
Matthew Taylor BB
Ashley Jones CC
Christopher Clark DD
Amanda White FF
Daniel Thomas AA
Lauren Rodriguez BB
Ryan Garcia CC
Taylor Martinez DD
Samantha Anderson FF
Andrew Wilson AA
Brittany Moore BB
Nicholas Lee CC
Elizabeth Harris DD
Joshua King FF
Olivia Taylor AA
James Jackson BB
Rachel Martinez CC
Justin Carter DD
Megan Thompson FF
Brandon Lewis AA
Stephanie Walker BB
Joseph Green CC
Kimberly Allen DD
Tyler Nelson FF
Alexis Wright AA
Zachary Scott BB
Kayla Adams CC
Benjamin Hall DD
Amber Rivera FF
Cody Wright AA
Rebecca Baker BB
Kyle Roberts CC
Danielle Reed DD
Austin Phillips FF
Jennifer Parker AA
Dylan Stewart BB
Victoria Ramirez CC
Eric Cooper DD
Jasmine Flores FF
Jordan Campbell AA
Madison Perez BB
```

## ListGrades

*listGrades "grades.txt" --- command print first 5 entries*

```
> listGrades "grades.txt"
John Smith AA
Emily Johnson BB
Michael Davis CC
Sarah Wilson DD
David Brown FF
```

## SortAll

```
> sortAll "grades.txt"
Select sorting method:
1. Alphabetically by name
2. From lowest to highest grade
3. From highest to lowest grade
> 1
Operation completed successfully.
```

*To sort the students, 3 options appear on the screen. alphabetical sorting, high to low grade sorting low to high grade sorting. I set the limit at 10000*

Aaron Ward FF	Alexis Wright AA	Aaron Ward FF
Adam Foster FF	Amanda Lopez AA	Adam Foster FF
Alexis Wright AA	Andrew Wilson AA	Amanda White FF
Allison Murphy DD	Brandon Lewis AA	Amber Rivera FF
Amanda Lopez AA	Caitlin Edwards AA	Austin Phillips FF
Amanda White FF	Caleb Butler AA	Bradley Bell FF
Amber Rivera FF	Christopher Sanchez AA	Courtney Powell FF
Andrew Wilson AA	Cody Wright AA	David Brown FF
Ashley Barnes CC	Daniel Thomas AA	Jasmine Flores FF
Ashley Jones CC	Devin Collins AA	Joshua King FF
Austin Phillips FF	Evan Parker AA	Kaitlyn Morris FF
Austin Washington CC	Grace Torres AA	Katherine Bennett FF
Benjamin Hall DD	Jennifer Parker AA	Marcus Coleman FF
Blake Torres BB	Jessica Martinez AA	Marissa Cox FF
Bradley Bell FF	John Smith AA	Megan Thompson FF
Brandon Lewis AA	Jordan Campbell AA	Miranda Reed FF
Brandon Simmons CC	Kaylee Murphy AA	Nathan Ross FF
Brittany Long DD	Logan Brooks AA	Olivia Young FF
Brittany Moore BB	Olivia Taylor AA	Samantha Anderson FF
Bryan Price DD	Sydney Mitchell AA	Tyler Nelson FF
Caitlin Edwards AA	Blake Torres BB	Allison Murphy DD
Caleb Butler AA	Brittany Moore BB	Benjamin Hall DD
Christian Evans CC	Dylan Stewart BB	Brittany Long DD
Christopher Clark DD	Emily Johnson BB	Bryan Price DD
Christopher Sanchez AA	Ethan Howard RR	Christopher Clark DD

## ListSome

```
> listSome 5 2 "grades.txt"
Amanda White FF
Amber Rivera FF
Andrew Wilson AA
Ashley Barnes CC
Ashley Jones CC
```

## Help Commend

```
gtuStudentGrades "fileName" - Creates a new file or opens an existing file
showAll "fileName" - Shows all student grades in the specified file
addStudentGrade "name" "grade" "fileName" - Adds a new student and grade to the file
searchStudent "name" "fileName" - Searches for the grade of a student by name
listSome numOfEntries pageNumber "fileName" - Lists the specified number of student grades on a specific page
sortAll "fileName" - Sorts all student grades alphabetically by name
showAll - Shows all student grades in the default file
listGrades - Lists all grades in the default file
>
```

*if you type 'gtuStudentGrades' in the command field, you will get commands that you can type on the screen*

## Logging

```
Added grade: Sehmus Acar AA
Listed first 5 grades.
Sorted grades.
Listed grades on page 2 with 5 entries per page.
```

*A file named log is created and the logs are saved here*

## END OF PROGRAMME

```
Unknown command or incorrect format.For help to 'GtuStudentGrades'
> q
```

*You can end the programme by pressing the letter 'q'.*

## Unexpected Command

```
> farkl1
Unknown command or incorrect format.For help to 'GtuStudentGrades'
```

*When an unexpected command is entered, the text on the screen is printed*

## Make Clean

```
acar@DESKTOP-IEVDRBN:/mnt/d/hw1$ make clean
rm -f 161044085_sehmus_acar_HW1 *.o log.txt *.txt
```

*Type 'make clean' in the terminal and the cleaning process is done*