

**Gebze Technical University**

**Faculty of Engineering**

**Computer Engineering Department**

**CSE 344**  
**Homework-1 Report**

**Ahmet Yiğit**  
**200104004066**

- **Test Cases**
  - **GtuStudentGrades**
    - **With No Parameter**
    - **<FileName> Parameter**
  - **AddStudentGrade**
    - **<NameSurname> <Grade> <FileName>**
  - **SearchStudent**
    - **<NameSurname> <FileName>**
  - **SortStudentGrades**
    - **<FileName> <Field:Optional> <Order:Optional>**
  - **ShowAll**
    - **<FileName>**
  - **ListGrades**
    - **<FileName>**
  - **ListSome**
    - **<EntryCount> <PageNumber> <FileName>**
  - **Logging**
    - **<LogData>**
- **Clean – Compile – Run**
  - With makefile, you can do clean \*.txt files and output files.
  - With Compile, you can compile main.c.
  - With run, you can run compiled output file.

```

mens1s@Ahmet-MacBook-Air-3 hw-01 % make clean
-----
Removing compiled files...
mens1s@Ahmet-MacBook-Air-3 hw-01 % make compile
-----
Compiling...
mens1s@Ahmet-MacBook-Air-3 hw-01 % make run
-----
Running the tests....
=====
./student_grades
If you want to quit press Q
>

```

- General Wrong Type Code Entry

```

>wrongCommand If You Want To
Invalid command. Use 'gtuStudentGrades' for usage information.
>

```

## 1. Gtu Student Grades / gtuStudentGrades

- a. We are testing "gtuStudentGrades" function without any parameter and we are waiting to see available function list.
- b. >gtuStudentGrades

```
./student_grades
If you want to quit press Q
>gtuStudentGrades
gtuStudentGrades [COMMAND] [ARGUMENTS]

Available commands:
  <filename>          - Creates a new file to store student grades.
  addStudentGrade <name> <grade> <filename>
                      - Adds a new student's name and grade to the specified file.
  searchStudent <name> <filename>
                      - Searches for a student's grade by name in the specified file.
  sortAll <filename> <field:Optional> <order:Optional>
                      - Parameter can be name or grade. Default is name. Default is asc.
                      - Sorts all student grades stored in the specified file.
  showAll <filename>
                      - Displays all student grades stored in the specified file.
  listGrades <filename>
                      - Displays the first 5 student grades stored in the specified file.
  listSome <num_entries> <page_number> <filename>
                      - Displays a specific range of student grades from the specified file.
                      num_entries: Number of entries per page.
                      page_number: Page number to display.
  gtuStudentGrades    - Displays this help message.
```

- c. >
- d. With file parameter it creates grades.txt or user what entered, and also add information to log.txt.
- e. >gtuStudentGrades "grades.txt"

```
>gtuStudentGrades "grades.txt"
>
```

- f.
- g. In Log File:

```
1 File created succesfully!
2
```

- i.

## 2. AddStudentGrade

- a. We are testing “addStudentGrade” function, and we are expecting to save data to user given (parameter) file, if there is no file it gives error.

b. 

```
>gtuStudentGrades "grades.txt"
>addStudentGrade "1 Ahmet Yigit First Place" "AA" "grades.txt"
>addStudentGrade "2 Ahmet Yigit Second Place" "BA" "grades.txt"
>addStudentGrade "3 Test Test" "BB" "grades.txt"
>addStudentGrade "4 Mahmut Felan" "AA" "grades.txt"
>addStudentGrade "5 Kesin Mahmuttur Bu" "CB" "grades.txt"
>addStudentGrade "6 Bilemem Bu Kimm " "BC" "grades.txt"
>addStudentGrade "7 Ali Denessenn" "CC" "grades.txt"
>addStudentGrade "8 Deicem Dayı" "DD" "grades.txt"
>addStudentGrade "9 Bilemceimm" "FD" "grades.txt"
>addStudentGrade "10 Ok Sen Haklısın" "FF" "grades.txt"
>addStudentGrade "10 Ok Ben Haklısın" "DF" "grades.txt"
>addStudentGrade "10 Ok Ben Haklısın" "DF" "gradesss.txt"
open: No such file or directory
>addStudentGrade "10 Ok Ben Haklısın" "DF"
Usage: addStudentGrade <name> <grade> <filename>
>
```

- c. You can see that last two entry was wrong and program says that how to use it.

- d. When we are looking at the log and grades files we can see all the results.

e. 

```
File created succesfully! You, 4 days ago • c
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
File cannot openned!
FAILURE! Student and grade cannot added to file!
```

f. 

```
1 Ahmet Yigit First Place, AA
2 Ahmet Yigit Second Place, BA
3 Test Test, BB
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
7 Ali Denessenn, CC
8 Deicem Dayı, DD
9 Bilemceimm, FD
10 Ok Sen Haklısın, FF
10 Ok Ben Haklısın, DF
```

### 3. SearchStudent

- a. We are testing "searchStudent" function.

```
>searchStudent "5 Kesin Mahmuttur Bu" "grades.txt"
5 Kesin Mahmuttur Bu CB
>searchStudent "10 Ok Ben Haklısın " "grades.txt"
Student Not Found.
>searchStudent "10 Ok Ben Haklısın " "gradess.txt"
open: No such file or directory
Student Not Found.
>
```

- i.
- b. You can see that, function finds it and prints all of information otherwise, it prints Student Not Found, also it checks filename is present or not. If file does not present it does not kill all processes kills child and continue in main processs.

- c. Log File

```
Search operations done succesfully!
Search operations done succesfully!
File cannot opened!
Search operations done succesfully!
```

- i.

### 4. Sort Student Grades

- a. With File Name

- i. Default parameters are name and ascending order.
- ii. It is string order so 10 comes earlier than 2.

```
>sortAll "grades.txt"
1 Ahmet Yigit First Place, AA
10 Ok Ben Haklısın, DF
10 Ok Sen Haklısın, FF
2 Ahmet Yigit Second Place, BA
3 Test Test, BB
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
7 Ali Denessenn, CC
8 Deicem Dayı, DD
9 Bilemceimm, FD
```

- iii.

- b. With Field

```
>sortAll "grades.txt" "grade"
1 Ahmet Yigit First Place, AA
4 Mahmut Felan, AA
2 Ahmet Yigit Second Place, BA
3 Test Test, BB
6 Bilemem Bu Kimm , BC
5 Kesin Mahmuttur Bu, CB
7 Ali Denessenn, CC
8 Deicem Dayı, DD
10 Ok Ben Haklısın, DF
9 Bilemceimm, FD
10 Ok Sen Haklısın, FF
```

- i.

c. With Field and Order

```
>sortAll "grades.txt" "grade" "desc"
10 Ok Sen Haklisiin, FF
9 Bilemceimm, FD
10 Ok Ben Haklisiin, DF
8 Deicem Dayi, DD
7 Ali Denessenn, CC
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
3 Test Test, BB
2 Ahmet Yigit Second Place, BA
4 Mahmut Felan, AA
1 Ahmet Yigit First Place, AA
>
```

i.

d. Error Handling

i. File Name

```
>sortAll "gradess.txt"
open: No such file or directory
1. >
```

ii. Wrong Field Parameter

```
>sortAll "grades.txt" "namee"
1. >
```

2. There is no output you can see error in log.

```
Invalid parameter for sort!
3.
```

iii. Wrong Order Parameter

```
>sortAll "grades.txt" "grade" "descc"
1. >
```

2. There is no output you can see error in log.

```
Invalid order for sort!
3.
```

## 5. ShowAll

- a. Now, we are testing showAll function and we are waiting to see all data in given file.

```
>showAll "grades.txt"
1 Ahmet Yigit First Place, AA
2 Ahmet Yigit Second Place, BA
3 Test Test, BB
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
7 Ali Denessenn, CC
8 Deicem Dayı, DD
9 Bilemceimm, FD
10 Ok Sen Haklısın, FF
10 Ok Ben Haklısın, DF
```

b. >

## c. Error Handling

```
>showAll "gradess.txt"
open: No such file or directory
>showAll
Usage: showAll <filename>
```

d. >

## 6. List Grades

- a. It shows, first five entry in given file, also makes error handling to.

```
Usage: listGrades <filename>
>listGrades "grades.txt"
1 Ahmet Yigit First Place, AA
2 Ahmet Yigit Second Place, BA
3 Test Test, BB
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
>listGrades "gradess.txt"
open: No such file or directory
>listGrades
Usage: listGrades <filename>
```

b. >

## 7. List Some

- a. It show as expected values from user given parameter.

```
Usage: listSome <row> <col> <filename>
>listSome "3" "2" "grades.txt"
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
>listSome "2" "3" "grades.txt"
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
>listSome "4" "2" "grades.txt"
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
7 Ali Denessenn, CC
8 Deicem Dayı, DD
>listSome "2" "4" "grades.txt"
7 Ali Denessenn, CC
8 Deicem Dayı, DD
```

i. >

b. Error Handling

```
Invalid command: use gtuStudentGrades for usage information
>listSome "2" "4" "gradesss.txt"
open: No such file or directory
>listSome "2" "4"
Usage: listSome <num_entries> <page_number> <filename>
>
```

i.

8. Test Cases – Grades.txt – Log.txt

a. Test Cases

```
gtuStudentGrades You, yesterday * oki doki
gtuStudentGrades "grades.txt"

addStudentGrade "1 Ahmet Yigit First Place" "AA" "grades.txt"
addStudentGrade "2 Ahmet Yigit Second Place" "BA" "grades.txt"
addStudentGrade "3 Test Test" "BB" "grades.txt"
addStudentGrade "4 Mahmut Felan" "AA" "grades.txt"
addStudentGrade "5 Kesin Mahmuttur Bu" "CB" "grades.txt"
addStudentGrade "6 Bilemem Bu Kimm " "BC" "grades.txt"
addStudentGrade "7 Ali Denessenn" "CC" "grades.txt"
addStudentGrade "8 Deicem Dayı" "DD" "grades.txt"
addStudentGrade "9 Bilemceimm" "FD" "grades.txt"
addStudentGrade "10 Ok Sen Haklısın" "FF" "grades.txt"
addStudentGrade "10 Ok Ben Haklısın" "DF" "grades.txt"

searchStudent "5 Kesin Mahmuttur Bu" "grades.txt"
searchStudent "5 Kesin Mahmuttur Bu " "grades.txt"
searchStudent "5 Kesin Mahmuttur Bu " "gradess.txt"
searchStudent "5 Kesin Mahmuttur Bu "

sortAll
sortAll "grades.txt"
sortAll "grades.txt" "name"
sortAll "grades.txt" "name" "desc"
sortAll "grades.txt" "name" "desc"
sortAll "gradess.txt" "grade" "desc"
sortAll "gradess.txt" "grade" "desc"
sortAll "gradess.txt" "grade" "desc"

showAll "grades.txt"
showAll

listGrades "grades.txt"

listSome "3" "2" "grades.txt"
listSome "2" "3" "grades.txt"
listSome "2" "3"
listSome "2" "3" "gradess.txt"
```

i.

b. Grades.Txt

```
1 Ahmet Yigit First Place, AA
2 Ahmet Yigit Second Place, BA
3 Test Test, BB
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
7 Ali Denessenn, CC
8 Deicem Dayı, DD
9 Bilemceimm, FD
10 Ok Sen Haklısın, FF
10 Ok Ben Haklısın, DF
```

i.



c. Log.txt

```
File created succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Student and grade added to file succesfully!
Search operations done succesfully!
Search operations done succesfully!
File cannot opened!
Search operations done succesfully!
Sort operations done succesfully!
Sort operations done succesfully!
Sort operations done succesfully!
Sort operations done succesfully!
File cannot opened!
Sort operations done succesfully!
Invalid parameter for sort!
Invalid order for sort!
Sort operations done succesfully!
All informations from file showed succesfully!
Only first 5 entries from the file showed succesfully!
Entries between <user given range> from the file showed succesfully!
Entries between <user given range> from the file showed succesfully!
File cannot opened!
```

i.

d. Terminal Output

```
./student_grades
If you want to quit press Q
>gtuStudentGrades "grades.txt"
>addStudentGrade "1 Ahmet Yigit First Place" "AA" "grades.txt"
>addStudentGrade "2 Ahmet Yigit Second Place" "BA" "grades.txt"
>addStudentGrade "3 Test Test" "BB" "grades.txt"
>addStudentGrade "4 Mahmut Felan" "AA" "grades.txt"
>addStudentGrade "5 Kesin Mahmuttur Bu" "CB" "grades.txt"
>addStudentGrade "6 Bilemem Bu Kimm" "BC" "grades.txt"
>addStudentGrade "7 Ali Denessenn" "CC" "grades.txt"
>addStudentGrade "8 Deicem Dayı" "DD" "grades.txt"
>addStudentGrade "9 Bilemceimm" "FD" "grades.txt"
>addStudentGrade "10 Ok Sen Haklısın" "FF" "grades.txt"
>addStudentGrade "10 Ok Ben Haklısın" "DF" "grades.txt"
>searchStudent "5 Kesin Mahmuttur Bu" "grades.txt"
5 Kesin Mahmuttur Bu CB
>searchStudent "5 Kesin Mahmuttur Bu " "grades.txt"
Student Not Found.
>searchStudent "5 Kesin Mahmuttur Bu " "gradess.txt"
open: No such file or directory
Student Not Found.
>searchStudent "5 Kesin Mahmuttur Bu "
Usage: searchStudent <name> <filename>
>sortAll
Usage: sort <filename> <parameter> <parameter:optional>
>sortAll "grades.txt"
1 Ahmet Yigit First Place, AA
10 Ok Ben Haklısın, DF
10 Ok Sen Haklısın, FF
2 Ahmet Yigit Second Place, BA
3 Test Test, BB
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
7 Ali Denessenn, CC
8 Deicem Dayı, DD
9 Bilemceimm, FD
>sortAll "grades.txt" "name"
1 Ahmet Yigit First Place, AA
10 Ok Ben Haklısın, DF
10 Ok Sen Haklısın, FF
2 Ahmet Yigit Second Place, BA
3 Test Test, BB
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
7 Ali Denessenn, CC
8 Deicem Dayı, DD
9 Bilemceimm, FD
>sortAll "grades.txt" "name" "desc"
9 Bilemceimm, FD
8 Deicem Dayı, DD
7 Ali Denessenn, CC
6 Bilemem Bu Kimm , BC
5 Kesin Mahmuttur Bu, CB
4 Mahmut Felan, AA
3 Test Test, BB
2 Ahmet Yigit Second Place, BA
10 Ok Sen Haklısın, FF
10 Ok Ben Haklısın, DF
1 Ahmet Yigit First Place, AA
```

i.

```

>sortAll "grades.txt" "name" "desc"
9 Bilemceimm, FD
8 Deicem Day1, DD
7 Ali Denessenn, CC
6 Bilemem Bu Kimm , BC
5 Kesin Mahmuttur Bu, CB
4 Mahmut Felan, AA
3 Test Test, BB
2 Ahmet Yigit Second Place, BA
10 Ok Sen Haklısın, FF
10 Ok Ben Haklısın, DF
1 Ahmet Yigit First Place, AA
>sortAll "gradess.txt" "grade" "desc"
open: No such file or directory
>sortAll "grades.txt" "grade" "desc"
>sortAll "grades.txt" "grade" "desc"
>sortAll "grades.txt" "grade" "desc"
10 Ok Sen Haklısın, FF
9 Bilemceimm, FD
10 Ok Ben Haklısın, DF
8 Deicem Day1, DD
7 Ali Denessenn, CC
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
3 Test Test, BB
2 Ahmet Yigit Second Place, BA
4 Mahmut Felan, AA
1 Ahmet Yigit First Place, AA
>showAll "grades.txt"
1 Ahmet Yigit First Place, AA
2 Ahmet Yigit Second Place, BA
3 Test Test, BB
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
7 Ali Denessenn, CC
8 Deicem Day1, DD
9 Bilemceimm, FD
10 Ok Sen Haklısın, FF
10 Ok Ben Haklısın, DF
>showAll
Usage: showAll <filename>
>listGrades "grades.txt"
1 Ahmet Yigit First Place, AA
2 Ahmet Yigit Second Place, BA
3 Test Test, BB
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
>listSome "3" "2" "grades.txt"
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
>listSome "2" "3" "grades.txt"
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
>listSome "2" "3"
Usage: listSome <num_entries> <page_number> <filename>
>listSome "2" "3" "gradess.txt"
open: No such file or directory
>

```

ii.

```

./student_grades
If you want to quit press Q
>gtuStudentGrades "grades.txt"
>addStudentGrade "1 Ahmet Yigit First Place" "AA" "grades.txt"
>addStudentGrade "2 Ahmet Yigit Second Place" "BA" "grades.txt"
>addStudentGrade "3 Test Test" "BB" "grades.txt"
>addStudentGrade "4 Mahmut Felan" "AA" "grades.txt"
>addStudentGrade "5 Kesin Mahmuttur Bu" "CB" "grades.txt"
>addStudentGrade "6 Bilemem Bu Kimm " "BC" "grades.txt"
>addStudentGrade "7 Ali Denessenn" "CC" "grades.txt"
>addStudentGrade "8 Deicem Dayı" "DD" "grades.txt"
>addStudentGrade "9 Bilemceimm" "FD" "grades.txt"
>addStudentGrade "10 Ok Sen Haklısın" "FF" "grades.txt"
>addStudentGrade "10 Ok Ben Haklısın" "DF" "grades.txt"
>searchStudent "5 Kesin Mahmuttur Bu" "grades.txt"
5 Kesin Mahmuttur Bu CB
>searchStudent "5 Kesin Mahmuttur Bu " "grades.txt"
Student Not Found.
>searchStudent "5 Kesin Mahmuttur Bu " "gradess.txt"
open: No such file or directory
Student Not Found.
>searchStudent "5 Kesin Mahmuttur Bu "
Usage: searchStudent <name> <filename>
>sortAll
Usage: sort <filename> <parameter> <parameter:optional>
>sortAll "grades.txt"
1 Ahmet Yigit First Place, AA
10 Ok Ben Haklısın, DF
10 Ok Sen Haklısın, FF
2 Ahmet Yigit Second Place, BA
3 Test Test, BB
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
7 Ali Denessenn, CC
8 Deicem Dayı, DD
9 Bilemceimm, FD
>sortAll "grades.txt" "name"
1 Ahmet Yigit First Place, AA
10 Ok Ben Haklısın, DF
10 Ok Sen Haklısın, FF
2 Ahmet Yigit Second Place, BA
3 Test Test, BB
4 Mahmut Felan, AA
5 Kesin Mahmuttur Bu, CB
6 Bilemem Bu Kimm , BC
7 Ali Denessenn, CC
8 Deicem Dayı, DD
9 Bilemceimm, FD
>sortAll "grades.txt" "name" "desc"
9 Bilemceimm, FD
8 Deicem Dayı, DD
7 Ali Denessenn, CC
6 Bilemem Bu Kimm , BC
5 Kesin Mahmuttur Bu, CB
4 Mahmut Felan, AA
3 Test Test, BB
2 Ahmet Yigit Second Place, BA
10 Ok Sen Haklısın, FF
10 Ok Ben Haklısın, DF
1 Ahmet Yigit First Place, AA

```

