

## Lab 1-2 Write-up

### Team Members:

- Ellen Liu
- Conor Schofield
- Dimitri Charitou

### Initial Decisions:

- Programming Language: Java
- Programming Environment: IntelliJ I.D.E.

### Internal Architecture:

- Student data stored as Java ArrayList of Student objects.
- Teacher data stored as Java ArrayList of Teacher objects.
- Program performs a linear search through Student arraylist to obtain Student data.

### Task Log:

- Task 1: Student Class
  - Student: Conor Schofield
  - Start Time: 9/20/19 4:30pm
  - End Time: 9/20/19 4:45pm
  - Total Time: 15 minutes
- Task 2: students.txt Parser
  - Student: Dimitri Charitou
  - Start Time: 9/20/19 7:30pm
  - End Time: 9/20/19 9:00pm
  - Total Time: 1.5 hours
- Task 3: R4, R5, R6
  - Student: Conor Schofield
  - Start Time: 9/21/19 6:00pm
  - End Time: 9/21/19 7:00pm
  - Total Time: 1 hour
- Task 4: R8, R9, R12
  - Student: Ellen Liu
  - Start Time: 09/23/19 11:00am
  - End Time: 09/23/19 11:30am
  - Total Time: 30 minutes
- Task 5: R7, R10, R11
  - Student: Dimitri Charitou
  - Start Time: 9/22/19 3:00pm
  - End Time: 9/22/19 4:00pm

- Total Time: 1 hour
- Task 6: NR1, NR3
  - Student: Dimitri Charitou
  - Start Time: 10/6/19 1:00pm
  - End Time: 10/6/19 3:00pm
  - Total Time: 2 hours
- Task 7: NR2, NR4
  - Student: Ellen Liu
  - Start Time: 10/6/19 10:00pm
  - End Time: 10/7/19 12:00am
  - Total Time: 2 hours
- Task 8: NR5
  - Student: Conor Schofield
  - Start Time: 10/6/19 6:00pm
  - End Time: 10/6/19 8:00pm
  - Total Time: 2 hour
- Task 1: Teacher Class
  - Student: Conor Schofield
  - Start Time: 9/30/19 4:30pm
  - End Time: 9/30/19 4:45pm
  - Total Time: 15 minutes

## Testing:

Conor Schofield:

- Tested NR5, R4, R6
- Total Time: 15 minutes
- Bugs Found: Division by 0 error

Dimitri Charitou

- Tested R7, R10, R11
- Total Time: 15 minutes
- Bugs Found: Incorrect GPA calculation, No rounding for average GPA, Division by 0 error

Ellen Liu

- Tested R8, R9, R12, NR2, NR4
- Total Time: 18 minutes
- Bugs Found: Detection of special keyword was not working, Not rounding to 2 decimal places for printed GPA

## Modifications:

We decided to add new commands for the new features of the program. In addition, we modified the Student class to not contain their teacher's name and instead created a separate Teacher class to hold teacher information.

## Syntax and Semantics:

NR1 is run by:

C[lassroom]: <number>

Given a classroom number, list all students assigned to it.

NR2 is used in R9 when running:

G[rade]: <number [H[igh] | L[ow]]

NR3 is run by:

L[evel]: <grade level>

Given a grade level, list all teachers who teach it.

NR4 is run by:

E[nrollment]

Lists all classrooms and gives the number of enrolled students in each

NR5 is run by:

D[ata]: <bus route> | <grade level> | <teacher name> B | G | T

Given a bus route, grade level, or teacher name this command returns the average gpa, minimum, maximum, and standard deviation for the given input. 'B' for bus route, 'G' for grade level, and 'T' for teacher name.

## Final Notes:

The lab was completed on October 7, 2019.