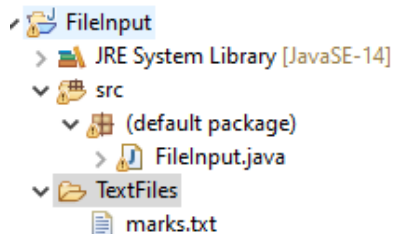


# In-Class Programming Assignment

*Step 1: Create a new Java project in Eclipse called **your first and last name**. Make sure this entire folder is saved in your ICS4U0-2B <firstName LastName> folder.*

*Step 2: Save the supplied text file in the Google Classroom post in the project directory. You may wish to create a folder within the project call TextFiles and then place the text file inside there for example.*

*In that case it would look something like this:*



If your text file is inside of a folder named TextFiles, your initial lines of code should be:

```
FileReader fr=new FileReader("./TextFiles/marks.txt");  
BufferedReader br=new BufferedReader (fr);
```

## Code Requirements

Universities typically accept your top six marks when you apply regardless of the number of courses you take.

The attached text file contains the student's name as well as their marks separated by spaces. Each row represents a student and should contain a minimum of six marks and a maximum of eight marks, each separated by a space. The program should only take into account your top six marks.

For example:

```
Giulio 50 75 60 80 88 65 78  
Marco 77 83 88 90 90 55  
Joe 50 50 50 50  
Amritpal 67 45 55 40 56 76 56 25
```

a) Write a method called *CalcAverage* that will receive a string that represents a student's name and marks. The average will be of type double. This method will calculate and return the average of the student when applying for university. If a student has fewer than six marks and they are all valid marks, return a -1. If a student has greater than eight marks and they are all valid marks, return a -2. If at least one of the marks is not valid, return a -3. Assume that the student's name will always be given as the first parameter. Your program should never crash. Make sure you use a try/catch block! Also include one when you are opening the text file.

In your main program (public static void main(String [] args) { }

b) You must meet the following criteria in your main program:  
→ Calculate and print the average for each student one at a time as you read in each line of the text file. Make sure to mention their name and their average in a well-formed output statement as long as they have valid marks and a valid number of marks.

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→ If the student does not have enough credits, too many marks, or their marks that are not valid, output a specific message of what is wrong. Example: Karan doesn't have at least six credits to apply to university.

→ Calculate the average total for ALL of the students. Example: If there are two students in total and Marco has an average of 90% and Karan has an average of 80%, then the average of all students would be 85%. Output this to the screen in a well formed output statement.

→ Output the highest average overall (value as a percent) and state which student had it. In the example above, you would say that Marco has the highest overall average of 90%.

Once you have met the criteria let me know in MS Teams so that I can collect your project folder from your shared ICS4U0 folder. You will also need to submit your Java class file as well as your text file that you used to test out your program in the Google Classroom post. You will be creating additional test cases in the text file that I gave you in the assignment post.

Good luck!

### **Communication** (level )

Criteria:

Variable names

Comments

Program header

Commenting all variables and all major pieces of code within your program.

Organization

Well formatted and clear output statements

**Application mark** (based off of all the requirements that work). There will be one mark for the program compiling and one mark for making sure that the program doesn't crash for any reason.