* What are the named variables you will use?  List their names, data types, and purpose.

I used string name and college,

I used string var inputFileName.

I used int variables males, malec, females, femalec, ccscore, cccount, unscore, and uncount.

I used char gender,

I used int score.

Int variables store natural numbers

Char variable store a single letter/ one byte

The inputFileName string is used to store the file name that the user enters.

* What are the unnamed variables you will use?  List their data type and purpose.

I don’t thing there is any unnamed variables.

* What input data is needed by the program?

The input needed by the program is the file name / or file path.

* What output data is generated by the prorgam?

This program outputs the .txt file onto the console then outputs the average of males, average of females, average of community college, and average of university scores and average of all scores.

* Describe how the input data will be transformed into the output data.

-First the program asks for the file location.

-If the file location is not valid it displays an error message

-Then it uses the while loop, while inputFile.peek != EOF(end of file) to go through the list of names, genders, college, and scores. Then it couts the data. I make it look nicer using setw()

-Cout the information

-Then It goes through a series of if/else statements to differentiate between the male, female, CC or UN students. For example, if gender == ‘M’ then the variables males(male score) gets added to the previous male score, then malec(male count) gets +1. Then it moves on to the next else if/ if statement to sort out the different scenerios. Example else if(college == “UN”) unscore += score, uncount++.

-After that the program couts the information using static\_cast<double> turn the ints into double variables. And it divides the total score of each category with the count to get the average. Example, males(total score) / malec(count) == average. It does that with all the scores.

-After that it takes the sum of either cc/university or M/F scores and divide it by 12 to get the average score of the whole list.

-cout “end of file reached”