Faculty of Computing and Informatics (FCI)
Multimedia University
Cyberjaya

TCP1101 Assignment

Trimester 1, 2020/2021

Lecture Section : TC02

by <<TEAM NAME : NEOPHYTES>>

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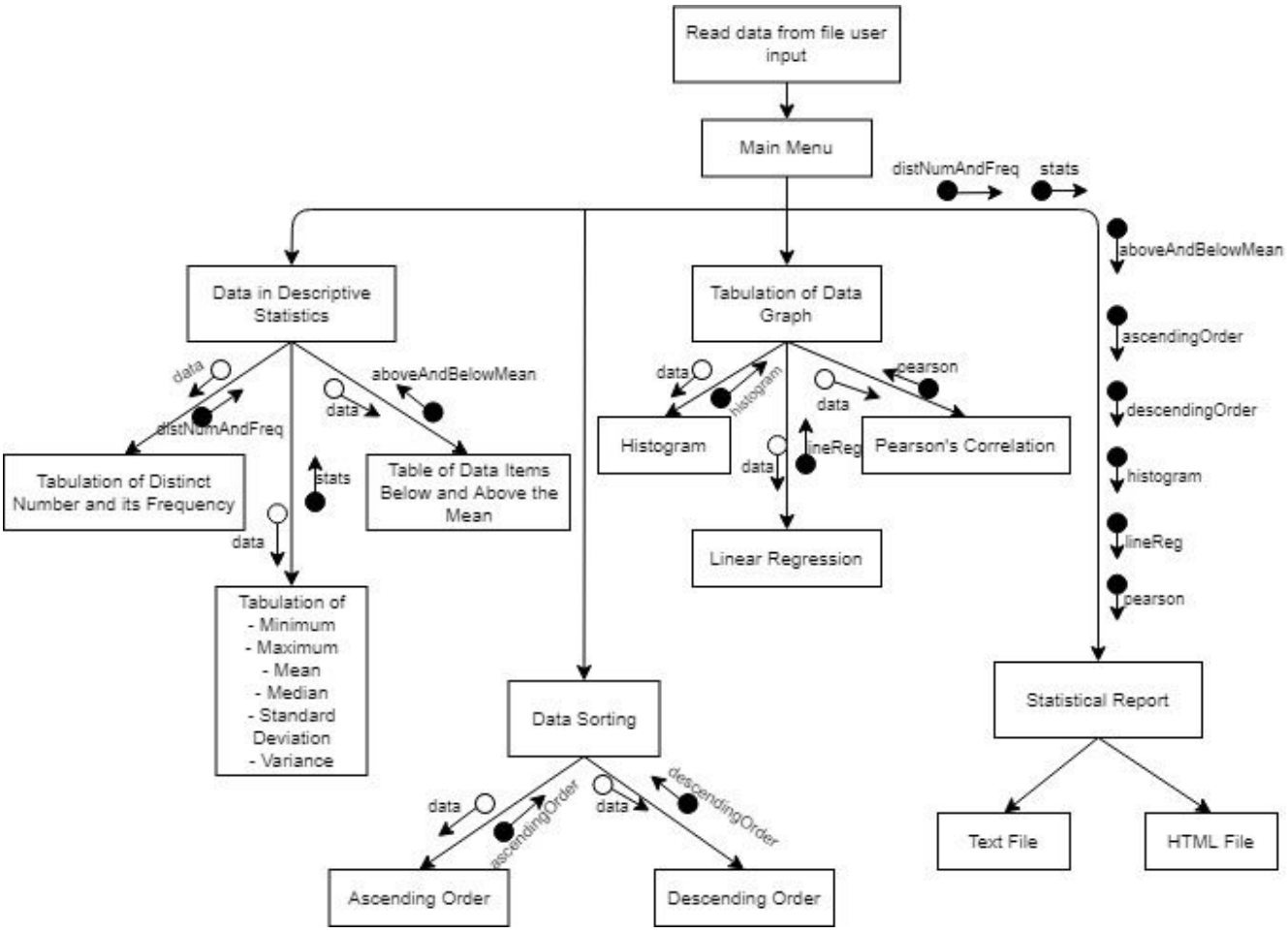
Functions Written By Each Members

Member	Functions
Amani Balqis	➢ calcMean ➢ aboveMean ➢ belowMean ➢ calcStdDev ➢ calcVar ➢ printDistNumNFreqHtml ➢ RegMnCHtml ➢ pearsonCorHtml ➢ printHistogramHtml ➢ printAscHtml ➢ DescOrderHtml ➢ printStatsAllColsHtml ➢ htmlData
Chin Pei Wern	➢ fileName ➢ readHeader ➢ readData ➢ detectFormatError ➢ UserInput ➢ htmlortxt ➢ userInputFileName ➢ distNum ➢ freqOfDistNum ➢ distNumAndFreq ➢ printAboveMean ➢ aboveAndBelowMean ➢ saveAboveMean ➢ saveBelowMean ➢ calcPearson ➢ pearson ➢ histogram ➢ printStatsMenu ➢ statsAllCols ➢ stats ➢ statReport ➢ statisticalReport ➢ printTabularFormMenu ➢ printDataSortingMenu ➢ printDataGraphMenu

	➢ printMainMenu ➢ main
Ng Yoong Kee	➢ findHighestCol ➢ findLowestCol ➢ RegMnC ➢ lineReg ➢ htmlStatsAllCols ➢ htmlStats ➢ htmlAboveMean ➢ htmlBelowMean ➢ htmlData ➢ printStatsAllColsHtml ➢ printDistNumNFreqHtml
Nurul Syaqeera	➢ saveDistNumfreq ➢ saveLineReg ➢ savePearson ➢ saveHistogram ➢ printAsc ➢ AscOrder ➢ ascendingOrder ➢ saveAscOrder ➢ DescOrder ➢ descendingOrder ➢ saveDescOrder ➢ Median ➢ saveAllStats ➢ statReport

Structured Chart That Reflects The Current Program (Syaqeera)

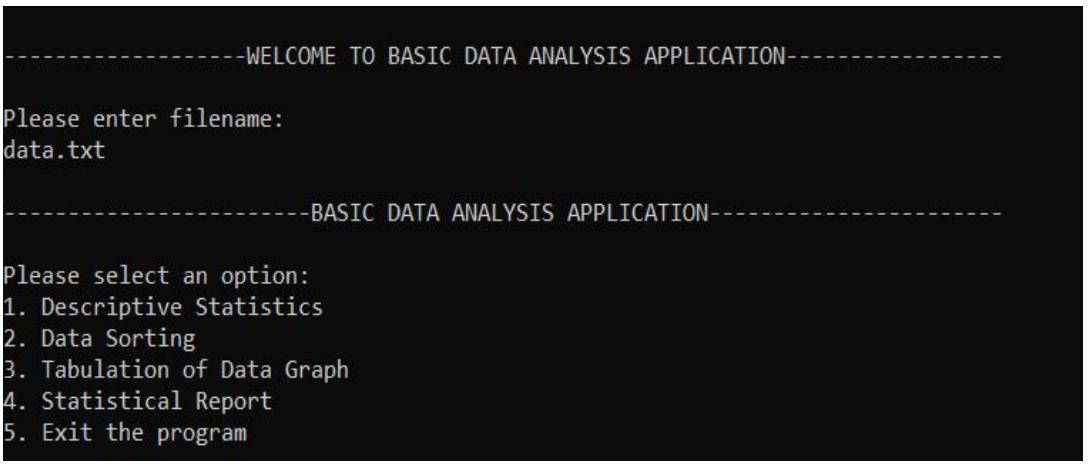


Instructions on How to Compile Our Program, and the IDE that we Used (Chin Pei Wern)

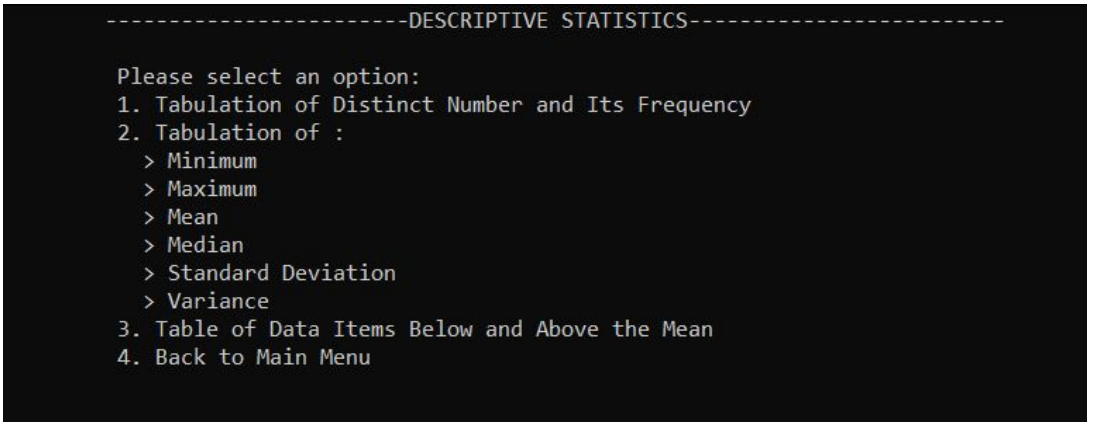
1. Create a folder for our C++ program.
2. Navigate to that folder.
3. Insert the data file into the same folder.
4. Click on the main.cpp.
5. Press F9 to compile and run the program.
6. **IDE :** Code::Blocks

Instructions on How to Use Our Program (Amani)

1. Enter the name of the data file.

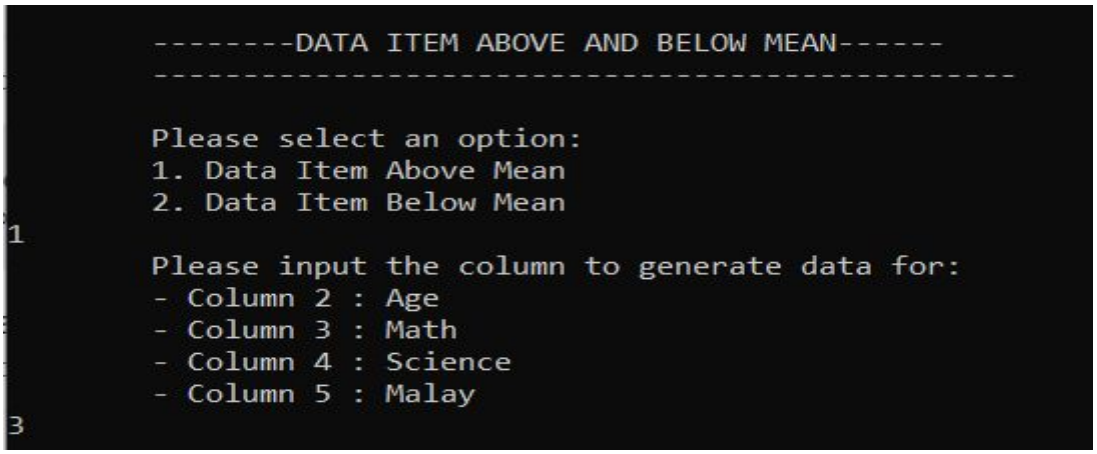


2. Enter a number with respect to the 4 options data choice given for the user to generate the table of and option 5 is to exit the program.

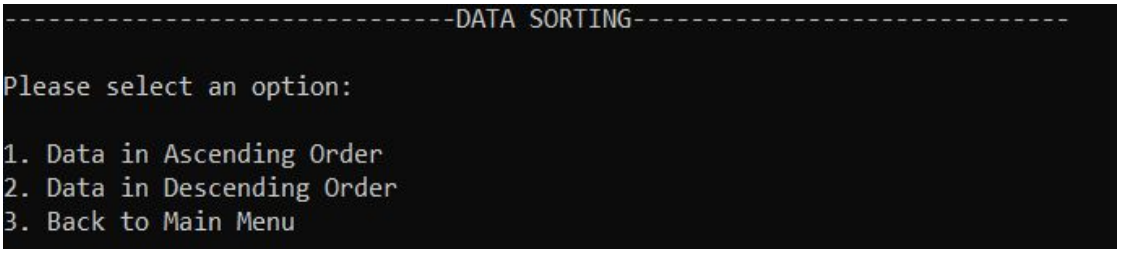


3. Option 1 will bring to another branch of option in order to :
    - Create the table distinct number and its frequency by pressing 1
    - Tabulation of minimum, maximum, mean, median, standard deviation and variation by pressing 2
    - Data item below and above the mean by pressing 3.

    Number 4 is to go back to the main menu.

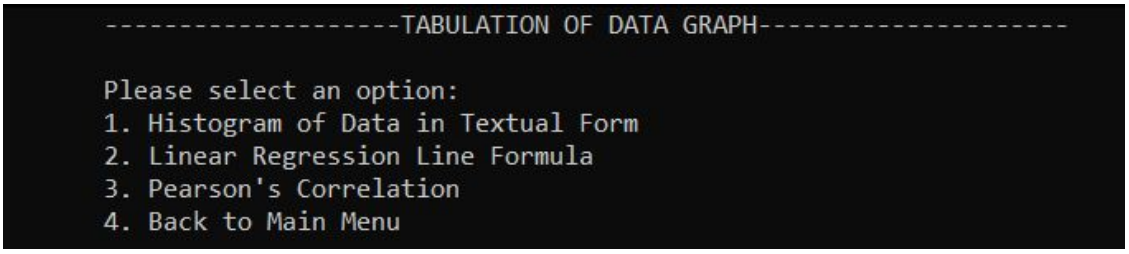


4. Enter the column number wanted to generate data for and output will be displayed.



5. At the data sorting (option 2) from the main menu.
   - Choose 1 for ascending order.
   - Choose 2 for descending order.

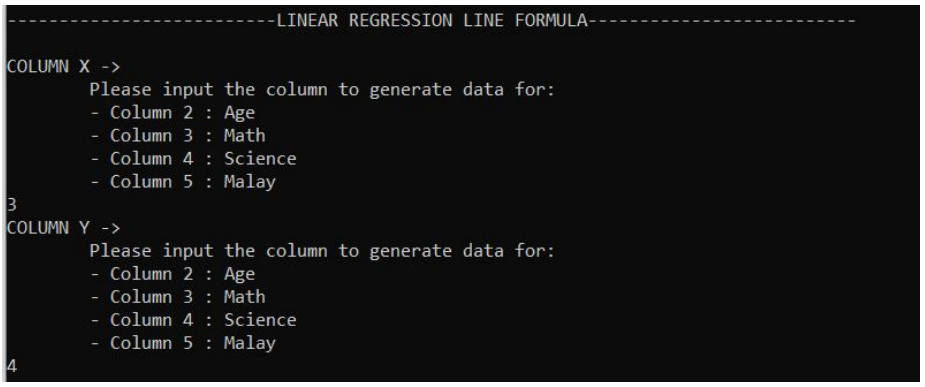
   Input which column to generate data and it will display the result. To go back to the menu, choose option 3.



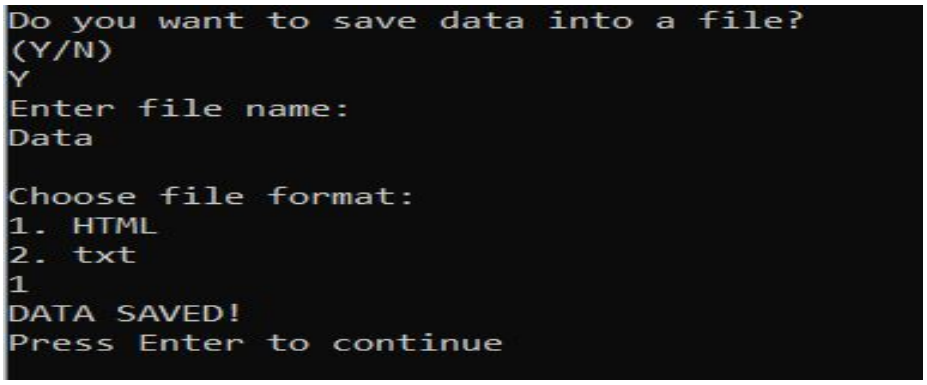
6. At the Tabulation of Data Graph (option 3), it has 3 types of data graphs which can be tabulated which is :
   - Histogram by pressing 1
   - Linear Regression by pressing 2
   - Pearson's Correlation by pressing 3.

   Press 4 to go back to the main menu.

7. For the histogram, choose one column to generate the output.

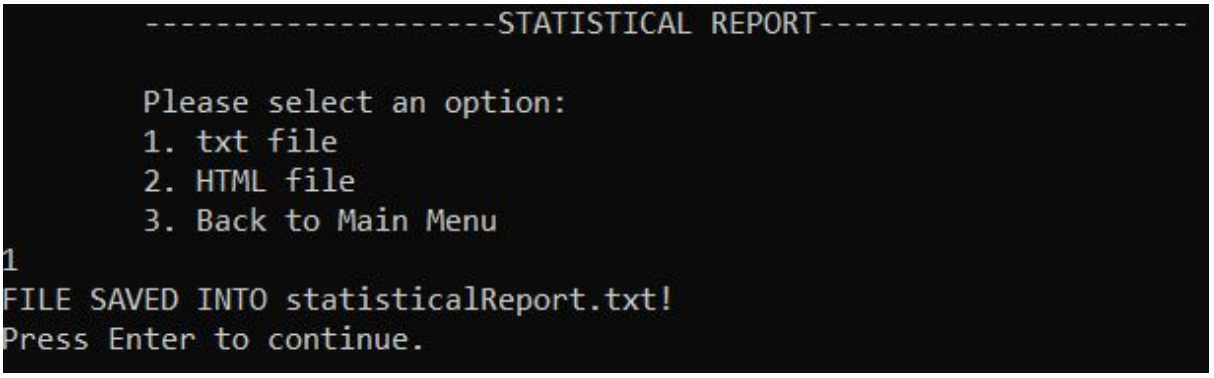


8. For linear regression and Pearson's Correlation, enter two columns to generate the data.



9. After the result of the generated data is displayed, the user is given a choice whether to save the output or not. Enter **Y/y to save** and **N/n for not saving**. Then, if user choose to save the file, user will be asked to enter one of the two options given :
   - Choose option 1 to save in HTML format.
   - Option 2 to save in the text file.

   Afterwards, enter the name of the file and press enter to continue the program.



10. At the Statistical Report from the main menu
    - Select 1 to create a report and save into a text file
    - Select 2 to create a report in an HTML file.

    Press 3 to go back to the main menu and press enter to continue.

Any situation that could cause errors in running your program. (Syaqeera)

➔ Type input based on instruction.
Example : "Error! Please choose an option from 1 to 5."
Otherwise, if a user input an alphabet letter, the error message will go through an infinite loop.

Conclusion. (Ng Yoong Kee)

The aim of this program is to allow the user to read data from a file with multiple columns separated by commas. After reading the data, the program can perform all of the required computations. The computations included find out the value of maximum, minimum, median, mean, variance and standard deviation, display the distinct numbers and its frequency, plot a histogram in textual form, display the data items above and below the mean, compute the Pearson's correlation, compute the linear regression as well as display data either in ascending or descending order. The menu interface is user-friendly, users can easily understand it and get the computation they want.

This program is useful for the works which need these kinds of repeated and mass calculations. People can save their time as well as energy and become more productive in their jobs.

By doing this program, we have a chance to strengthen our knowledge that we learn from the lectures and our skill in programming also has a good practise. From the experience of this, we are able to create our own computation program that we may need in our life. We also learn how to work together with our team members in coding. This would be helpful in the future, while we are hired in a company and coding a huge project with our team members.