Programming Exercise Scenario:

Write a program that asks the user to enter five exam scores. The program will display a letter grade and associated message for each score, based on the table below, and the average exam score. The program will not contain any repeated code and have a minimum of two functions besides Main().

**ALGORITHM**

1. Welcome user to program
2. Ask user if they have read the splash screen
   1. If yes, continue
   2. If not, repeat question
3. Ask username
   1. Validate input
4. Ask user for test score
   1. Validate input to be < 0 and less than 101.
5. Calc letter grade and message for test scores with the table data.

|  |  |  |
| --- | --- | --- |
| **Score** | **Letter Grade** | **Message** |
| 90 – 100 | A | Excellent work |
| 89 – 80 | B | Nice job |
| 79 – 70 | C | Not bad |
| 69 – 60 | D | Room for improvement |
| Below 60 | F | Go back and review |

1. Display Letter grade and message for test score
2. Accumulate number of test scores entries
   1. Number of tests +=1
3. Accumulate test score totals
   1. Total test score+= test score
4. Ask if there is another test score in input
   1. If yes, Repeat step 3 to 7
   2. If no, continue
5. Calculate Average of test score totals and number of tests counted
   1. Total test score / Number of tests
6. Display average test score
7. Ask user if they want to restart the program
   1. If yes, repeat steps 2 to 10
   2. If no, continue
8. Display “thank you” message.

**VARIABLES/CONSTANTS**

|  |  |  |
| --- | --- | --- |
| *VariableName* | *Value* | *Data Type* |
| userName | = ’’ | (string) |
| testScore | = ‘’ | (int) |
| letterGrade | = ‘’ | (string) |
| message | = ‘’ | (string) |
| TotalTests | = 0 | (int) |
| TotalGrade | = 0 | (int) |
| testAverages | = ‘’ | (float) |

**FORMULAS**

* **TotalGrade += testScore**

1. Accumulate test score totals

* **testScoreAverage = TotalGrade / TotalTests**

a) Calculate Average of test score totals and number of tests counted

* **TotalTests +=1**

1. Accumulate number of test scores entries

**HIERARCHY**

**FLOWCHARTS – One flowchart per function - Embed from flowchart tool**



***Main***



***Welcome***



***GetInput***



***GetName***



***GetScores***



***Validate***



***DisplayScores***



**TEST DATA – 5 complete data sets**

| Input    *userName* | Input  testScore | Process  letterGrade  see chart | Process  message  See chart | Process  TotalGrade  =  (TotalGrade += TotalGrade) | Process  testAverages =  (TotalGrade / TotalTests) | Output  userName,  letterGrade,  Message,  TotalTests  testAverages |
| --- | --- | --- | --- | --- | --- | --- |
| Jeremy | 1. 100 2. 100 3. 100 4. 100 5. 95 | 1. A 2. A 3. A 4. A 5. A | 1. Excellent work 2. Excellent work 3. Excellent work 4. Excellent work 5. Excellent work | 495 | 495 / 5 = 99 | 1)Jeremy has scored the letter grade: A  Excellent work!  2)Jeremy has scored the letter grade: A  Excellent work!  3)Jeremy has scored the letter grade: A  Excellent work!  4)Jeremy has scored the letter grade: A  Excellent work!  5)Jeremy has scored the letter grade: A  Excellent work!  For 5 tests, you averaged 99.0%! |
| Wendy | 1. 75 2. 80 3. 91 | 1. C 2. B 3. A | 1. Not bad 2. Nice job 3. Excellent work | 246 | 246/3 = 82 | 1)Wendy has scored the letter grade: C  Not bad!  2) Wendy has scored the letter grade: B  Nice job!  3)Wendy has scored the letter grade: A  Excellent work!  For 3 tests, you averaged 82.0%! |
| Jessy | 1. 65 2. 84 | 1. D 2. B | 1. Room for improvement 2. Nice job | 149 | 149 / 2 = 74.5 | 1)Jessy has scored the letter grade: D  Room for improvement!  2)Jessy has scored the letter grade: B  Nice job  For 2 tests, you averaged 74.5%! |
| Lilly | 1. 50 2. 50 3. 50 4. 50 5. 50 6. 50 7. 50 8. 50 9. 50 10. 100 | 1. F 2. F 3. F 4. F 5. F 6. F 7. F 8. F 9. F 10. A | 1. Go back and review 2. Go back and review 3. Go back and review 4. Go back and review 5. Go back and review 6. Go back and review 7. Go back and review 8. Go back and review 9. Go back and review 10. Excellent work | 550 | 1. / 10 = 55 | 1)Lilly has scored the letter grade: F  Go back and review!  2) Lilly has scored the letter grade: F  Go back and review!  3) Lilly has scored the letter grade: F  Go back and review!  4) Lilly has scored the letter grade: F  Go back and review!  5) Lilly has scored the letter grade: F  Go back and review!  6) Lilly has scored the letter grade: F  Go back and review!  7) Lilly has scored the letter grade: F  Go back and review!  8) Lilly has scored the letter grade: F  Go back and review!  9) Lilly has scored the letter grade: F  Go back and review!  10) Lilly has scored the letter grade: A  Excellent work!  For 10 tests, you averaged 55.0%! |
| Monty | 1. 69 2. 23 3. 96 4. 100 | 1. D 2. F 3. A 4. A | 1. Room for improvement 2. Go back and review 3. Excellent work 4. Excellent work | 288 | 288 / 4 = 72 | 1)Monty has scored the letter grade: D  Room for improvement!  2)Monty has scored the letter grade: F  Go back and review!  3)Monty has scored the letter grade: A  Excellent work!  4)Monty has scored the letter grade: A  Excellent work!  For 4 tests, you averaged 72.0%! |

**PYTHON CODE (submitted in separate compressed files)**

**#Chapter 5 Lab**

**#Test Score Analyzer**

**#Jeremy Bargy**

**#March 4, 2020**

**#Display welcome page and developer name**

**def welcome():**

**beginSequence= 'y' #str**

**print('\n\t\t\t\tHello Students!\n\t\t\t\t---------------')**

**print('Thank you for taking the time to use this program.')**

**print('The program was made by Jeremy Bargy.')**

**print('Last update March 2020')**

**#Display description of program**

**print('\n\t\t\t\tInstructions\n\t\t\t\t------------')**

**print('The program being used is designed to help students identify the average score they achieved from the test taken.')**

**print('A student with this information can identify the actions needed to improve their overall academic status.\n\n\n\n')**

**print('Here is a list of how to use this program:\n')**

**print('1) The program will ask users for their first name.\n') #step 1**

**print('\ta: Be sure to enter letters for your name and not leave an empty box.\n')**

**print('2) The program will ask users to enter their test score in a numeric value.\n') #step 2**

**print('\ta: Be sure to enter in a positive number and not to exceed 100.\n')**

**print('3) The program will then return the letter grade associated with your score and a feedback message.\n') #step 3**

**print('4) The program will ask users if this is another test score to enter. \n') #step 4**

**print('\ta: You will enter a "y" or "Y" for Yes and the program will continue to ask for your test scores.\n')**

**print('\tb: You will enter a "n" or "N" for No and the program will enter the next sequence.\n')**

**print('5) The program will return the average for the test scores entered and number of test entered.\n') #step 5**

**print('6) The program will ask if the user would like to restart this program for another user.\n') #step 6**

**print('\ta: You will enter a "y" or "Y" for Yes and the program will restart.\n')**

**print('\tb: You will enter a "n" or "N" for No and the program will end.\n')**

**print('Take a minute to ready through the instructions before you begin.\n\n\n')**

**print('Have you read the instructions and are ready to begin?')**

**print('Enter "Y" for yes. Please use capital letters.')**

**print('Or enter "N" for no. Please use capital letters.')**

**#loop until user had read instructions**

**beginSequence = input('Begin program?\n ')**

**while not(beginSequence == 'Y' or beginSequence == 'y') or beginSequence=='' or beginSequence== ' ':**

**print('Error: please read the instructions and enter "Y" for yes to begin: \n')**

**beginSequence= input('Begin program? \n')**

**def main():**

**#execute GetInput, DisplayScore functions**

**startProgram='Y'**

**#calls welcome function**

**welcome()**

**#loop continues as long as user enters Y or y**

**while startProgram == 'Y' or startProgram =='y':**

**GetInput()**

**#repeat program if more groups need to enter data.**

**print('\n\nWould you like to restart this program?\n')**

**startProgram = input('Please enter "Y" to restart program. \n Or "N" to end the program: \n')**

**while not(startProgram == 'Y' or startProgram=='y' or startProgram=='N' or startProgram=='n') or startProgram=='' or startProgram== ' ':**

**print('\nError: please "Y" for yes to restart:')**

**print('Or enter "N" to end the program: ')**

**startProgram= input('Restart program? \n')**

**def GetInput():**

**#calls GetName, GetScores, DisplayScores functions and calculates the average grade for tests entered**

**TotalTests = 0**

**TotalGrade = 0**

**userName = GetName()**

**contGetTest = 'Y'**

**while contGetTest == 'Y' or contGetTest =='y':**

**testscore =GetScores()**

**DisplayScores(userName, testscore)**

**TotalGrade += testscore**

**TotalTests += 1**

**#repeat program if another student needs to enter data.**

**contGetTest = input('\nPlease enter "Y" to enter more student test data. \n Or "N" to move to the next sequence: \n')**

**while not(contGetTest == 'Y' or contGetTest=='y' or contGetTest=='N' or contGetTest=='n') or contGetTest=='' or contGetTest== ' ':**

**print('\nError: please "Y" for yes to restart: ')**

**print('Or enter "N" to move on:')**

**contGetTest= input('Restart program? \n')**

**#calculate averages for tests entered**

**testAverages = (TotalGrade / TotalTests)**

**print('\n\n\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_')**

**print('\nFor',TotalTests, 'tests, you averaged', testAverages,'%!')**

**print('\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n\n')**

**def GetName():**

**#ask for user name**

**userName= input('\nPlease enter your first name: \n')**

**while not(userName.isalpha()) or userName == ' ' or userName == '' :**

**print('Error: incorrect input:')**

**userName =input('Please your first name: \n')**

**return userName**

**def GetScores():**

**# retrieves user test score - value returning function**

**# Get student user to enter test score**

**testScores = (input('\nPlease enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100: \n'))**

**testScores = validate(testScores)**

**return testScores**

**def validate(testScore):**

**#validate input is a number and within accepted range**

**while not( testScore.isdigit()) or int( testScore) >= 101 or int( testScore) < 0 or int( testScore) == ' ' or int( testScore)=='':**

**print('Error: incorrect input: \n')**

**testScore = (input('Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100: \n'))**

**testScore = int(testScore)**

**return testScore**

**def DisplayScores(userName,testscore):**

**#calculate letter grade and feedback message**

**letterGrade = ''**

**message = ''**

**if testscore >= 90:**

**letterGrade = 'A'**

**message = 'Excellent Work!'**

**elif testscore >= 80:**

**letterGrade = 'B'**

**message = 'Nice Job!'**

**elif testscore >= 70:**

**letterGrade = 'C'**

**message = 'Not Bad!'**

**elif testscore >= 60:**

**letterGrade = 'D'**

**message = 'Room for Improvement!'**

**else:**

**letterGrade = 'F'**

**message = 'Go Back & Review!'**

**#Display Student name, letterGrade, message**

**print('\n\n\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_')**

**print(userName, 'has scored the letter grade:', letterGrade)**

**print(message)**

**print('\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n\n')**

**main()**

**#display farewell message**

**print('\n')**

**print('Thanks for using our program!')**

**print('Goodbye!')**

**TEST DATA EXECUTION RESULTS**

>>>

============= RESTART: E:\COP1000\Chapter 5\Chp5Lab\LabChapter5.py =============

Hello Students!

---------------

Thank you for taking the time to use this program.

The program was made by Jeremy Bargy.

Last update March 2020

Instructions

------------

The program being used is designed to help students identify the average score they achieved from the test taken.

A student with this information can identify the actions needed to improve their overall academic status.

Here is a list of how to use this program:

1) The program will ask users for their first name.

a: Be sure to enter letters for your name and not leave an empty box.

2) The program will ask users to enter their test score in a numeric value.

a: Be sure to enter in a positive number and not to exceed 100.

3) The program will then return the letter grade associated with your score and a feedback message.

4) The program will ask users if this is another test score to enter.

a: You will enter a "y" or "Y" for Yes and the program will continue to ask for your test scores.

b: You will enter a "n" or "N" for No and the program will enter the next sequence.

5) The program will return the average for the test scores entered and number of test entered.

6) The program will ask if the user would like to restart this program for another user.

a: You will enter a "y" or "Y" for Yes and the program will restart.

b: You will enter a "n" or "N" for No and the program will end.

Take a minute to ready through the instructions before you begin.

Have you read the instructions and are ready to begin?

Enter "Y" for yes. Please use capital letters.

Or enter "N" for no. Please use capital letters.

Begin program?

y

Please enter your first name:

Jeremy

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

100

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Jeremy has scored the letter grade: A

Excellent Work!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

100

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Jeremy has scored the letter grade: A

Excellent Work!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

100

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Jeremy has scored the letter grade: A

Excellent Work!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

100

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Jeremy has scored the letter grade: A

Excellent Work!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

95

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Jeremy has scored the letter grade: A

Excellent Work!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

n

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

For 5 tests, you averaged 99.0 %!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Would you like to restart this program?

Please enter "Y" to restart program.

Or "N" to end the program:

n

Thanks for using our program!

Goodbye!

>>>

>>>

============= RESTART: E:\COP1000\Chapter 5\Chp5Lab\LabChapter5.py =============

Hello Students!

---------------

Thank you for taking the time to use this program.

The program was made by Jeremy Bargy.

Last update March 2020

Instructions

------------

The program being used is designed to help students identify the average score they achieved from the test taken.

A student with this information can identify the actions needed to improve their overall academic status.

Here is a list of how to use this program:

1) The program will ask users for their first name.

a: Be sure to enter letters for your name and not leave an empty box.

2) The program will ask users to enter their test score in a numeric value.

a: Be sure to enter in a positive number and not to exceed 100.

3) The program will then return the letter grade associated with your score and a feedback message.

4) The program will ask users if this is another test score to enter.

a: You will enter a "y" or "Y" for Yes and the program will continue to ask for your test scores.

b: You will enter a "n" or "N" for No and the program will enter the next sequence.

5) The program will return the average for the test scores entered and number of test entered.

6) The program will ask if the user would like to restart this program for another user.

a: You will enter a "y" or "Y" for Yes and the program will restart.

b: You will enter a "n" or "N" for No and the program will end.

Take a minute to ready through the instructions before you begin.

Have you read the instructions and are ready to begin?

Enter "Y" for yes. Please use capital letters.

Or enter "N" for no. Please use capital letters.

Begin program?

y

Please enter your first name:

Wendy

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

75

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Wendy has scored the letter grade: C

Not Bad!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

80

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Wendy has scored the letter grade: B

Nice Job!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

91

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Wendy has scored the letter grade: A

Excellent Work!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

n

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

For 3 tests, you averaged 82.0 %!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Would you like to restart this program?

Please enter "Y" to restart program.

Or "N" to end the program:

n

Thanks for using our program!

Goodbye!

>>>

>>>

============= RESTART: E:\COP1000\Chapter 5\Chp5Lab\LabChapter5.py =============

Hello Students!

---------------

Thank you for taking the time to use this program.

The program was made by Jeremy Bargy.

Last update March 2020

Instructions

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The program being used is designed to help students identify the average score they achieved from the test taken.

A student with this information can identify the actions needed to improve their overall academic status.

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a: Be sure to enter in a positive number and not to exceed 100.

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4) The program will ask users if this is another test score to enter.

a: You will enter a "y" or "Y" for Yes and the program will continue to ask for your test scores.

b: You will enter a "n" or "N" for No and the program will enter the next sequence.

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a: You will enter a "y" or "Y" for Yes and the program will restart.

b: You will enter a "n" or "N" for No and the program will end.

Take a minute to ready through the instructions before you begin.

Have you read the instructions and are ready to begin?

Enter "Y" for yes. Please use capital letters.

Or enter "N" for no. Please use capital letters.

Begin program?

y

Please enter your first name:

Jessy

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

65

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Jessy has scored the letter grade: D

Room for Improvement!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

84

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Jessy has scored the letter grade: B

Nice Job!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

n

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

For 2 tests, you averaged 74.5 %!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Would you like to restart this program?

Please enter "Y" to restart program.

Or "N" to end the program:

n

Thanks for using our program!

Goodbye!

>>>

>>>

============= RESTART: E:\COP1000\Chapter 5\Chp5Lab\LabChapter5.py =============

Hello Students!

---------------

Thank you for taking the time to use this program.

The program was made by Jeremy Bargy.

Last update March 2020

Instructions

------------

The program being used is designed to help students identify the average score they achieved from the test taken.

A student with this information can identify the actions needed to improve their overall academic status.

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a: Be sure to enter in a positive number and not to exceed 100.

3) The program will then return the letter grade associated with your score and a feedback message.

4) The program will ask users if this is another test score to enter.

a: You will enter a "y" or "Y" for Yes and the program will continue to ask for your test scores.

b: You will enter a "n" or "N" for No and the program will enter the next sequence.

5) The program will return the average for the test scores entered and number of test entered.

6) The program will ask if the user would like to restart this program for another user.

a: You will enter a "y" or "Y" for Yes and the program will restart.

b: You will enter a "n" or "N" for No and the program will end.

Take a minute to ready through the instructions before you begin.

Have you read the instructions and are ready to begin?

Enter "Y" for yes. Please use capital letters.

Or enter "N" for no. Please use capital letters.

Begin program?

y

Please enter your first name:

Lilly

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

50

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lilly has scored the letter grade: F

Go Back & Review!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

50

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lilly has scored the letter grade: F

Go Back & Review!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

50

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lilly has scored the letter grade: F

Go Back & Review!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

50

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lilly has scored the letter grade: F

Go Back & Review!

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Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

50

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Lilly has scored the letter grade: F

Go Back & Review!

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y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

50

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Lilly has scored the letter grade: F

Go Back & Review!

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Please enter "Y" to enter more student test data.

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y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

50

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Lilly has scored the letter grade: F

Go Back & Review!

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Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

50

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lilly has scored the letter grade: F

Go Back & Review!

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Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

50

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lilly has scored the letter grade: F

Go Back & Review!

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Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

100

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lilly has scored the letter grade: A

Excellent Work!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

n

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

For 10 tests, you averaged 55.0 %!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Would you like to restart this program?

Please enter "Y" to restart program.

Or "N" to end the program:

n

Thanks for using our program!

Goodbye!

>>>

>>>

============= RESTART: E:\COP1000\Chapter 5\Chp5Lab\LabChapter5.py =============

Hello Students!

---------------

Thank you for taking the time to use this program.

The program was made by Jeremy Bargy.

Last update March 2020

Instructions

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The program being used is designed to help students identify the average score they achieved from the test taken.

A student with this information can identify the actions needed to improve their overall academic status.

Here is a list of how to use this program:

1) The program will ask users for their first name.

a: Be sure to enter letters for your name and not leave an empty box.

2) The program will ask users to enter their test score in a numeric value.

a: Be sure to enter in a positive number and not to exceed 100.

3) The program will then return the letter grade associated with your score and a feedback message.

4) The program will ask users if this is another test score to enter.

a: You will enter a "y" or "Y" for Yes and the program will continue to ask for your test scores.

b: You will enter a "n" or "N" for No and the program will enter the next sequence.

5) The program will return the average for the test scores entered and number of test entered.

6) The program will ask if the user would like to restart this program for another user.

a: You will enter a "y" or "Y" for Yes and the program will restart.

b: You will enter a "n" or "N" for No and the program will end.

Take a minute to ready through the instructions before you begin.

Have you read the instructions and are ready to begin?

Enter "Y" for yes. Please use capital letters.

Or enter "N" for no. Please use capital letters.

Begin program?

y

Please enter your first name:

Monty

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

69

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Monty has scored the letter grade: D

Room for Improvement!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

23

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Monty has scored the letter grade: F

Go Back & Review!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

96

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Monty has scored the letter grade: A

Excellent Work!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

y

Please enter the test score you have earned. Please use a numeric value that is positive and does not exceed 100:

100

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Monty has scored the letter grade: A

Excellent Work!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please enter "Y" to enter more student test data.

Or "N" to move to the next sequence:

n

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

For 4 tests, you averaged 72.0 %!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Would you like to restart this program?

Please enter "Y" to restart program.

Or "N" to end the program:

n

Thanks for using our program!

Goodbye!

>>>