

Visual Basic Program # 10 Practice Test # 1  
**(Ungraded, Must be turned In, DUE Yesterday\*)**

**Purpose:** To provide Additional experience in everything covered thus far in the VB lectures, handouts and assignments and to prepare the student for the VB Hands On Test, Test # 5. But especially the creation of data variables of the appropriate data type (DIM), assignment statements, using “intrinsic functions” and performing arithmetic operations

The student will get additional experience using the If Block Conditional Structure to make decisions.

This structure must be used in this program and the next two programs which includes the Visual Basic Hands On Test.

**Problem:** You will write a program to produce a Detail Report of Student grades with a summary total. The user will type in a set of student records with two fields in each record. The student name and the test score. The program must print the Report with the report heading label and column labels positioned appropriately above the box with the detail lines and the summary class average. The program must print each student record detail line, and calculate the average score. To calculate average, you, the programmer will use a counter to count the number of tests. You must also accumulate the total of all the test scores then divide that total by the number of test scores (counter), for all records and print the class average for the tests at the end of the report. Counters and accumulator statements are covered in detail in the handout for the mileage program.

**SPECIFICATIONS:**

Then, when the user clicks the first button labeled, as shown in the sample output, the program code will use the If Block structure to determine whether the students score is greater than or equal to 90. If it is, the program should output a detail line in the list box with an asterisk next to the student’s name as shown on the sample output. The employee should be able to continue entering student test records and when finished click a second button which will produce a blank line and the summary total (average test score for the class) as shown in the sample output.

**Input Data:**

Student Name  
Test Score

**Test Data Records:**

| <u>Student Name</u> | <u>Test Score</u> |
|---------------------|-------------------|
| Bud Weiser          | 90                |
| Joe Cuervo          | 80                |
| Johnny Walker       | 95                |
| Judy Split          | 85                |
| Slim Jim            | 70                |

### Sample Output:

Prac Test 1 Paul Kubicki

Student Name

Test Score

Click To Enter Record      Click to Display Average

Student Grade Report

| Student Name   | Test Score |
|----------------|------------|
| Bud Weiser*    | 90         |
| Joe Cuervo     | 80         |
| Johnny Walker* | 95         |
| Judy Split     | 85         |
| Slim Jim       | 70         |
| Class Average  | = 84       |

#### List of Tasks you need to do to complete this assignment:

1. Open and correctly name (Call it VB Prog 10 Last and First name) save your project to the desktop.
2. Create and name and position the objects on the form.
3. Determine what variables you will need and whether the data type should be string or double.
4. Determine which variables must be public ( Hints: The variables that store the total of all scores and the variable for the counter must be public because they will be used for the first button's event procedure code where the Total scores will be accumulated and the counter used to count how many records are entered will be calculated. They will also be used in the second event procedure's code which will calculate the Average Score for the class and output it to the listBox when the user is done entering records and clicks the second button. The code for the second button will also display a blank line before it displays the class average. The student must also determine which variables can be private. (More Hints: the variables you use for the Student's name and their test score are only used in one procedure.)

5. **Write the Code.** (More Hints: In your Private Sub for the first button, use an If selection structure to test the value stored in the variable containing the Score and determine if it is greater than or equal to 90. If that is true output their name and score with an asterisk next to their name or if it is false, print the detail line without an asterisk.
6. When producing the Detail lines and the line with the average in event procedure number two, you will need use a combination of the vbTab function to move data fields across the screen and the concatenation operator & to connect variables and literal strings together on the line, and Spaces enclosed in Quotation marks, “ ”, to adjust your output as best as you can. This last is a necessary because we do not have time in this course to teach the string manipulation functions and output functions that you would learn in our full semester length Visual Basic class.)
7. **Once you have written the code for the two event procedures. Type in the test data clicking the first button after each Student Record is entered. When all the records are entered and displayed in the list box then click the Second button. To display the Class test Average.**
8. **Assuming there are no errors, see if the output matches. Or, make correction as necessary.**

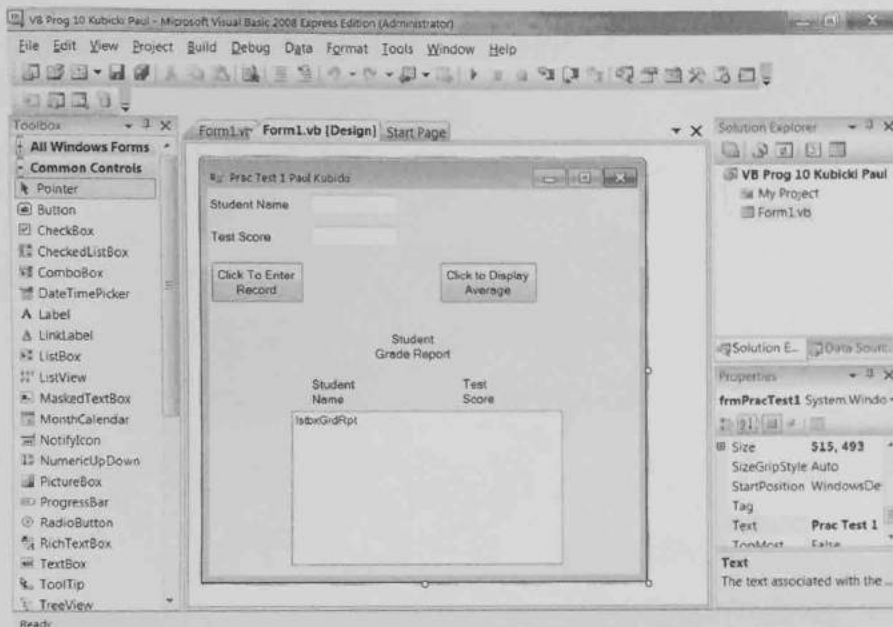
**First – Open and Name ( As instructed in Step 1 above.) VB Prog 10 Last and First names and Save the project to the Desktop:**

**Second – Create and Name objects on Form and set their Properties:**

**\*\*Note check the screen capture shown on page 94 below this page, before you start placing and naming objects, and setting their properties. To avoid confusion work, on one object at a time, 1. - Place the object on the form, 2. - Name the object, 3. - Set the properties for that object. In some cases I specify the object name and properties that I want set. In others I use the object naming convention followed by “*your Choice*” in italics. That means that **you** should use the naming convention and whatever makes sense to **you** for the object name or the property setting.**

| <b>Object</b> | <b>Properties</b>                     | <b>Setting</b>  |
|---------------|---------------------------------------|---|
| 1. Form       | Name<br>Text                          | <b>frmPracTest1</b><br><b>Prac Test 1 First and Last name</b>         |
| 2. Label      | Name<br>Text<br>Font                  | <b>lblYourChoice</b><br>Student Name<br><i>YourChoice</i>             |
| 3. Label      | Name<br>Text<br>Font                  | <b>lblYourChoice</b><br>Test Score<br><i>YourChoice</i>               |
| 4. Label      | Name<br>Text<br>AutoSize<br>TextAlign | <b>lblYourChoice</b><br>Student Grade Report<br>False<br>MiddleCenter |
| 5. Label      | Name<br>Text<br>Font<br>AutoSize      | <b>lblYourChoice</b><br>Student Name<br><i>YourChoice</i><br>False    |
| 6. Label      | Name<br>Text<br>Font<br>AutoSize      | <b>lblYourChoice</b><br>Test Score<br><i>YourChoice</i><br>False      |
| 7. TextBox    | Name                                  | <b>txtYourChoice</b>  |
| 8. TextBox    | Name                                  | <b>txtYourChoice</b>  |
| 9. ListBox    | Name<br>Font                          | <b>lstYourChoice</b><br>Courier New 8 point                           |
| 10. Button    | Name<br>Text<br>Font                  | <b>btnYourChoice</b><br><i>YourChoice</i><br><i>YourChoice</i>        |
| 11. Button    | Name<br>Text<br>Font                  | <b>btnYourChoice</b><br><i>YourChoice</i><br><i>YourChoice</i>        |

**Third.** Your Form should be similar to the one below.



**Fourth Writing code:**

1. Double click the 1st button on the form in the design view this will bring up the code sheet.
2. \*\* Add the necessary comments to all the code lines.

**\*\*NOTE: All your programs must have a comment preceding each line that explains what that line of code does.**

3. \*\*Add the necessary comments and code lines to the click event for the button that displays the average.

**Fifth:**

4. Run the project: Follow the instructions in your specifications and enter the test data. Your results should match the final output Screen capture on page 88 above

**Run the project WITH the test data shown in the following steps: The test data has been especially constructed to make it easier to align the output. Do NOT use your own data.**

**Sixth:**

**Adding Internal Documentation: Place your name, section #, class, Program #, and a brief statement of what the program does underneath "Public class".**

**YOU SHOULD KNOW WHAT TO DO BY NOW! And you may have done it already**

**Last, produce the printouts of the code and output screen as you have done for every program this semester and turn them in.**

**\*\*\*\*\* Ref: Page 91 "Due Yesterday is a Joke".... Please Relax and Have fun!**