

Business Programming

Business solutions using Visual Basic

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Introduction

An intern working with the administration team at Swansea Bay swimming festival .You have been asked help collate and publish statistics on recent medal competition results, where local children have taken part in swimming races , you must use visual basic and build a program to compile the following statistics based on the latest set of competition result.

A list of showing children \ swimmer name and swimming club, swimming style and level of the student and medal gained in the competitions.

The percentage of gold silver and bronze medals

Total number of Gold for girls

The total number of highly commended attained by boys for front crawl

Total number of highly commended for girls for butterfly

For a given swimmer print out all the races that they have completed in and the times that they achieve

The program will read data from an excel file

Process to build the VB application

To build the Visual basic application, a coding program was used, this program is called visual studio. The aim for the program is to read data from the excel spreadsheet. Once it reads the data from the excel spreadsheet the data should show up in the six list boxes that have been provided in visual studio , once this action is completed other operations can be performed .

The program will be able to show the children's names and the swimming club they are part of and the current level of swimming they are at and the medals the have achieved at the festival.

The program will calculate the percentage of gold , silver and bronze medals. The program will also be able to show the total medals for girls which are gold.

The program will commend the total number attained by the boys for the front crawl swimming stroke. And a total for the girls who completed the butterfly stroke.

For each swimmer all the races that they completed and the time will be printed for each individual swimmer.

All of the information about the swimmers and the swimming strokes and the medals that they have are in the excel database and their swimming level is also recorded in the excel database.

Program Structures

In the code , the listboxes have to named accordingly in the properties section of visual studio. The buttons which will allow you to get values for the percentages of the swimming strokes have to be named

in the properties part of visual studio and the same name should appear in the code so that it will run the program. The program structures in visual studio is set up in order of how things should be executed in the program.

Structures in VBnet

Call statement – a call statement is a method

Call by name statement – The call by name statement excutes the class methods in the program

Do loop – This structure is repeated to prove if a condition is true or until it is true.

Exit statement – exits the program before its time

End statement – The end statement shows the end of a paragraph of code

If ,then, else – If ‘ then and else structures define conditions in the program

While end - Excutes a paragraph of code until a condition is proved to be false.

Stop statement - suspends program from continuing with the operation

<https://www.safaribooksonline.com/library/view/vbnet-language-in/0596003080/apbs19.html> 09\05\2018

VB application

The screenshot shows an Excel spreadsheet with the following data:

Swimmer name	Swimming club	Swimming style	Swimming Level	Medal gained	Gender
Ruth Adams	SA1 Swim club	Front crawl	7	Silver	F
Amy Kevins	SA1 Swim club	Trudgen	8	Bronze	F
Tom Jones	SA1 Swim club	Butterfly stroke	7	silver	M
John Adamson	SA1 Swim club	Breastroke	5	Gold	M
Lucy Reeves	SA1 Swim club	Backstroke	4	Bronze	F
Daniel Kensey	SA1 Swim club	Sidestroke	7	Gold	M
Lauren James	SA1 Swim club	Front crawl	7	Silver	F
Danny Evans	SA1 Swim club	Trudgen	8	Silver	M
Amanda Tealse	SA1 Swim club	Butterfly stroke	7	Silver	M
Kevin Holmes	SA1 Swim club	Breastroke	5	Bronze	M
Daniel Hammond	SA1 Swim club	Backstroke	4	Gold	M
Diems Randy	SA1 Swim club	Sidestroke	7	Bronze	M
Daniel Clifford	SA1 Swim club	Front crawl	7	Bronze	M
Henery Adams	SA1 Swim club	Trudgen	8	Gold	M
Anna Henry	SA1 Swim club	Butterfly stroke	7	Bronze	F
Daisy Ricahrds	SA1 Swim club	Breastroke	5	Silver	F
Emilea Price	SA1 Swim club	Backstroke	4	Silver	F
Diana Meakes	SA1 Swim club	Sidestroke	7	Bronze	F
Sophie Hicks	SA1 Swim club	Butterfly stroke	7	Silver	F
Richard Mayers	SA1 Swim club	Front crawl	5	Silver	M
Thomas Realton	SA1 Swim club	Front crawl	4	Bronze	M
Dave Pilchard	SA1 Swim club	Sidestroke	8	Gold	M
Steve Jenkins	SA1 Swim club	Backstroke	4	Gold	M
Mark Downshire	SA1 Swim club	Front crawl	5	Silver	M

The above screenshot shows all the records relating to the Swansea swimming Bay. The excel database contains six fields which have information. This information will be sent to the visual basic.

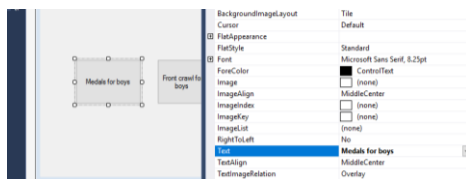
The screenshot shows a Visual Basic form titled "Swimming club program.vb" in Design view. The form contains six list boxes labeled ListBox1 through ListBox6. Below the list boxes, there are three labels: "Total medals for boys", "front crawl boys", and "girls butterfly". Each label has a "Get value" button and a text box for input.

The above screenshot shows Swansea Swimming Bay form. From the above image there are six list boxes as there are six fields with data

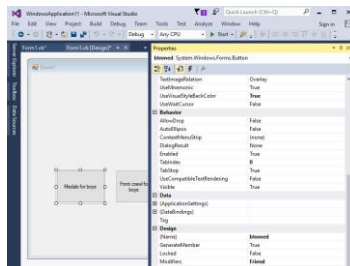
within excel database. There are three get value buttons and there is textbox field where the data will be shown when the program runs.

The buttons have named in the properties section in visual basic , the screenshots below will show this.

Medals for boys properties

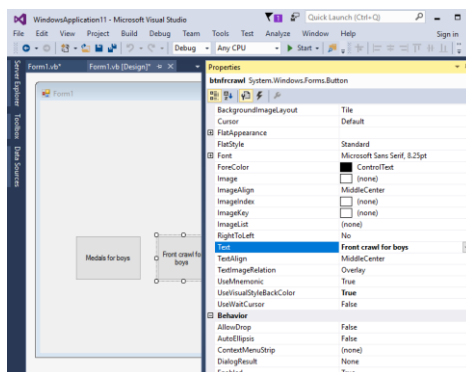


This is the text property

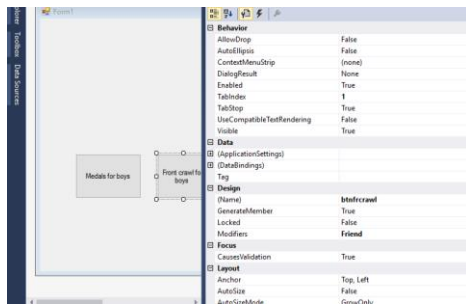


Design property in visual basic

Front crawl properties

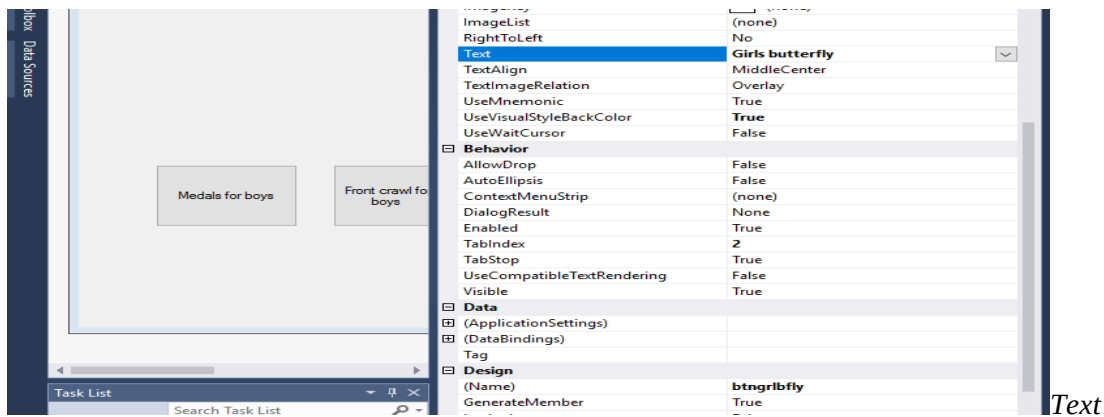


Text properties

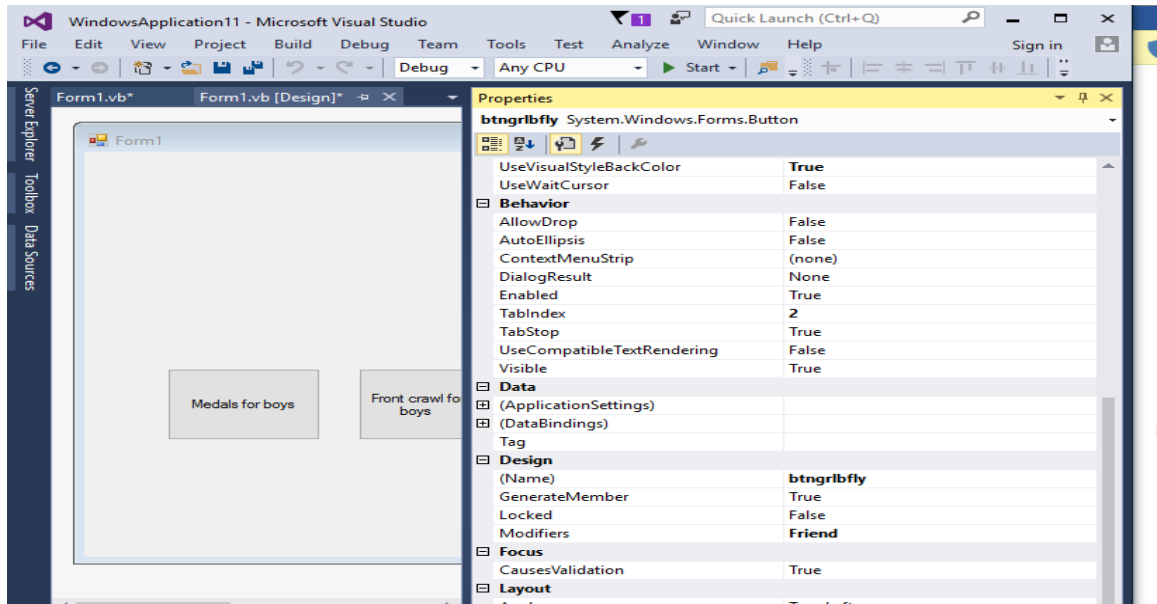


Design properties

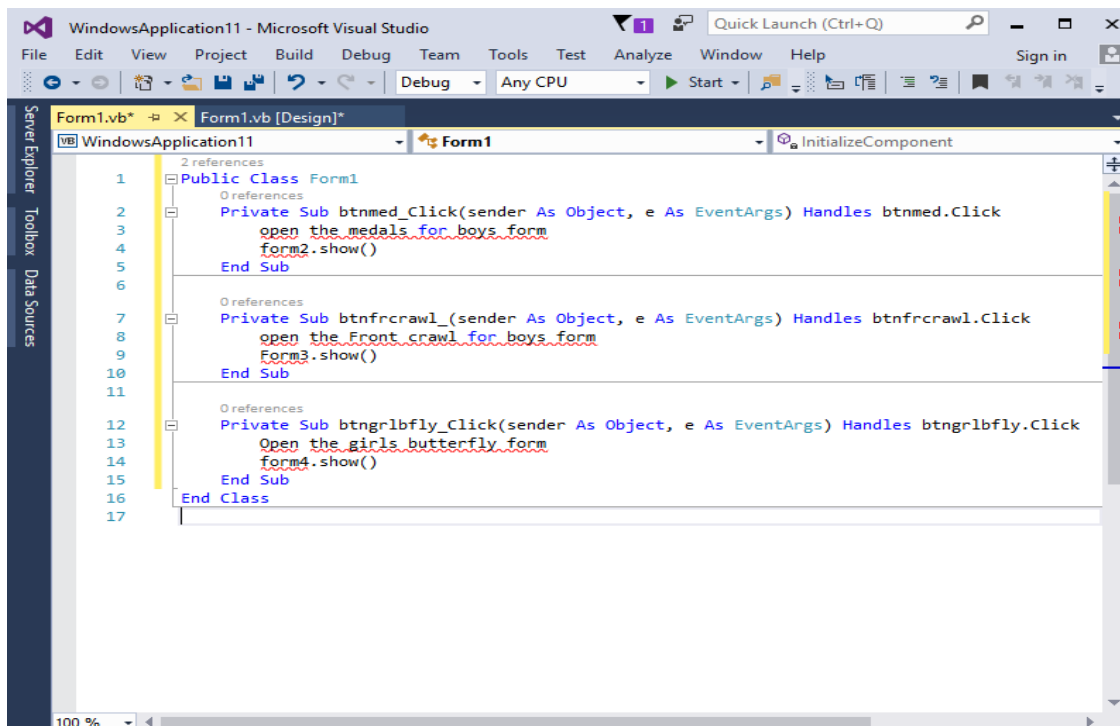
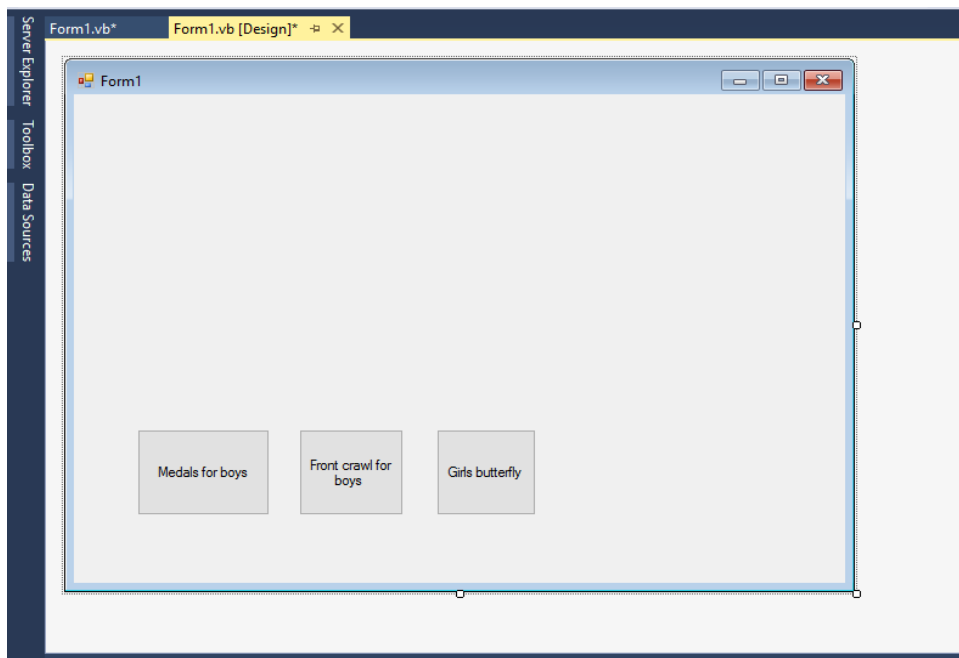
Girls Butterfly visual basic properties



properties

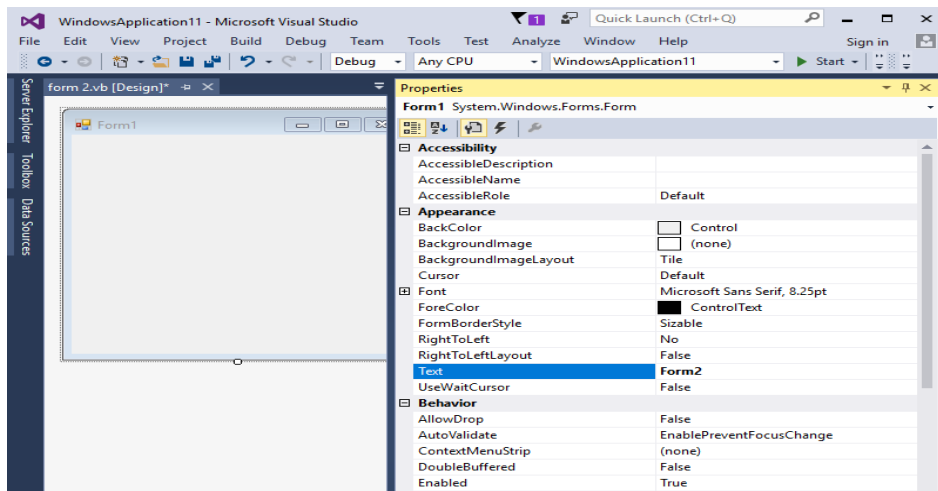


Design properties

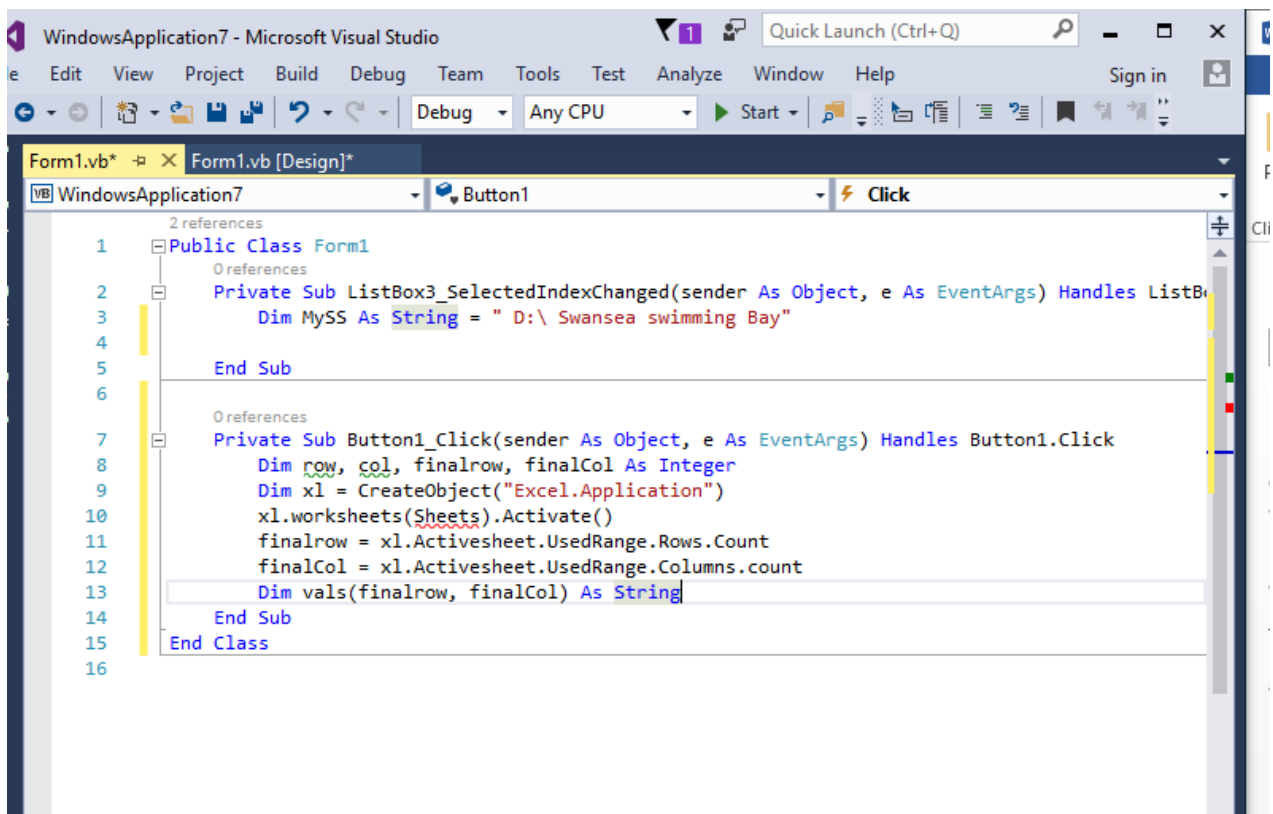


The above screenshot shows the code for the buttons , there are three buttons represented in the code to show the results that are required. There is one button for the front crawl for the boys, there is also a button for the medals for boys ,and there is one button for the girls butterfly.

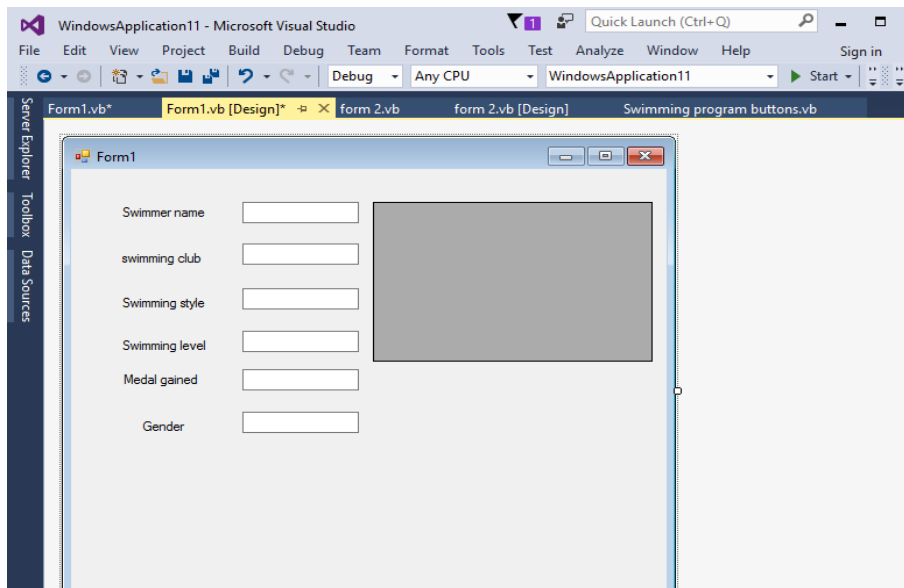
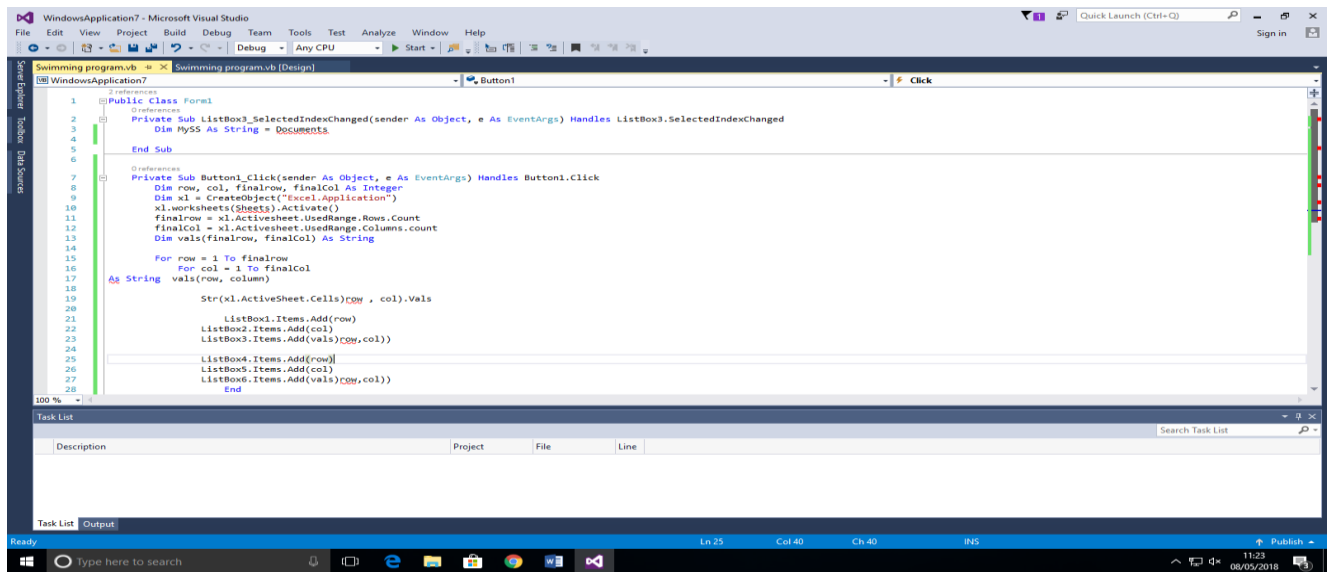
Decalring the input form for input of data

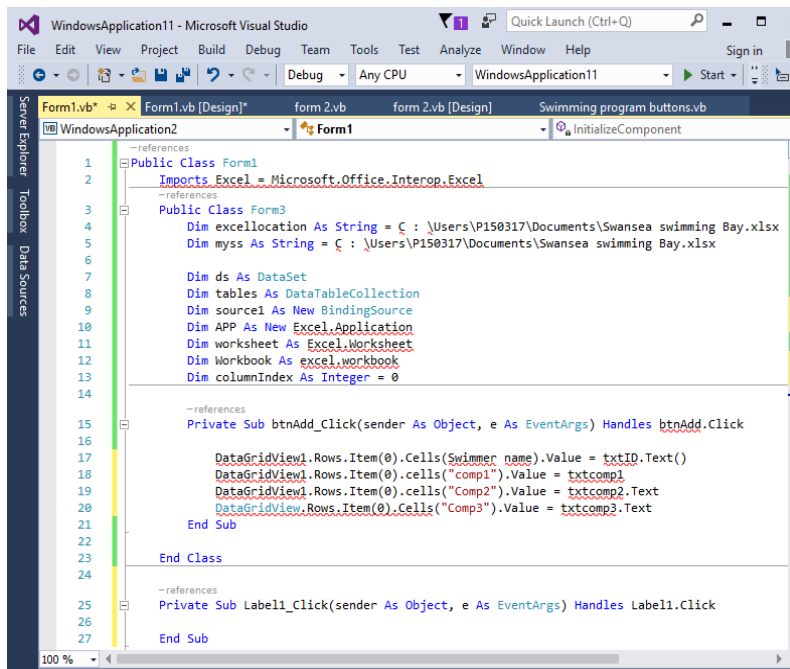


Swansea Swimming Bay code in visual studio



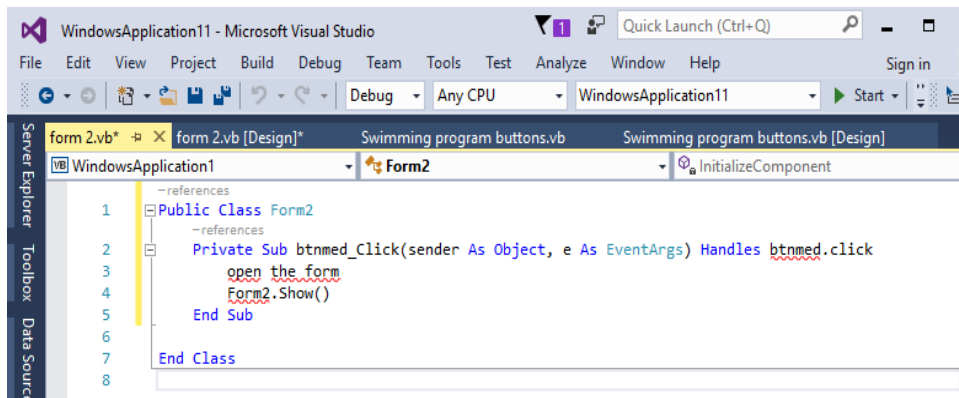
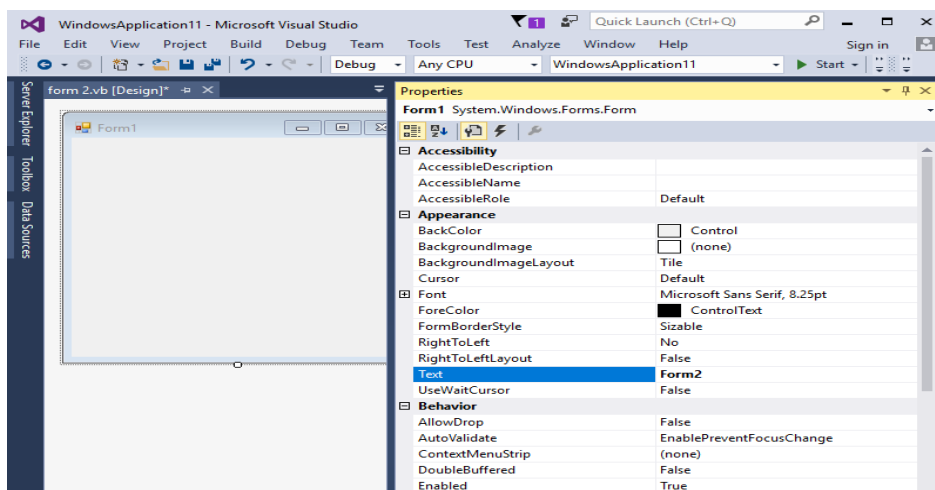
The screenshot above shows the code for the list boxes in visual basic, this code will send data from the excel spreadsheet which is named Swansea Swimming bay from the memory stick , it will send the data from the excel spreadsheet to visual basic in the listboxes format.





The screenshot above will allow data to be sent to the data grid.

Declaring the form



```

1  Public Class Form2
2      Private Sub btnmed_Click(sender As Object, e As EventArgs) Handles btnmed.Click
3          open the form
4          Form2.Show()
5      End Sub
6
7      Private Sub TextBox1_TextChanged(sender As Object, e As EventArgs) Handles Txtbx1.TextChanged
8          Print Name
9      End Sub
10
11     Private Sub Button1_Click(sender As Object, e As EventArgs) Handles inptbtn1.Click
12
13     End Sub
14
15     Private Sub TextBox2_TextChanged(sender As Object, e As EventArgs) Handles TextBox2.TextChanged
16
17     End Sub
18 End Class
19
20

```

This code shows that the button for the medals for boys has been declared and identified. The other code below shows the other text boxes that have been added into the program so that the data can be entered to see which medals the boy attained the most medals and his name.

Expected results for the program

Test table

Test	Expected	Result
Buttons	When button is clicked the value should appear in the input box	Errors in build
Sending data to VB	The excel database values should appear in the list boxes.	Errors in build
Calculate medal percentage	Value will be presented in textbox	Errors in build
Front crawl for boys	Value should appear	Errors in build
Butterfly for girls	The value should appear in the textbox	Errors in build
Send data to data grid	The data should appear in the data grid	Errors in build

Evaluation of Visual Basic

Visual basic is a great software to use to build small programs , its not that easy to use but it has various features within the application that will allow you to enhance the features of the program so that program can do more.

Visual basic allows you define properties so that the code can accept those expect those values and it recognise them when actions are being performed. In visual basic there are two types of properties that have to be defined , there is the text property and the design property the design property is very important as the same name should appear in the code so that its identified clearly.