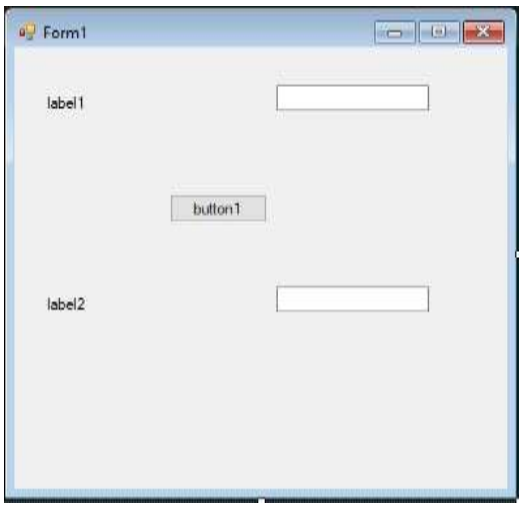
Department of Statistics & Computer Science
University of Kelaniya
Academic Year – 2018/2019
COSC 31112/ BECS 31242
Visual Programming

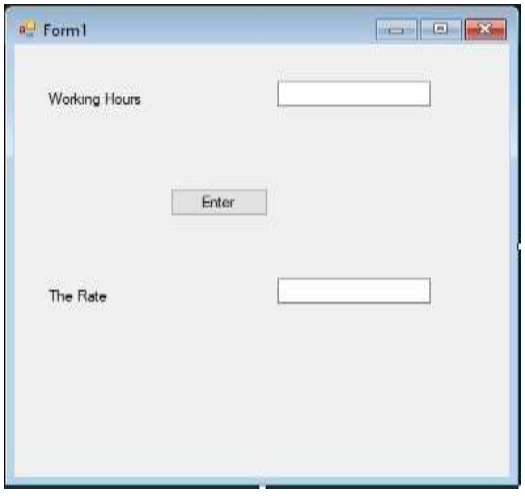
Practical Guide 02

1. The salary of the employee is to be calculated using the following procedure: If working hours are less than or equal to 40, the rate is 100 LKR per hour and if working hours are greater than 40, then the rate is 150 LKR per hour. Create a Windows form using **If Else** statements which takes the working hours as the input and with a button click the relevant rate should be displayed in a Text box.

   (i) Create a form with **two Labels, two Text boxes**, and a **button** as follows.



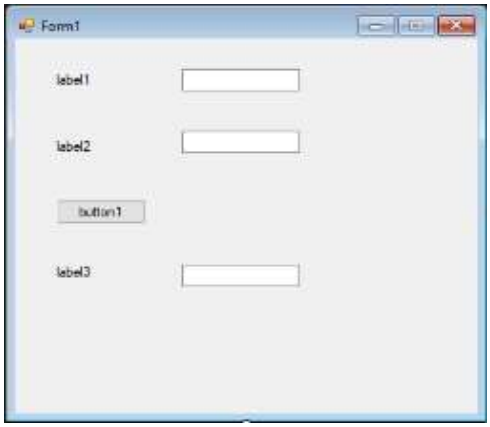
   (ii) Change the text of the labels as 'Working Hours' and 'The Rate', the names of text boxes as 'hours' and 'rate', and the text of the button as 'Enter'.



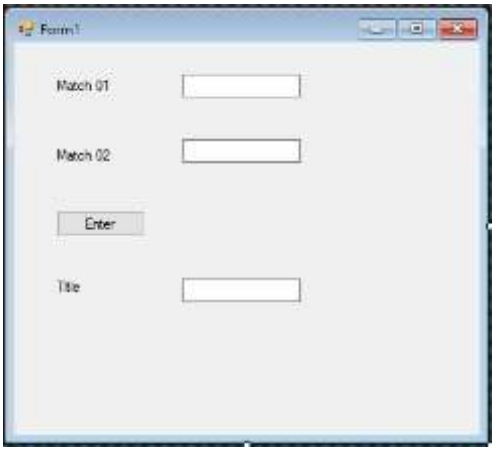
   (iii) **Write the necessary C# code** inside the button click event to determine and display the rate using If-Else statements.

2. A Player has to play two matches. If he wins only one match; he will be titled as an ‘Attacker’. If he wins both matches he will be titled as a ‘Champion’. Else he will be given the title ‘Sportsman’. Create a Windows form using **Nested If** statements which takes the facts; whether the player wins the two matches (As two separate inputs) and outputs the title of the Player in a Text box.

(i) Create a Windows form with **three labels** and **one button**.



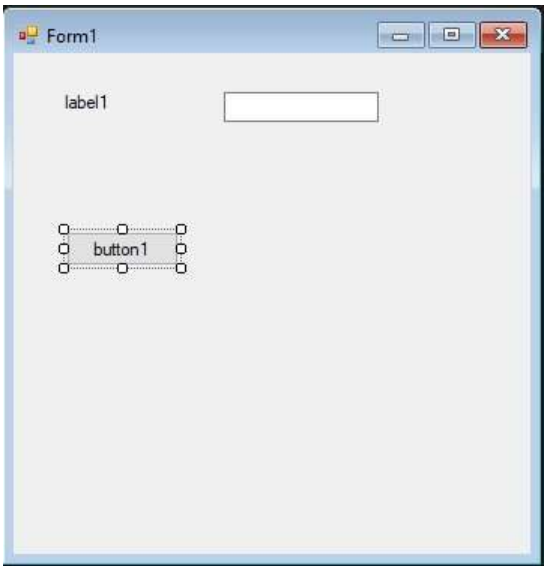
(ii) Change the text of the **three labels** as ‘Match 01’,’ Match 02’, and ‘Title’ and the text of the **button** as ‘Enter’.



(iii) **Implement the logic** using Nested If statements inside the button click event to assign the correct title based on match results.

3. Create a Windows form using **Switch** statements which takes a letter as the input and shows the output with a message box saying whether the letter is a vowel or not.

(i) Create a Windows form with a **label, text box**, and a **button**.



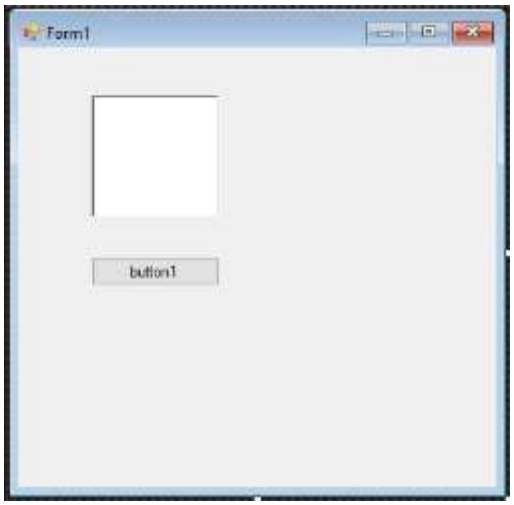
(ii) Change the text of the label to 'The Letter 'and the text of the button to 'Enter'.

(iii) Use a Switch statement in the button click event to check whether the entered letter is a vowel (A, E, I, O, U) and display an appropriate message.

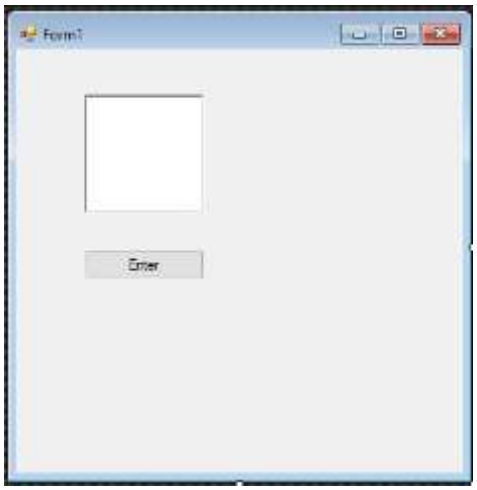
4. Repeat Problem 02 using the **Nested switch** in C#.

5. Print (0-9) digits in a rich text box using **while, For** and **do while** loops.

   (i) Create a Windows form with a Rich text box and a button.



   (ii) Change the text of the button to 'Enter'.



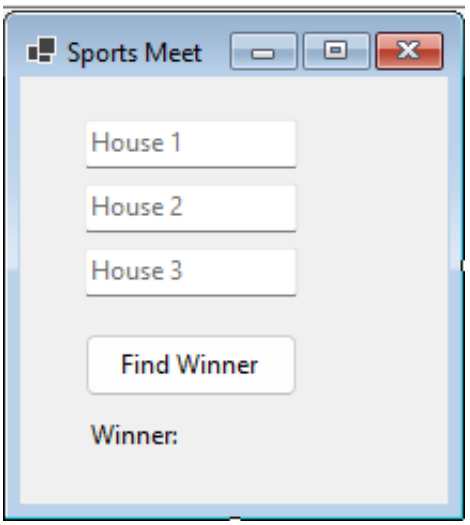
   (iii) **Write three separate implementations** using While, For, and Do-While loops inside the button click event.

6. Change the above code (Code for problem 05) just to print up to 5 using **Break**.

7. Change the code for problem 05 just to print digits (0-9) excluding 5 using **continue**.

8. A sports meet has three houses competing, and each house has earned a certain number of points. The house with the highest score is declared the winner.

(i) Create a **Windows Form** with **three Text Boxes, one Button, and one Label**.



(ii) Label the text boxes as ‘House 1’, ‘House 2’, and ‘House 3’ to input the scores.
(iii) Label the button as ‘Find Winner’.
(iv) Display the winner’s name and score in a MessageBox and update the label with the result.
(v) Use the Ternary Operator to determine the highest score and find the winning house inside the button-click event.
(vi) Handle invalid inputs (such as non-numeric values) gracefully by displaying an error message.