Andrew Youssef
10IS21

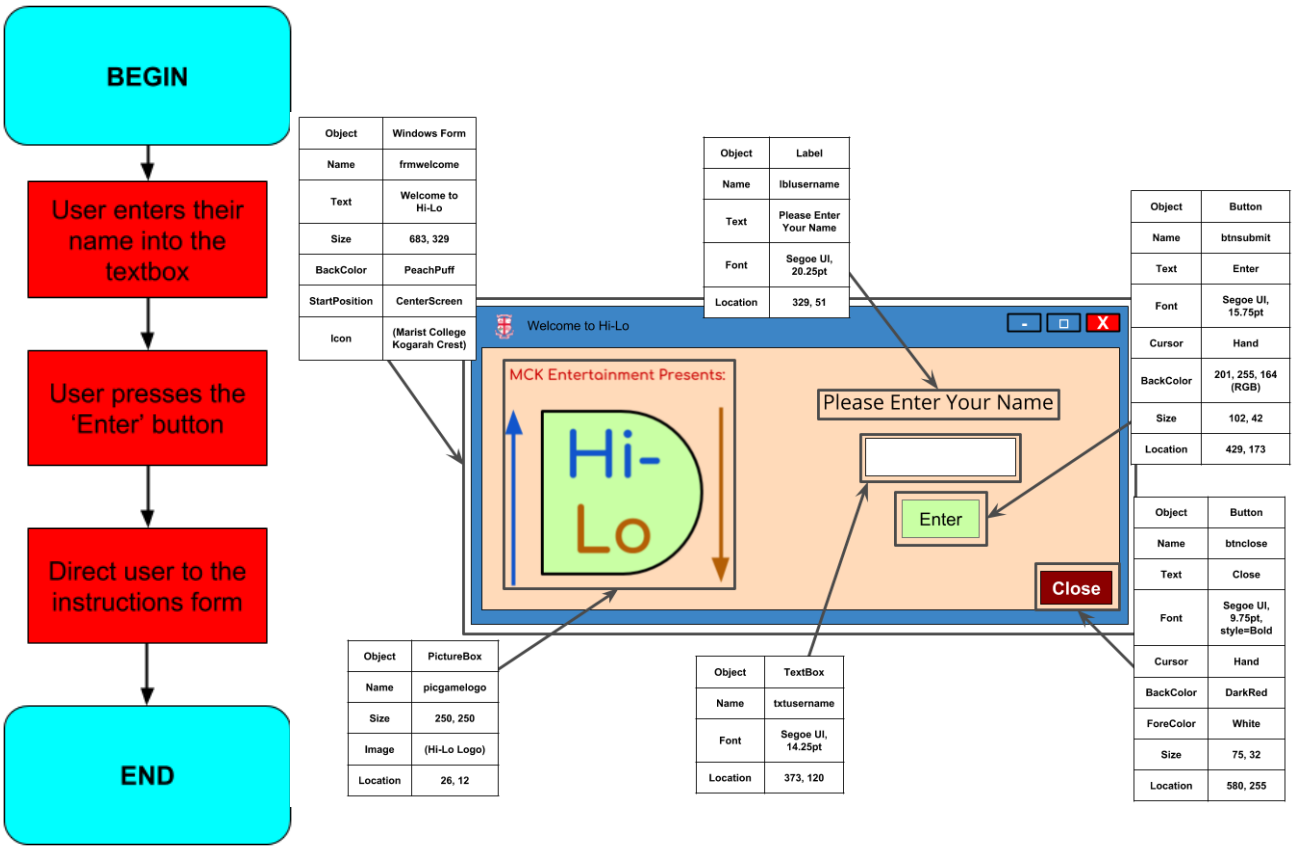
# Hi-Lo Game Programming Portfolio - Andrew Youssef

## ★ Define the Problem:

The Hi-Lo game is geared towards people aged 13-25, this is because of the rising interest in indie games. Hi-Lo is about the player using guesswork and their intuition to find the secret number. The game features 3 difficulties, these range from easy, between 1 to 20, medium, between 1 to 50, and the hard difficulty, between 1 to 100. This game has incredible replayability, as the user can continue trying to guess the secret number with less attempts and in a shorter amount of time.

## ★ Design the Solution

### Form 1:



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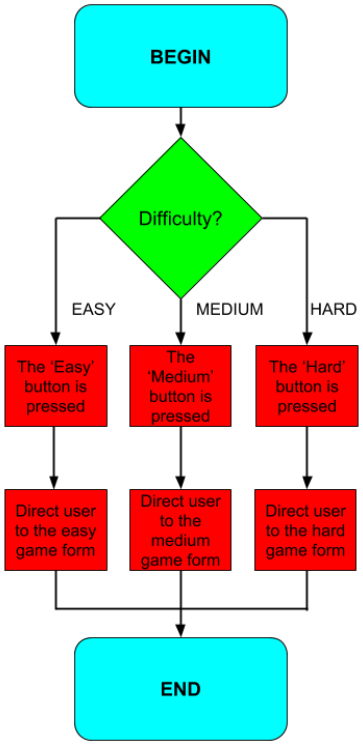
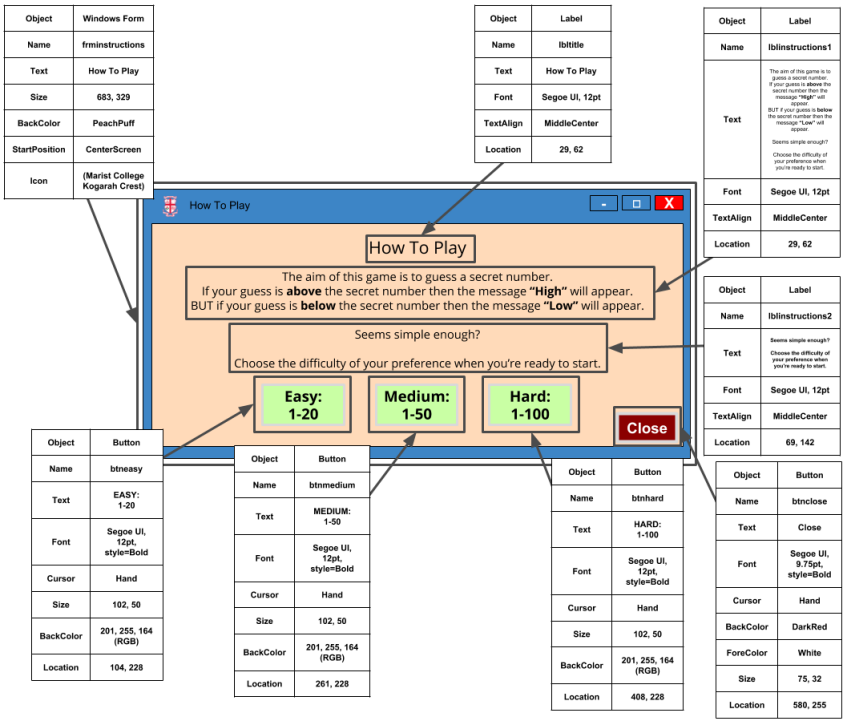
## Form 2:




| Object | Windows Form |
|---|---|
| Name | frminstructions |
| Text | How To Play |
| Size | 683, 329 |
| BackColor | PeachPuff |
| StartPosition | CenterScreen |
| Icon | (Marist College Kogarah Crest) |

| Object | Label |
|---|---|
| Name | lbltitle |
| Text | How To Play |
| Font | Segoe UI, 12pt |
| TextAlign | MiddleCenter |
| Location | 29, 62 |

| Object | Label |
|---|---|
| Name | lblinstructions1 |
| Text | The aim of this game is to guess a secret number. If your guess is above the secret number then the message "High" will appear. BUT if your guess is below the secret number then the message "Low" will appear. |
| Font | Segoe UI, 12pt |
| TextAlign | MiddleCenter |
| Location | 29, 62 |

| Object | Label |
|---|---|
| Name | lblinstructions2 |
| Text | Seems simple enough? Choose the difficulty of your preference when you're ready to start. |
| Font | Segoe UI, 12pt |
| TextAlign | MiddleCenter |
| Location | 69, 142 |

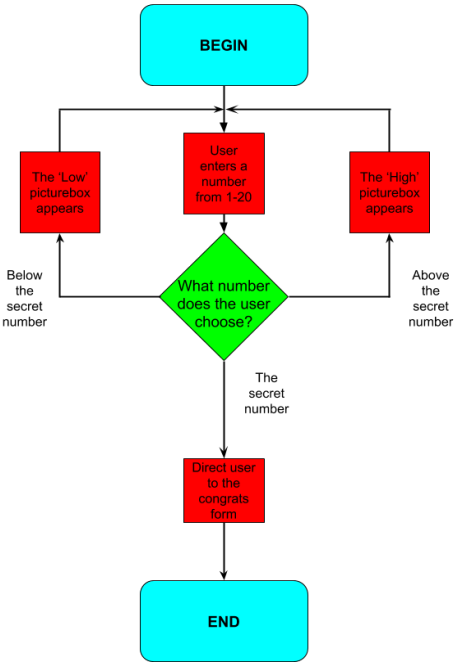
| Object | Button |
|---|---|
| Name | btneasy |
| Text | EASY: 1-20 |
| Font | Segoe UI, 12pt, style=Bold |
| Cursor | Hand |
| Size | 102, 50 |
| BackColor | 201, 255, 164 (RGB) |
| Location | 104, 228 |

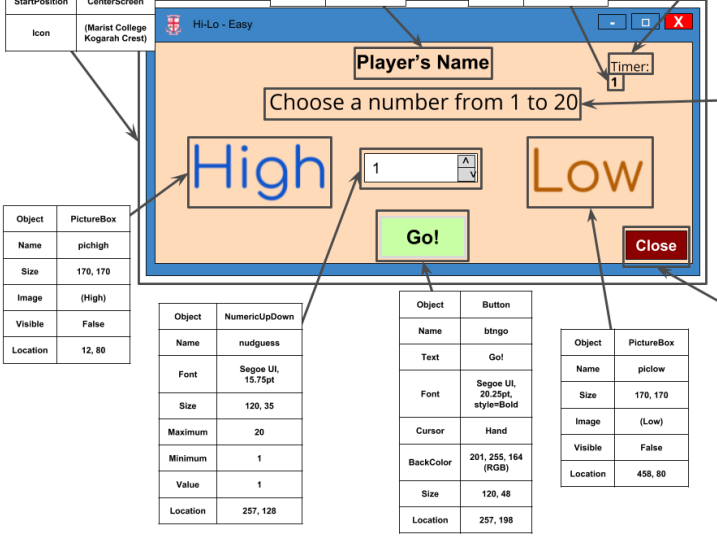
| Object | Button |
|---|---|
| Name | btnmedium |
| Text | MEDIUM: 1-50 |
| Font | Segoe UI, 12pt, style=Bold |
| Cursor | Hand |
| Size | 102, 50 |
| BackColor | 201, 255, 164 (RGB) |
| Location | 261, 228 |

| Object | Button |
|---|---|
| Name | btnhard |
| Text | HARD: 1-100 |
| Font | Segoe UI, 12pt, style=Bold |
| Cursor | Hand |
| Size | 102, 50 |
| BackColor | 201, 255, 164 (RGB) |
| Location | 408, 228 |

| Object | Button |
|---|---|
| Name | btnclose |
| Text | Close |
| Font | Segoe UI, 9.75pt, style=Bold |
| Cursor | Hand |
| BackColor | DarkRed |
| ForeColor | White |
| Size | 75, 32 |
| Location | 580, 255 |

## Form 3:




| Object | Windows Form |
|---|---|
| Name | frmeasygame |
| Text | Hi-Lo - Easy |
| Size | 683, 329 |
| BackColor | PeachPuff |
| StartPosition | CenterScreen |
| Icon | (Marist College Kogarah Crest) |

| Object | Label |
|---|---|
| Name | lblname |
| Text | Player's Name |
| Font | Segoe UI, 20.25pt, style=Bold |
| Location | 218, 6 |

| Object | Label |
|---|---|
| Name | lbleasygametim |
| Text | 1 |
| Font | Segoe UI, 11.25pt, style=Bold |
| Location | 548, 29 |

| Object | Label |
|---|---|
| Name | lbltimetitle |
| Text | Timer: |
| Font | Segoe UI, 11.25pt |
| Location | 546, 9 |

| Object | Label |
|---|---|
| Name | lblinstructions |
| Text | Choose a number from 1 to 20 |
| Font | Segoe UI, 21.75pt |
| Location | 126, 54 |

| Object | PictureBox |
|---|---|
| Name | pichigh |
| Size | 170, 170 |
| Image | (High) |
| Visible | False |
| Location | 12, 80 |

| Object | NumericUpDown |
|---|---|
| Name | nudguess |
| Font | Segoe UI, 15.75pt |
| Size | 120, 35 |
| Maximum | 20 |
| Minimum | 1 |
| Value | 1 |
| Location | 257, 128 |

| Object | Button |
|---|---|
| Name | btngo |
| Text | Go! |
| Font | Segoe UI, 20.25pt, style=Bold |
| Cursor | Hand |
| BackColor | 201, 255, 164 (RGB) |
| Size | 120, 48 |
| Location | 257, 198 |

| Object | PictureBox |
|---|---|
| Name | piclow |
| Size | 170, 170 |
| Image | (Low) |
| Visible | False |
| Location | 458, 80 |

| Object | Button |
|---|---|
| Name | btnclose |
| Text | Close |
| Font | Segoe UI, 9.75pt, style=Bold |
| Cursor | Hand |
| BackColor | DarkRed |
| ForeColor | White |
| Size | 75, 32 |
| Location | 580, 255 |

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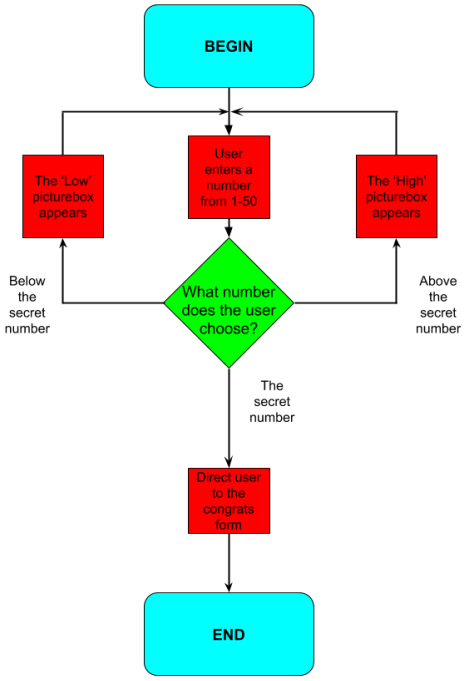
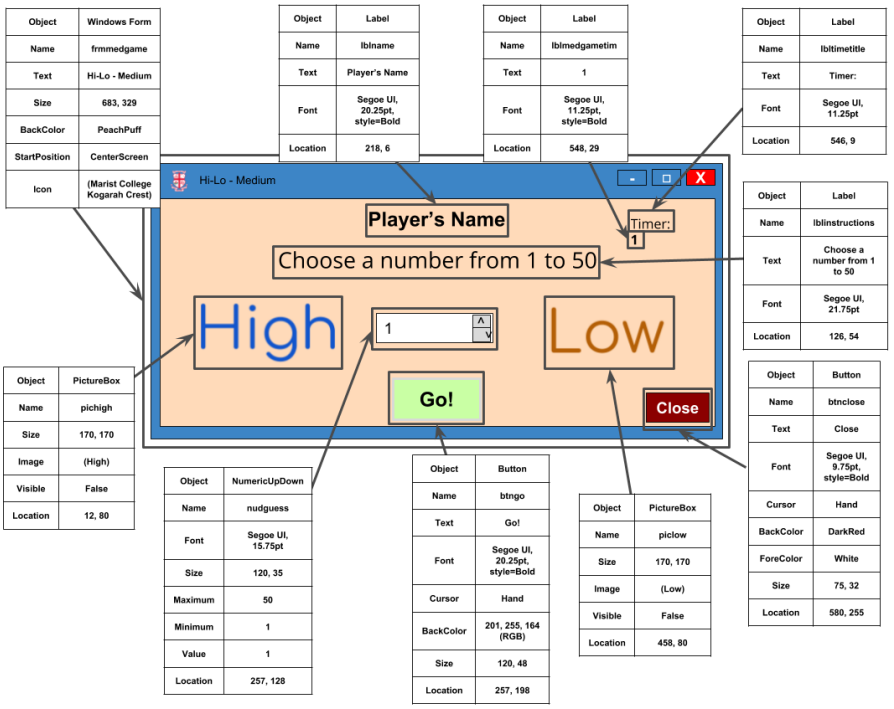
## Form 4:




| Object | Windows Form |
|---|---|
| Name | frmmedgame |
| Text | Hi-Lo - Medium |
| Size | 683, 329 |
| BackColor | PeachPuff |
| StartPosition | CenterScreen |
| Icon | (Marist College Kogarah Crest) |

| Object | Label |
|---|---|
| Name | lblname |
| Text | Player's Name |
| Font | Segoe UI, 20.25pt, style=Bold |
| Location | 218, 6 |

| Object | Label |
|---|---|
| Name | lblmedgametim |
| Text | 1 |
| Font | Segoe UI, 11.25pt, style=Bold |
| Location | 548, 29 |

| Object | Label |
|---|---|
| Name | lbltimetitle |
| Text | Timer: |
| Font | Segoe UI, 11.25pt |
| Location | 546, 9 |

| Object | Label |
|---|---|
| Name | lblinstructions |
| Text | Choose a number from 1 to 50 |
| Font | Segoe UI, 21.75pt |
| Location | 126, 54 |

| Object | PictureBox |
|---|---|
| Name | pichigh |
| Size | 170, 170 |
| Image | (High) |
| Visible | False |
| Location | 12, 80 |

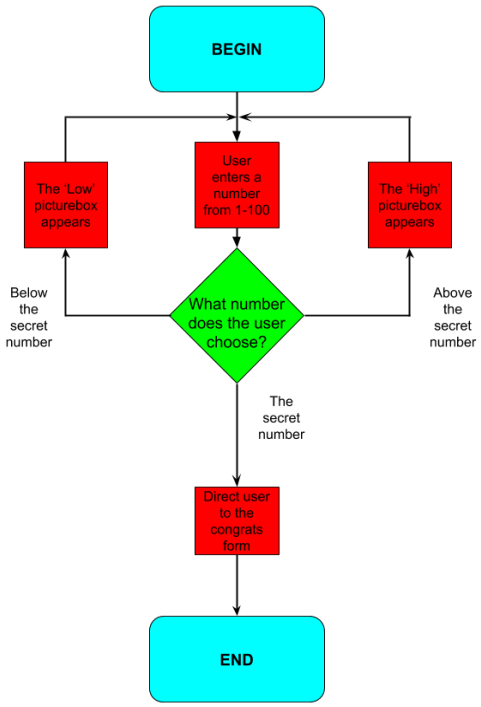
| Object | Button |
|---|---|
| Name | btnclose |
| Text | Close |
| Font | Segoe UI, 9.75pt, style=Bold |
| Cursor | Hand |
| BackColor | DarkRed |
| ForeColor | White |
| Size | 75, 32 |
| Location | 580, 255 |

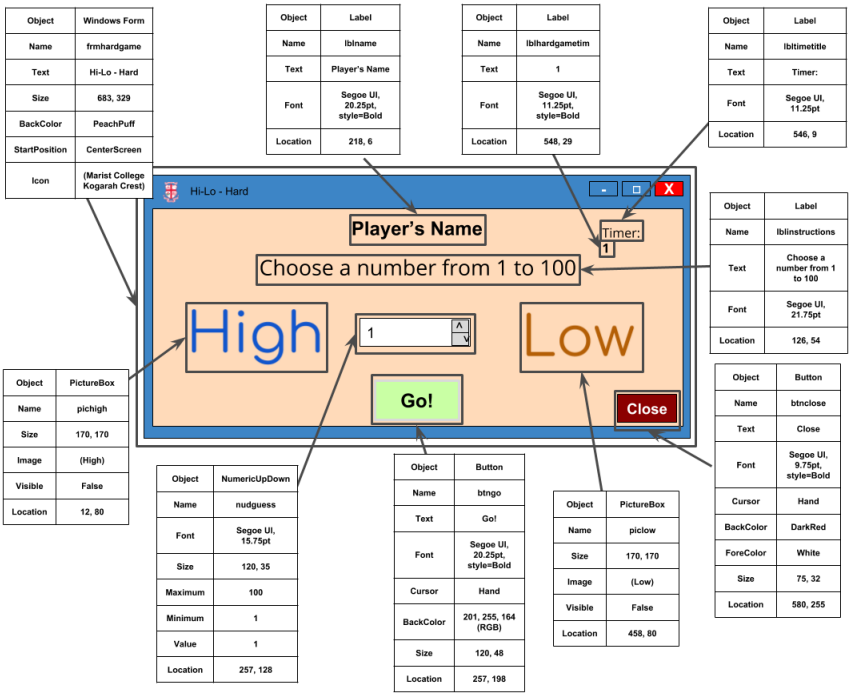
| Object | NumericUpDown |
|---|---|
| Name | nudguess |
| Font | Segoe UI, 15.75pt |
| Size | 120, 35 |
| Maximum | 50 |
| Minimum | 1 |
| Value | 1 |
| Location | 257, 128 |

| Object | Button |
|---|---|
| Name | btngo |
| Text | Go! |
| Font | Segoe UI, 20.25pt, style=Bold |
| Cursor | Hand |
| BackColor | 201, 255, 164 (RGB) |
| Size | 120, 48 |
| Location | 257, 198 |

| Object | PictureBox |
|---|---|
| Name | piclow |
| Size | 170, 170 |
| Image | (Low) |
| Visible | False |
| Location | 458, 80 |

## Form 5:




| Object | Windows Form |
|---|---|
| Name | frmhardgame |
| Text | Hi-Lo - Hard |
| Size | 683, 329 |
| BackColor | PeachPuff |
| StartPosition | CenterScreen |
| Icon | (Marist College Kogarah Crest) |

| Object | Label |
|---|---|
| Name | lblname |
| Text | Player's Name |
| Font | Segoe UI, 20.25pt, style=Bold |
| Location | 218, 6 |

| Object | Label |
|---|---|
| Name | lblhardgametim |
| Text | 1 |
| Font | Segoe UI, 11.25pt, style=Bold |
| Location | 548, 29 |

| Object | Label |
|---|---|
| Name | lbltimetitle |
| Text | Timer: |
| Font | Segoe UI, 11.25pt |
| Location | 546, 9 |

| Object | Label |
|---|---|
| Name | lblinstructions |
| Text | Choose a number from 1 to 100 |
| Font | Segoe UI, 21.75pt |
| Location | 126, 54 |

| Object | PictureBox |
|---|---|
| Name | pichigh |
| Size | 170, 170 |
| Image | (High) |
| Visible | False |
| Location | 12, 80 |

| Object | Button |
|---|---|
| Name | btnclose |
| Text | Close |
| Font | Segoe UI, 9.75pt, style=Bold |
| Cursor | Hand |
| BackColor | DarkRed |
| ForeColor | White |
| Size | 75, 32 |
| Location | 580, 255 |

| Object | NumericUpDown |
|---|---|
| Name | nudguess |
| Font | Segoe UI, 15.75pt |
| Size | 120, 35 |
| Maximum | 100 |
| Minimum | 1 |
| Value | 1 |
| Location | 257, 128 |

| Object | Button |
|---|---|
| Name | btngo |
| Text | Go! |
| Font | Segoe UI, 20.25pt, style=Bold |
| Cursor | Hand |
| BackColor | 201, 255, 164 (RGB) |
| Size | 120, 48 |
| Location | 257, 198 |

| Object | PictureBox |
|---|---|
| Name | piclow |
| Size | 170, 170 |
| Image | (Low) |
| Visible | False |
| Location | 458, 80 |

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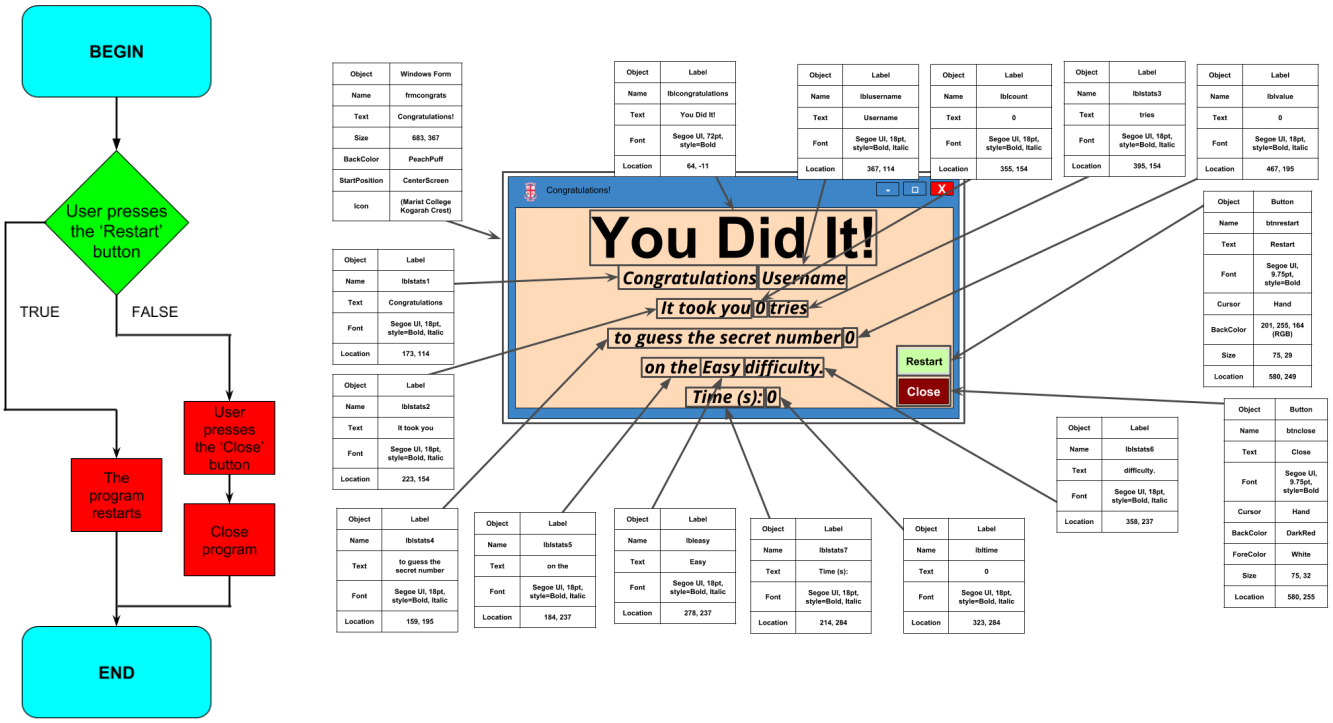
**Form 6:**




★ **Produce the Solution:**

See 'IST_TASK_1_200HR-HI_LO_GAME_-ANDREW_YOUSSEF'

★ **Evaluate the Solution:**

The challenges/issues I experienced was:

1. Figuring out the randomisation code for a number between 1 and 20.
2. Putting the user's name into the game forms and the congratulations form.
3. Adding a restart button into the congratulations form.
4. Figuring out how to make the application understand what to do when the guess is above, under or the same as the random number.
5. Figuring out how to add music in the background.

Those challenges/issues were overcome by:

1. Researching how to randomise the number by using a button.

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2. Referring to Activity 11 in the ‘Visual Basic Lesson Activities’ booklet.
3. Researching how to program a button to restart the program.
4. Using trial-and-error to figure out how to program the ‘high’ and ‘low’ messages by using “IF” statements.
5. Researching how to add music in the background of the application.