List of controls:

* Form: Presidents
* 16 textboxes for each president
* 16 radio buttons for each president
* Group box: Holds the web browser control
* Web browser control: For each president we display their Wikipedia page based on if we click their radio button
* Picture box: Hold each president’s photo based on if we click on their radio button
* Group box: Another group box to hold the radio buttons for the parties so we can filter the presidents
* 5 radio buttons for the different parties
* Progress bar: shows timer for how long user has to enter president’s correct numbers
* Error provider: If the user does not enter the correct number in the text box we don’t let them leave the textbox until they enter it correctly
* Tool Tip: Tooltip for each textbox to show “Which # President”
* Timer: Timer used to countdown as soon as the user presses a textbox to enter text for the number president
* Set one class variable for the timerStartEnd which sees if we can start the timer or not based on if a text box was getting a value input into it (boolean set to false initially)

Presidents form constructor {

Initialize component

Registry try and catch

Suppress the browsers script errors

Go through controls and set delegates for only the textboxes to ensure

That they have only entered a number in the textboxes and make sure they have

Entered the correct number so they can move on to the next text box

(TxtBoxEmpty\_\_TextChanged, TxtBoxEmpty\_\_Validating, TxtBoxNum\_\_KeyPress,

TxtBox\_\_Leave)

Also set the tooltip for each textbox within the controls loop

Set the tags for the presidents textboxes so we can use them to validate what the user

Has put in the textboxes in the future

Have the default be set to president Harrison and set his image, his

radio button being checked, the web browser being set to Harrisons Wikipedia page,

and the text of the group box to be set as his Wikipedia page link as well as the all

button being checked by default for the party group box

Set a delegate method for each president if their radio button was selected

(PresidentButton\_\_CheckedChanged)

Have a mouse enter and mouse leave delegate to increase the size of the image if the

User hovers over it and if they don’t set it back to the original size

Delegate method for the parties and see which one was selected to filter the

Presidents (PartyButton\_\_CheckedChanged)

Web browser document completed delegate to get all of our anchor tags to set their

Tooltip

Exit button delegate to close the form when the user wants to leave

Disable the exit button

Set the timer interval to 1,000

Set the timer delegate for the countdown

Set the progress bar maximum value to 240

Set the progress bar value to the progress bar maximum value

}

Timer1\_\_Tick{

Declare boolean to see if all textboxes are correct based on tag for each president’s

Textbox (start as true)

If the progress bar value is not equal to 0 then

Decrement the progress bar value

Go through all the controls and if they are text boxes then

We check if the text in the text box is not equal to the text box tag then

We set the all correct boolean we declared above to false

If the all correct boolean is true then

We stop the timer

Navigate the web browser to the fireworks GIF

Show the text for the groupbox as the URL for the GIF

Enable the exit button

Go through all the controls and if the control is a textbox then

Take away the delegate methods for validating the textboxes

Otherwise if the progress bar value is 0 then

We stop the timer and set the timerStartEnd boolean to false which we declared in the constructor

Go through the controls and if the control is a textbox

Make the text say 0 for all the textboxes

Reset the progress bar value to the maximum value

}

ExitButton\_\_Click {

Leave the application (Application.Exit())

}

PresidentButton\_\_CheckedChanged{

Have conditional for if the radio button is checked then within that

Have 16 conditionals to see which presidents radio button was selected

Within those conditionals if that president is checked then we set their image, set their

Wikipedia page, and set the group box text to the web browser to the link

Of their wikipedia page

}

PartyButton\_\_CheckedChanged {

Have conditional for if the radio button is checked then within that

Have 5 conditionals to see which party was selected

For each conditional based on what party is clicked make some presidents radio buttons

Not visible or visible based on their party to filter them

}

PictureBox\_\_MouseEnter {

Whatever president we are on their picture box should increase by two times

When we hover over their image so we multiply the picture box size by 2 (width

And height)

}

PictureBox\_\_MouseLeave {

Whatever president we are on their picture box should decrease back to their original

Size so we divide the picture box size by 2 now width and height) when they stop

Hovering over the image

}

TxtBoxEmpty\_\_TextChanged{

If the text box text is 0 or an empty string then

Do not set an error

If the timerStartEnd boolean is true start the timer

}

TxtBox\_\_Leave{

If the textbox text is nothing

Don’t set an error and set the text to 0 when they leave the text box

Otherwise if the text box text is not equal to the text box tag we set an error saying

It’s the wrong number

}

TxtBoxEmpty\_\_Validating {

If the text box text is 0 or nothing then we do not set an error and don’t do a causes

validation

(e.Cancel = false)

Else if the textbox text is not equal to the text box tag we do a causes validation

(e.Cancel = true)

Otherwise we do not set an error and set e.Cancel = false so no causes validation

Happens

}

TxtBoxNum\_\_KeyPress{

Set e.handled to true

Set the class scoped variable timerStartEnd to true so we can

Eventually start the timer in the TxtBoxEmpty\_\_TextChanged

Method

If the character is a digit or a backspace character we set

Handled to false

}

webBrowser\_\_DocumentCompleted{

Declare htmlElementCollection variable

Get all of the anchor tags from GetElementsByTagName and store it in the

htmlElementCollection variable

Loop for all the anchor tags and set their tooltips for “Professor Schuh for President!”

With SetAttribute

}