

# WORKING WITH GITHUB

## VERSION CONTROL

This needs to be taught as content area 5 of the Digital Production T-level, and the use of these technologies are a starting foundation for all of the other technologies which need to be delivered on this qualification.

Students shouldn't begin coding, web development or game development until they have created and committed a repository for their project and invited relevant collaborators.

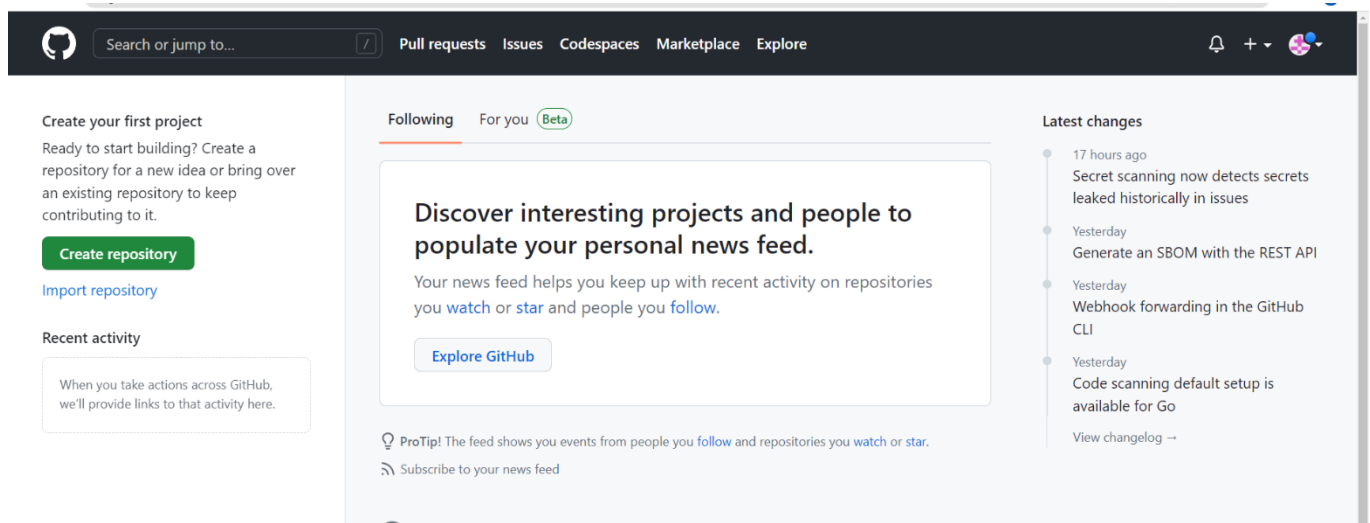
Links to a Github Repository with appropriately commented commits can be provided to external examiners as evidence of a student's ability to solve technical problems and collaborate with other team members, as well as proficiency in reviewing, testing and improving code.

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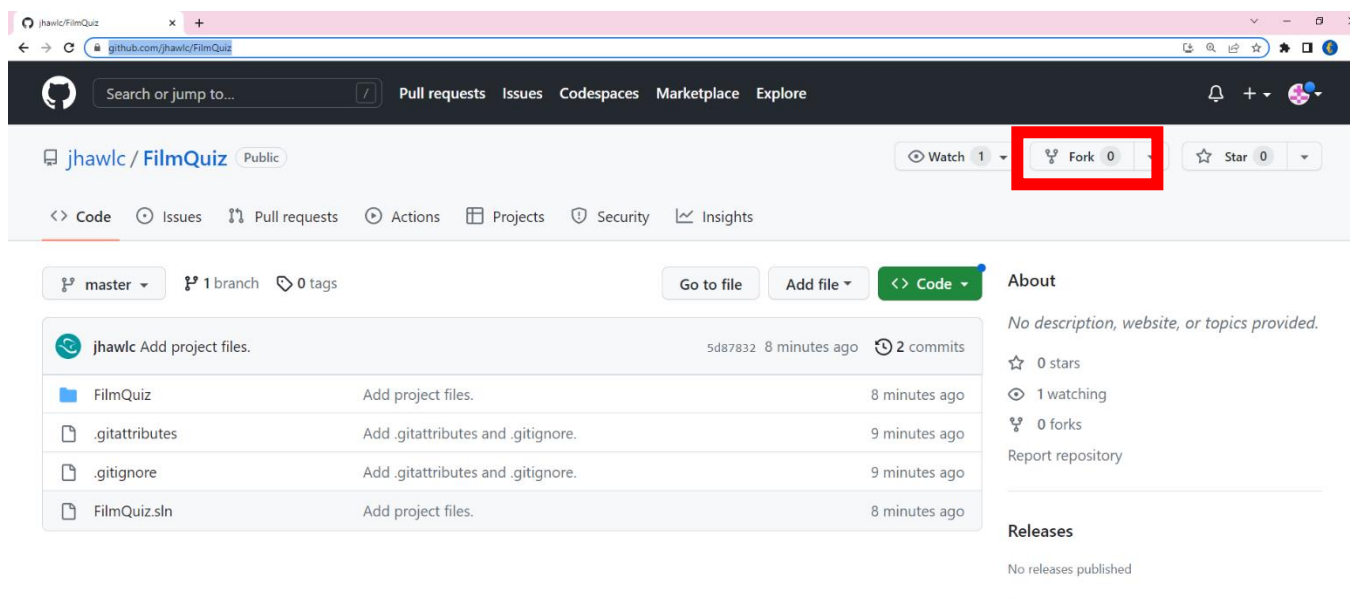
# Create a GitHub account

Go to [github.com](https://github.com) and create an account if you haven't already



## Fork the FilmQuiz

Go to <https://github.com/jhawlc/FilmQuiz>

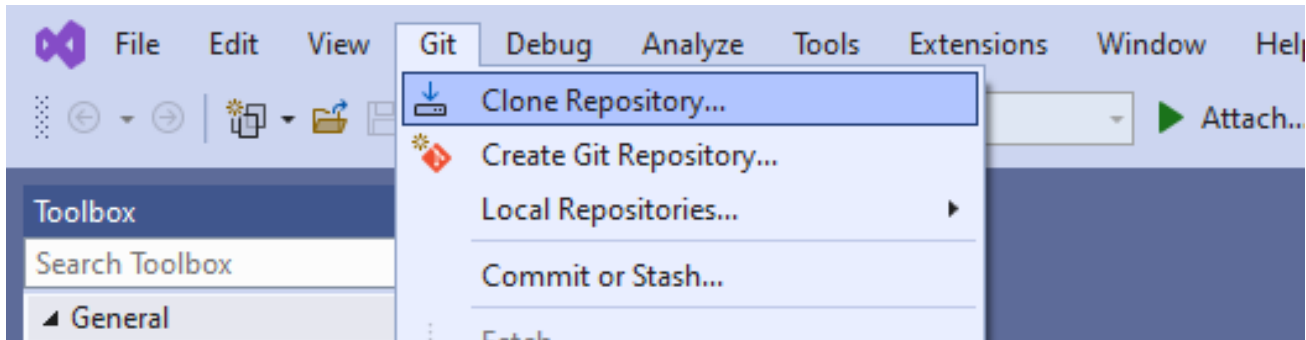


Click on **'Fork'** at the top right

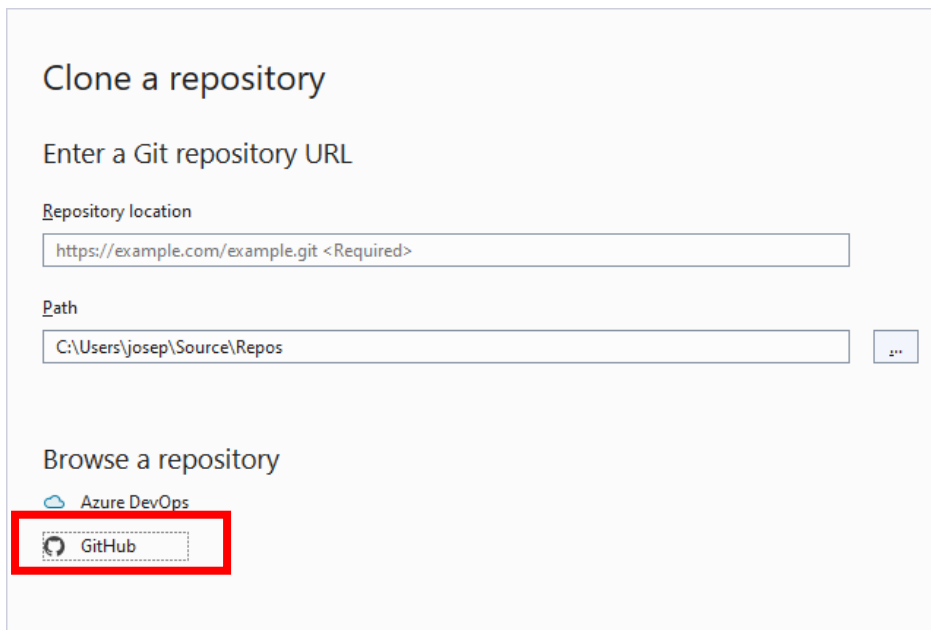
Then **'Create Fork'**

## Clone the Film Quiz

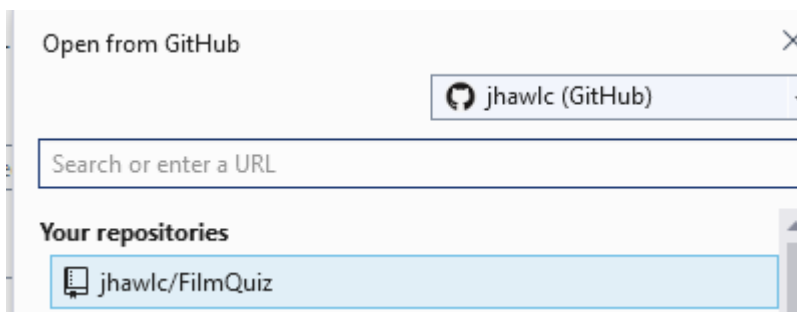
Open **Visual Studio** (not visual studio code)



Select **Git>Clone Repository**

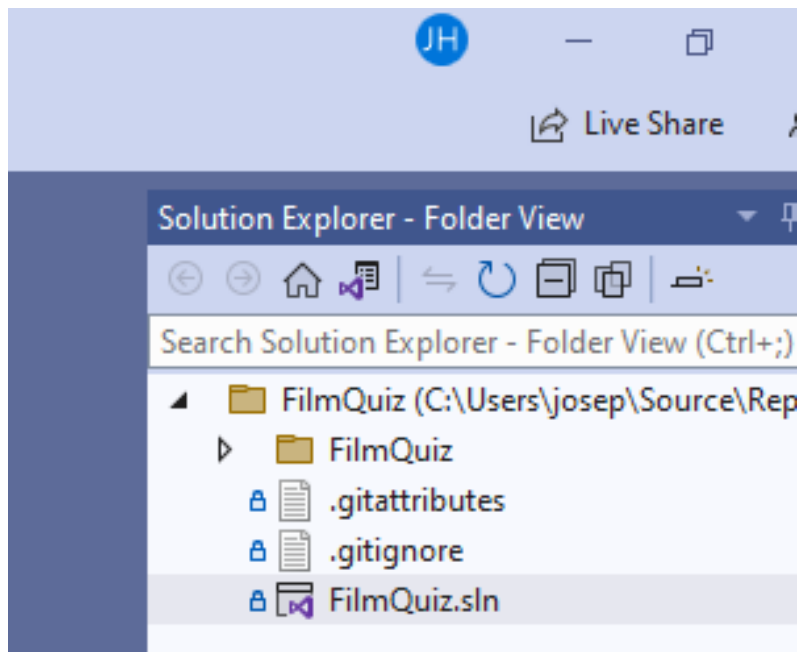


Then choose '**Github**' (you may need to sign in on a browser to do this. Make sure you default browser is Chrome and not IE)



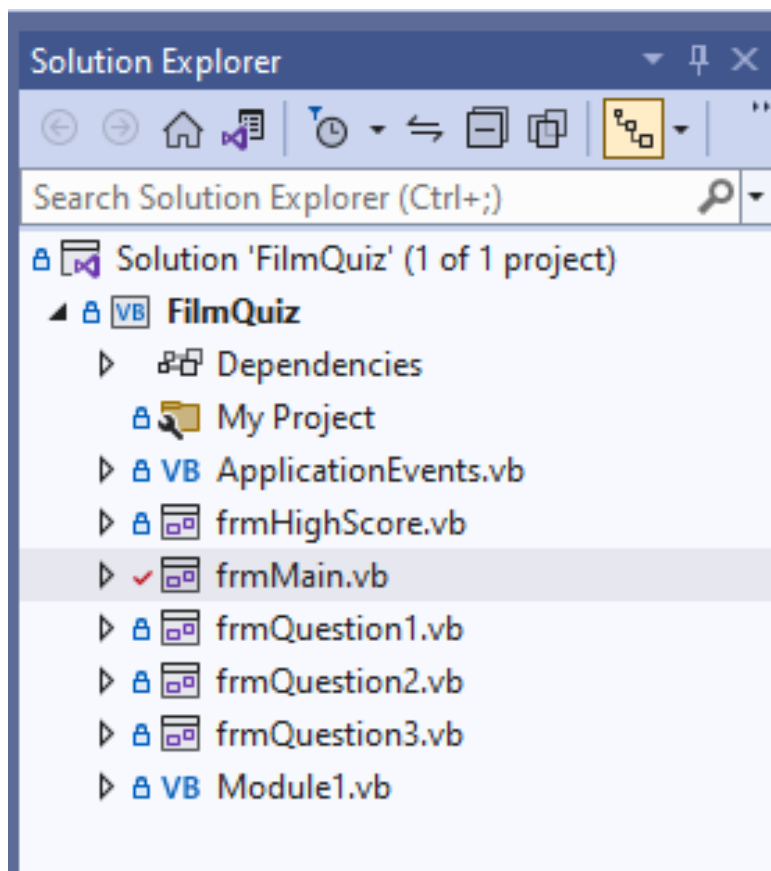
Then clone **jhawlc/FilmQuiz**

## Opening the Project



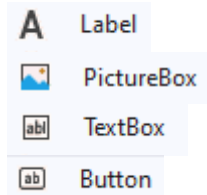
In the Solution Explorer on the right, double click the '**FilmQuiz.sln**' file to open the project

This should open the main project with five forms and a module. Start with **frmMain**



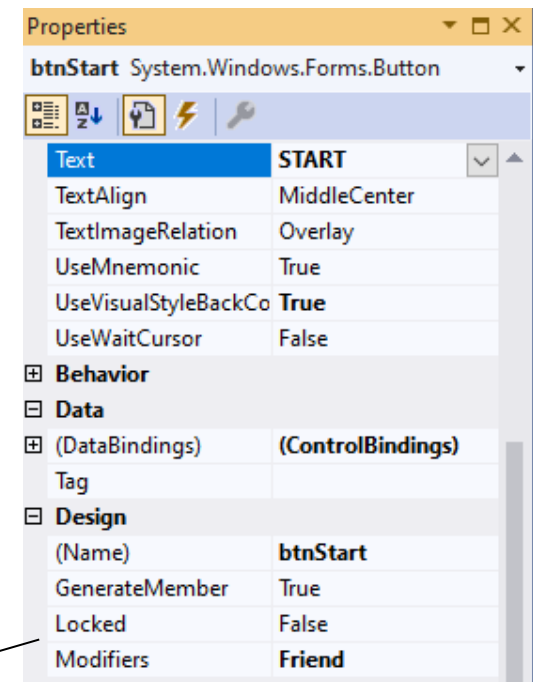
## Designing frmMain frmMain.vb

From the toolbox on the left:



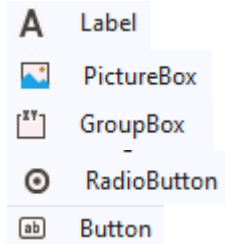
### Named Controls:

- txtPlayerName
- btnQuit
- btnStart



## Designing the Question forms

From the toolbox on the left:



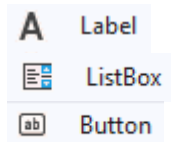
### Named Controls:

- btnAnswer1
- btnAnswer2
- btnAnswer3
- btnAnswer4
- btnNext

The screenshot shows a Windows application window titled "Breakfast at Tiffany's". The main content area has a light beige background and contains the question "In What Year Was Audrey Hepburn Born?". To the left of the question is a black and white photograph of Audrey Hepburn as Holly Golightly. To the right of the question is a vertical list of four radio button options: 1920, 1921, 1931, and 1935. The "1920" option is selected, indicated by a green dot. To the right of the list is another black and white photograph of Audrey Hepburn. At the bottom right of the form is a button labeled "Next".

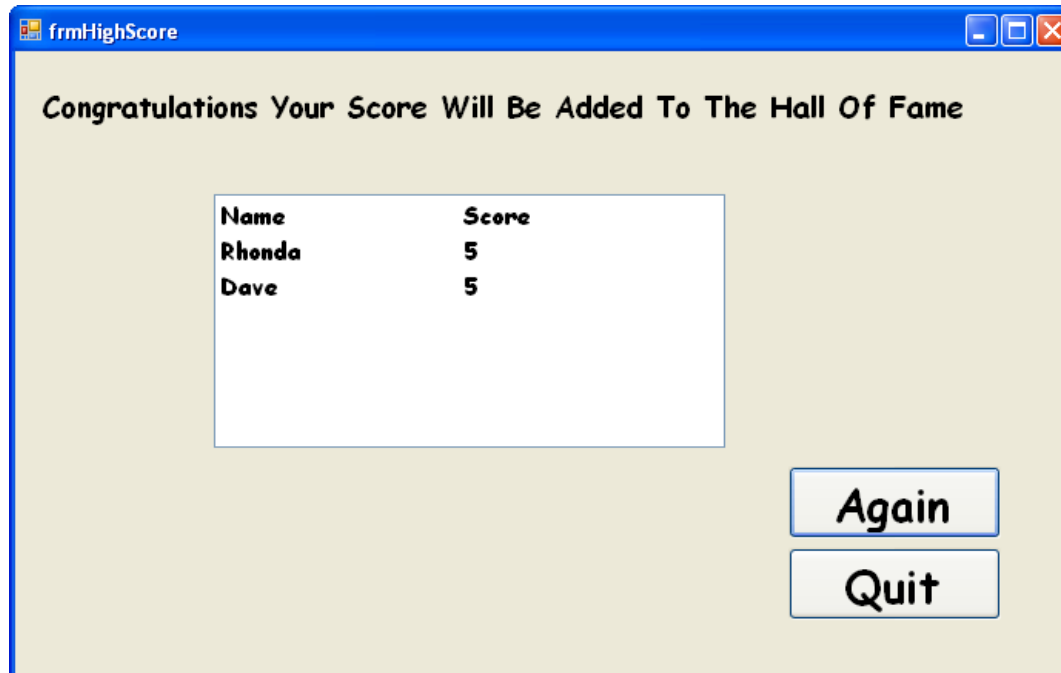
## Designing the High Score Form

From the toolbox on the left:



### Named Controls:

- IstHighScore
- btnAgain
- btnQuit

The screenshot shows a Windows form titled 'frmHighScore'. The form has a light beige background and a blue border. At the top, it displays the text 'Congratulations Your Score Will Be Added To The Hall Of Fame'. Below this text is a table with two columns: 'Name' and 'Score'. The table contains two rows of data: 'Rhonda' with a score of '5' and 'Dave' with a score of '5'. At the bottom right of the form, there are two buttons: 'Again' and 'Quit', stacked vertically.

Name	Score
Rhonda	5
Dave	5



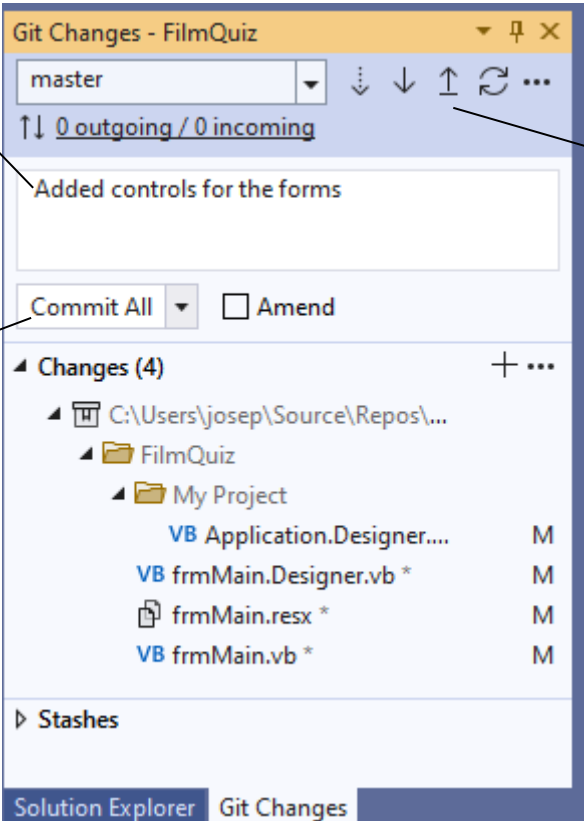
## Committing to Github

Go to git changes on the right

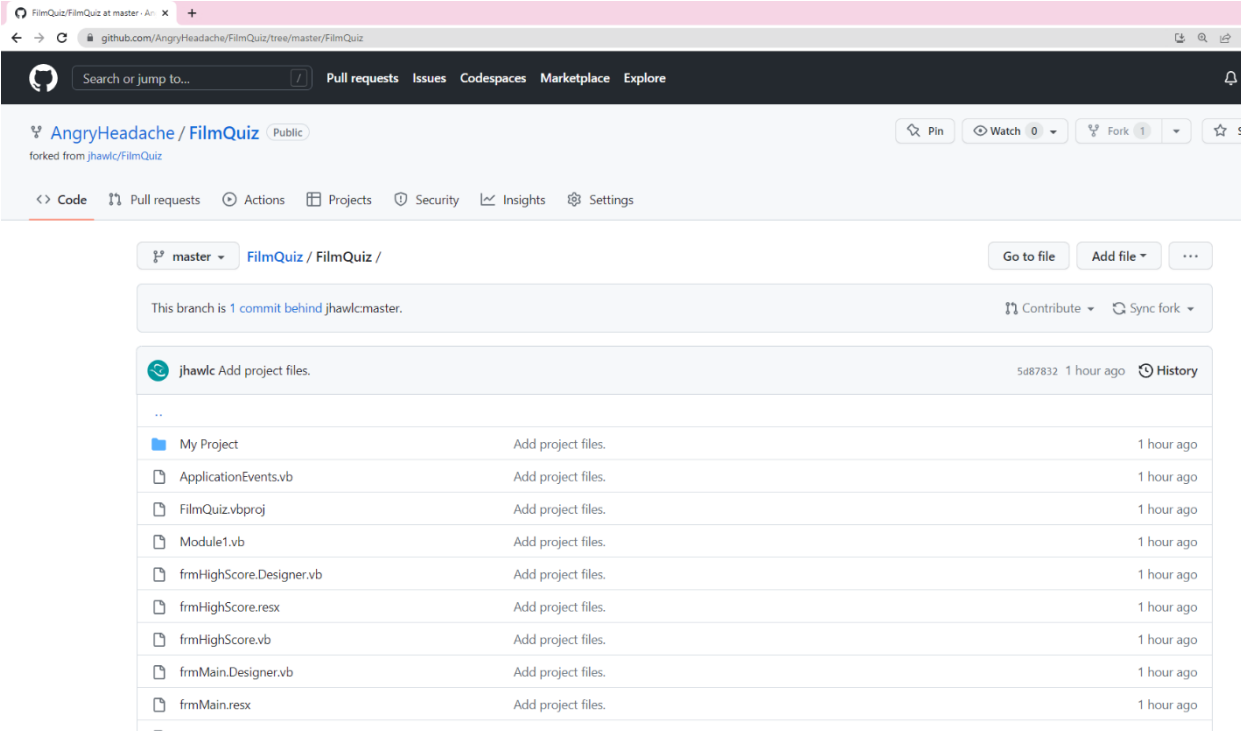
1. Add a message

2. Click on 'Commit All'

3. Click on the arrow to push to github

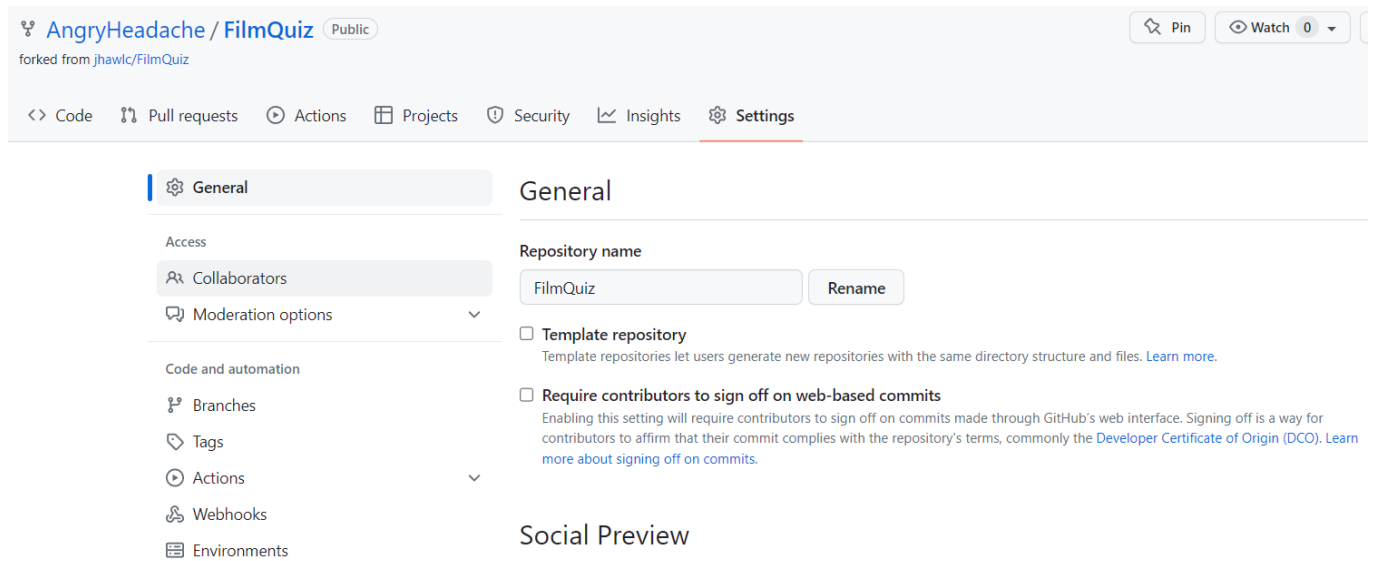


4. Go to github in your browser and check that the files have updated. Do this regularly.

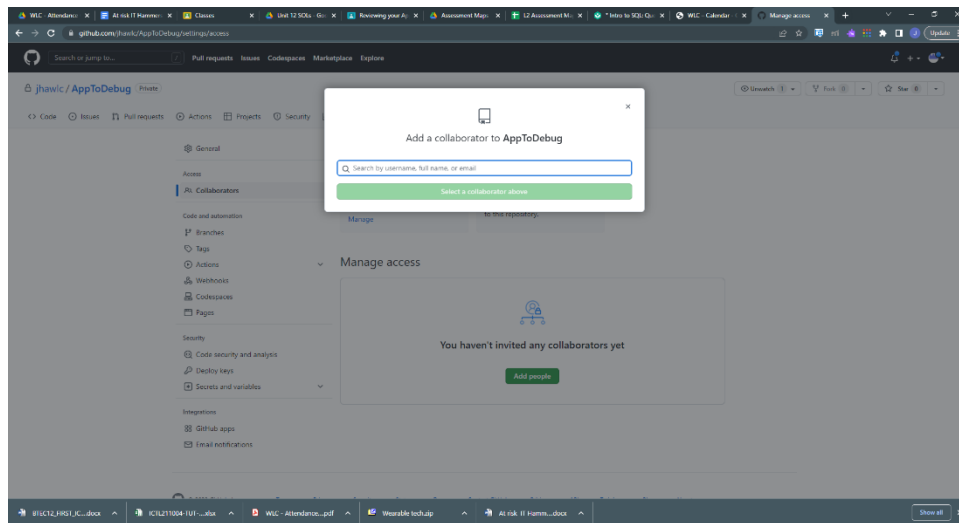


# Collaborating on Github

## Go to **Settings>Collaborators**

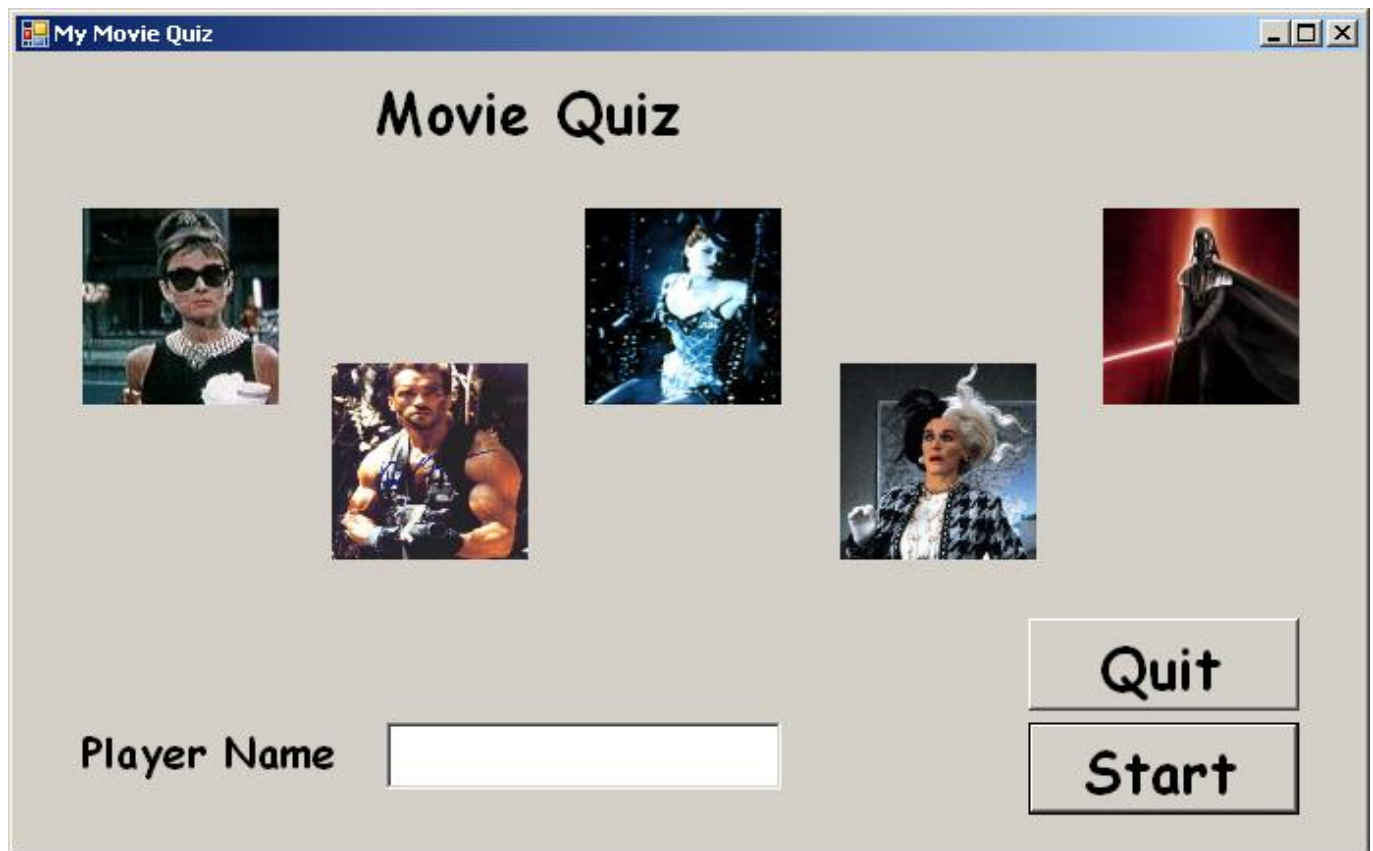


## Add **jhawlc** as a collaborator.



## Coding the Film Quiz

- You will be extending this project with code



### YOU WILL BE

- Creating forms to display a movie question with radio button responses
- Using a global variable for player name and score

### THE MODULE CODE

▶ VB Module1.vb

- Declare the following public variables

```
Public playerName As String  
Public playerScore As Integer
```

## THE MAIN FORM



frmMain.vb

Double Click on the **Start** button to view the code. Add the below:

```
playerScore = 0  
playerName = txtName.Text  
frmQuestion1.Show()  
  
Me.Hide()
```

## Quit the Quiz

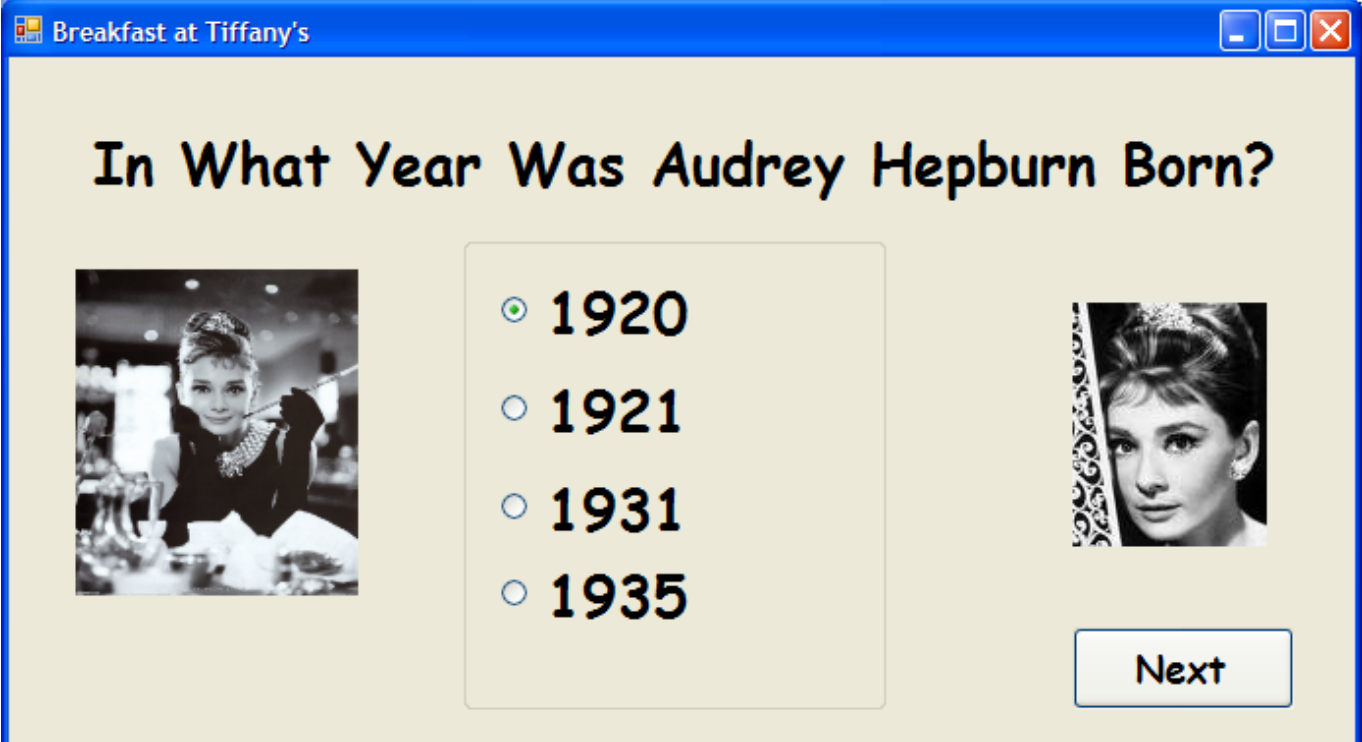
- On the Quiz Button Click event type

```
Application.Exit()
```

## QUESTION FORMS

 frmQuestion1.vb

- Each question form will have essentially the same code performing the same function



### Add a Next Button to go to the next Question

- On the Next Button click event

```
If (btnAnswer2.Checked) Then
    playerScore = playerScore + 1
End If
```

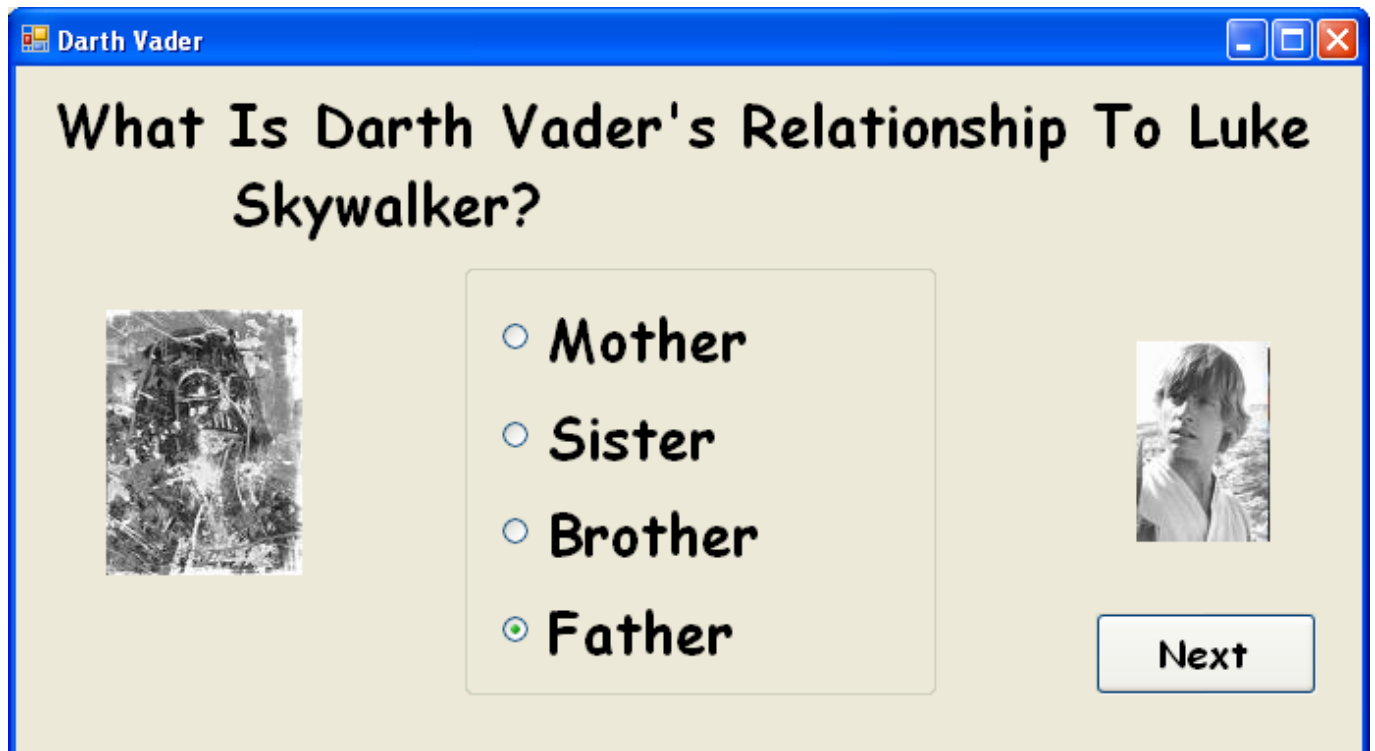
```
frmQuestion2.Show()
```

```
Me.Hide()
```

## LAST QUESTION FORM

 frmQuestion3.vb

- The last question form will show the High Score Board



### Add a Next Button to go to the next Question

- On the Next Button click event type

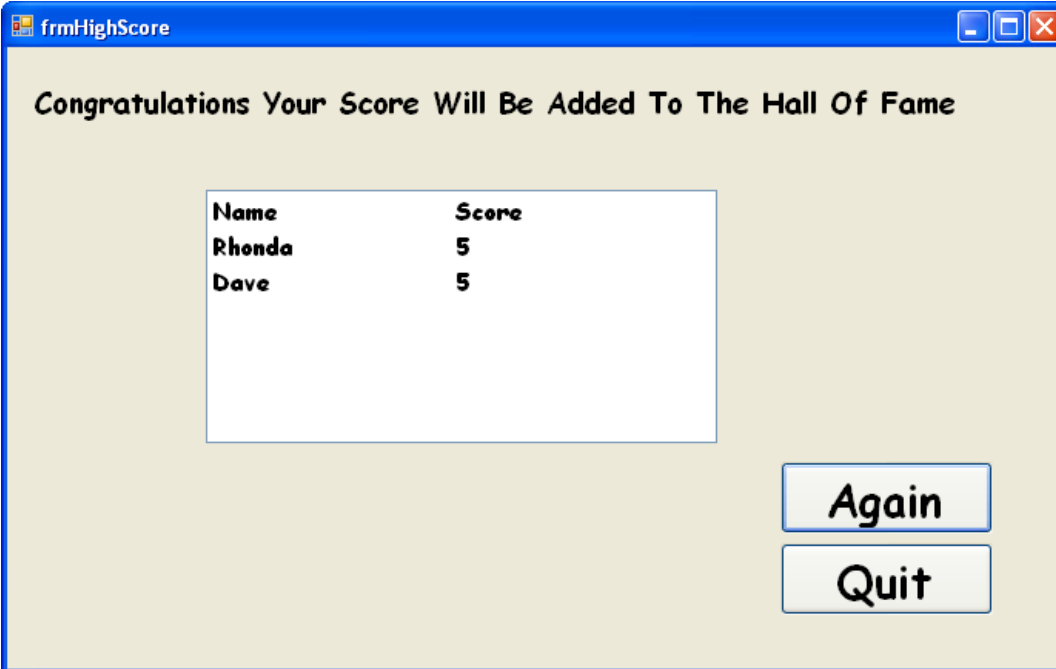
```
If (btnAnswer4.Checked) Then
    playerScore = playerScore + 1
End If

frmHighScore.Show()
frmHighScore.doScore()

Me.Hide()
```

## HIGH SCORE FORM

 frmHighScore.vb



Name	Score
Rhonda	5
Dave	5

### Play Again

- On the Play Again Button click event type

```
frmMain.Show()  
Me.Hide()
```

### Calculate Player Score

- Create a public sub procedure to calculate the player score

```
Public Sub doScore()  
    If (playerScore < 1) Then  
        lblMessage.Text = "Sorry Your Score Was Not Good Enough"  
    Else  
        lblMessage.Text = "Congratulations Your Score Will Be Added To The  
                           Hall Of Fame"  
        lstHighScore.Items.Add(playerName & vbTab & vbTab & playerScore)  
    End If  
End Sub
```

### Exit the Application

- On the Quit Button click event

```
Application.Exit
```

## Merging and Branching

Now you need to collaborate with another member of staff to combine your two quizzes together

1. Add them as a collaborator
2. Clone their FilmQuiz project and open it
3. Rename your question forms to questions 4 5 and 6
4. Use Add > Existing Item to import your question forms into their project
5. Commit and push all
6. Add a progress bar OR a media player to
  - a. Your project
  - b. Their Project
7. Use this link <https://tinyurl.com/5xyk565u> to research how to resolve merge commits in Visual Studio
8. Work with your collaborator to merge both versions into a completed Quiz Application
9. Use this link: <https://tinyurl.com/ydthufr4> to research how to use branches in Visual Studio
10. Experiment with creating different branches of commits.
11. Collaborate with another pair to merge all quizzes into one application with 12 questions