

# **Git and GitHub Classroom for CS559**

Part A – What it looks like to do a workbook

# GitHub Classroom (GIT crash course)

GitHub classroom creates a repository on GitHub for you

You must clone it to your computer

Commit your work

Push it back to GitHub

We clone the repository to grade it

This only makes sense if you understand GIT terminology  
and  
Have the right mental model of how GIT works

# Two parts to this “lecture”

## **Part A – what you do to use Workbooks in class**

requires you to understand GIT concepts

might be easier to understand after you watch part B

## **Part B – understanding GIT and GitHub classroom**

important to understand what is going on

much easier to motivate after you’ve seen part A

important beyond class

# **Getting the assignment...**

## **What you will do**

# Warning

I will use the GIT terms and concepts first, and then explain it later

# Steps

1. Get the announcement on Canvas
2. Follow this link to GitHub Classroom
3. Click on the magic button
4. Wait for GIT to get things ready for you
5. Go to your personal repository
6. Get the link for the repository
7. Clone the repository to your computer
8. Start a local web server
9. Look at the workbook – and start working

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SP21 COMPSCI 559 001 > Announcements > Workbook 01 Released!

6d

Spring 2020-2021

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Edit



### Workbook 01 Released!

Michael Gleicher  
[All Sections](#)

Jan 25 at 7:13pm

The first workbook is ready to go!

The GitHub classroom link is: <https://classroom.github.com/a/W4x8XwJ6>

When you go to that link, a repository with the workbook will be created for you. This is explained on the [Workbooks](#) page on the course web, and details on the [GIT for CS559](#) page. We'll also provide a tutorial on how to work with these things (either in class or as a video).

The first workbook is due on Monday, February 1. It comes right up.

The content of this announcement will not be visible to users until Jan 26 at 12:15pm

Search entries or author   Unread  

Reply



CS559 Computer Graphics - Spring 2021 Classroom

## Accept the assignment —

### Workbook 01: Introduction (Pre-Graphics)

Once you accept this assignment, you will be granted access to the `wb01-gleicher` repository in the [CS559-Spring21](#) organization on GitHub.

Accept this assignment

### Note:

You must be signed in to your GitHub account for this to work!



You accepted the assignment, **Workbook 01: Introduction (Pre-Graphics)**. We're configuring your repository now. This may take a few minutes to complete. Refresh this page to see updates.

Note: You may receive an email invitation to join [CS559-Spring21](#) on your behalf. No further action is necessary.



**Join the GitHub Student Developer Pack**

Verified students receive free GitHub Pro plus thousands of dollars worth of the best real-world tools and training from GitHub Education partners — for free. [Learn more](#)

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# Steps

1. Get the announcement on Canvas
2. Follow this link to GitHub Classroom
3. Click on the magic button

## **4. Wait for GIT to get things ready for you**

5. Go to your repository
6. Get the repository link
7. Clone the repository
8. Start a local repository
9. Look at the repository

GitHub is making you your own repository

It is your personal copy of the workbook



# You're ready to go!

You accepted the assignment, **Workbook 01: Introduction (Pre-Graphics)**.

Your assignment repository has been created:

<https://github.com/CS559-Spring21/wb01-gleicher>

We've configured the repository associated with this assignment ([update](#)).

Note: You may receive an email invitation to join [CS559-Spring21](#) on your behalf. No further action is necessary.



### Join the GitHub Student Developer Pack

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Wait a minute  
Press refresh  
Might take longer when busy

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CS559-Spring21 / wb01-gleicher Private  
generated from CS559/S21-Workbook01-Master

Watch 1 Star 0 Fork 0

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

master 1 branch 0 tags Go to file Add file Code

|                           |                      |              |
|---------------------------|----------------------|--------------|
| YoungWu559 Initial commit | 4c2d3e6 1 minute ago | 🕒 1 commit   |
| css                       | Initial commit       | 1 minute ago |
| docs                      | Initial commit       | 1 minute ago |
| for_students              | Initial commit       | 1 minute ago |
| js                        | Initial commit       | 1 minute ago |
| README.md                 | Initial commit       | 1 minute ago |
| index.html                | Initial commit       | 1 minute ago |
| sitemap.xml               | Initial commit       | 1 minute ago |

**About**

wb01-gleicher created by GitHub Classroom

[Readme](#)

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**Releases**

No releases published  
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**Packages**

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README.md

# CS559 Workbook , Spring 2021

This set of web pages forms a "workbook" assignment for CS559, Computer Graphics at the University of Wisconsin for

# The GitHub Repository Page

This is a page for your personal copy

You can get a link for cloning it to your computer

You can see what versions you have on GitHub

Do not “download as ZIP”

Do not edit files on GitHub

# Steps

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CS559-Spring21 / wb01-gleicher Private

Watch 1 Star 0 Fork 0

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

master 1 branch 0 tags

Go to file Add file Code

|                           |                |               |
|---------------------------|----------------|---------------|
| YoungWu559 Initial commit |                |               |
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| for_students              | Initial commit |               |
| js                        | Initial commit |               |
| README.md                 | Initial commit |               |
| index.html                | Initial commit | 2 minutes ago |
| sitemap.xml               | Initial commit | 2 minutes ago |

**Clone**

HTTPS SSH GitHub CLI

git@github.com:CS559-Spring21/wb01-glei

Use a password-protected SSH key.

**Open with GitHub Desktop**

**Download ZIP**

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README.md

# CS559 Workbook , Spring 2021

This set of web pages forms a "workbook" assignment for CS559, Computer Graphics at the University of Wisconsin for

# Clone the repository to your computer

This makes a copy of your repository on your computer

Notes:

Prefer SSH as the connection method

requires you to set up your computer [worth it!]

Use git tools

We recommend the GIT command line

Windows PowerShell

Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell <https://aka.ms/pscore6>

```
PS C:\Users\gleicher> git clone git@github.com:CS559-Spring21/wb01-gleicher.git
```

```
Cloning into 'wb01-gleicher'...
```

```
remote: Enumerating objects: 63, done.
```

```
remote: Counting objects: 100% (63/63), done.
```

```
remote: Compressing objects: 100% (52/52), done.
```

```
remote: Total 63 (delta 3), reused 62 (delta 3), pack-reused 0Receiving objects: 82% (52/6
```

```
Receiving objects: 100% (63/63), 57.61 KiB | 880.00 KiB/s, done.
```

```
Resolving deltas: 100% (3/3), done.
```

```
PS C:\Users\gleicher> |
```

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# You need a local web server

Repository is a web site

Need to look at the version on your computer

Cannot just open the files (things don't work)

Start a server in the directory

http-server [Node] is what we use for testing

Live Server in Visual Studio Code is very handy

```
PS C:\Users\gleicher>
```

```
PS C:\Users\gleicher> cd wb01-gleicher
```

```
PS C:\Users\gleicher\wb01-gleicher> http-server -c-1
```

```
Starting up http-server, serving ./
```

```
Available on:
```

```
http://172.26.176.1:8080
```

```
http://192.168.1.17:8080
```

```
http://127.0.0.1:8080
```

```
http://172.24.144.1:8080
```

```
Hit CTRL-C to stop the server
```

localhost

# Workbook 1: Introduction (Pre-Graphics)

This workbook is due on Monday, February 1, 2021

## Learning Goals

1. Understand and use the class mechanics (GitHub classroom links, Git, local servers, editing pages, ...)
2. Understand the organization of workbooks for the class (looking at pages, boxes, editing and adding things, turning things in)
3. Review basic HTML that you will need for class
4. Practice basic JavaScript and understand how to attach programs to web pages
5. Make interactions and animations with JavaScript web pages
6. Differentiate and use event-driven- and animation-loop-driven- programming
7. Understand how to control timing with browser animation loops

## Introduction

Welcome to the first workbook for CS559!

The right way to use this workbook, and any of the following ones, is to:

1. Clone the workbook from GitHub

### Workbook 1: Introduction (Pre-Graphics)

Pages:

**Index (Introduction)**

1: HTML and CS559

2: HTML Basics

3: HTML and JavaScript

4: Doing things to HTML

5: Animation Loops

6: Try it Yourself

# **Now we can work!**

Bear with me... I'll show you what to do, then explain



# Workbook pages have things to do

Instructions in the text

The work is in boxes – self contained pages

You edit files in “for\_students”

For workbook 1, it is html files

In later workbooks it is mainly JavaScript files

The docs directory has the workbook pages that you read. when you actually need to look at the html all of the text gets in the way - you want to get rid to a simple web page that you can work on. For this reason, we make super-simple web pages for the actual things you will work on and then “embed” them within these more complex pages. Here is an example:

## This is Page 01-01-01!

This is a very simple web page.

The student should change this line.

UW NetID: **CHANGE THIS**



What you see is a box with some very simple HTML in it. It says “This is Page 01-01-01!”. The name isn’t incorrect - because it actually is a different page - it’s a small web page we’ve made and then placed on this bigger web page (1/index.html). You can open it by itself directly with this link: [01-01-01.html](#).

We call these little web pages that are inside boxes on bigger web pages “boxes” on workbooks. Boxes are where you do your work. All boxes are named with 3 numbers: the workbook, the page, and the box on the page. So this first box is “01-01-01.html” - the first workbook, the first page, the first box.

The boxes, and other files that you will want to look at are in the `for_students`

time.

## Your turn...

Speaking of work, now we actually try to have you do something. To confirm that you are able to find the right file to edit, change the line that says “The student should change this line” to “NAME has changed this line” (where NAME is your name). Also change the NetID line to have your actual University NetID rather than “Change This”. This isn’t rocket science, but it’s the thing you do with workbooks: edit the files in the `for_students` directory.

After you change `01-01-01.html`, you may need to reload the page in order to see your changes. If you are using the Visual Studio Code Live Server (which we strongly recommend, see [Visual Studio Code \(VSCode\) for CS559](#)), this should be automatically reloaded for you.

Congratulations, you’ve actually done your first workbook task. If you looked at the rubric on the first page of the workbook, you would have seen that you get points for changing box “01-01-01”. We can repeat the relevant bit here:

- change web page text (Box: 01-01-01) (Points:2)

This will be the first of many boxes you will change over the course of the semester. Doing this trivial first assignment makes sure you can find the files that you should edit, and understand the architecture of boxes.

## HTML

# Editing workbook files

We recommend Visual Studio Code

EXPLORER

> OPEN EDITORS

WB01-GLEICHER

- > css
- > docs
- > for\_students
  - <> 01-01-01.html
  - <> 01-02-01.html
  - <> 01-02-02.html
  - # 01-02-03.css
  - <> 01-02-03.html
  - <> 01-02-04.html
  - <> 01-02-05.html
  - <> 01-02-06.html
  - <> 01-02-07.html
  - <> 01-03-01.html
  - <> 01-03-02.html
  - <> 01-03-03.html
  - JS 01-03-03.js
  - <> 01-03-04.html
  - <> 01-03-05.html

> OUTLINE

> TIMELINE

> NPM SCRIPTS

<> 01-01-01.html X

for\_students > <> 01-01-01.html > html > body > p > b

```

1  <html>
2      <body>
3          <h1>This is Page 01-01-01!</h1>
4          <p>This is a very simple web page.</p>
5          <p>The student should change this line.</p>
6          <p>UW NetID: <b>CHANGE THIS</b></p>
7      </body>
8  </html>
9
10

```

EXPLORER

> OPEN EDITORS

WB01-GLEICHER

- > css
- > docs
- for\_students
  - <> 01-01-01.html M
  - <> 01-02-01.html
  - <> 01-02-02.html
  - # 01-02-03.css
  - <> 01-02-03.html
  - <> 01-02-04.html
  - <> 01-02-05.html
  - <> 01-02-06.html
  - <> 01-02-07.html
  - <> 01-03-01.html
  - <> 01-03-02.html
  - <> 01-03-03.html
  - JS 01-03-03.js
  - <> 01-03-04.html
  - <> 01-03-05.html

> OUTLINE

> TIMELINE

> NPM SCRIPTS

```

for_students > <> 01-01-01.html > ...
1  <html>
2      <body>
3          <h1>This is Page 01-01-01!</h1>
4          <p>This is a very simple web page.</p>
5          <p>The student should change this line.</p>
6          <p>UW NetID: <b>mlgleicher</b></p>
7      </body>
8  </html>
9
10

```

The docs directory has the workbook pages that you read. When you actually need to look at the `html` all of the text gets in the way - you want to get rid to a simple web page that you can work on. For this reason, we make super-simple web pages for the actual things you will work on and then “embed” them within these more complex pages. Here is an example:

## This is Page 01-01-01!

This is a very simple web page.

The student should change this line.

UW NetID: mlgleicher

What you see is a box with some very simple HTML in it. It says “This is Page 01-01-01!”. The name isn’t incorrect - because it actually is a different page - it’s a small web page we’ve made and then placed on this bigger web page (`1/index.html`). You can open it by itself directly with this link: [01-01-01.html](#).

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The boxes, and other files that you will want to look at are in the `for_students`

```
PS C:\Users\gleicher\wb01-gleicher> git status
```

```
On branch master
```

```
Your branch is up to date with 'origin/master'.
```

```
Changes not staged for commit:
```

```
(use "git add <file>..." to update what will be committed)
```

```
(use "git restore <file>..." to discard changes in working directory)
```

```
    modified:   for_students/01-01-01.html
```

```
no changes added to commit (use "git add" and/or "git commit -a")
```

```
PS C:\Users\gleicher\wb01-gleicher> |
```



# 3 Steps to upload a file

Add [Stage]

Commit

Push

We'll explain why you need all 3 in a bit

I will do this from the command line


Save your work often! (it's a good backup!)

```
PS C:\Users\gleicher\wb01-gleicher> git add .\for_students\01-01-01.html
PS C:\Users\gleicher\wb01-gleicher> git commit -m "Changed box 01-01-01"
[master a209009] Changed box 01-01-01
 1 file changed, 1 insertion(+), 1 deletion(-)
PS C:\Users\gleicher\wb01-gleicher> git push
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 373 bytes | 373.00 KiB/s, done.
Total 4 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), completed with 3 local objects.
To github.com:CS559-Spring21/wb01-gleicher.git
 4c2d3e6..a209009  master -> master
PS C:\Users\gleicher\wb01-gleicher> |
```

# Check to see

This is optional, but if you want to make sure things work...

master 1 branch 0 tags  
Go to file Add file Code

|  |                      |              |              |
|--|----------------------|--------------|--------------|
|  <b>gleicher</b> Changed box 01-01-01 | a209009              | 1 minute ago | 🕒 2 commits  |
| css  | Initial commit       |              | 2 hours ago  |
| docs   | Initial commit       |              | 2 hours ago  |
| for_students   | Changed box 01-01-01 |              | 1 minute ago |
| js   | Initial commit       |              | 2 hours ago  |
| README.md  | Initial commit       |              | 2 hours ago  |
| index.html   | Initial commit       |              | 2 hours ago  |
| sitemap.xml  | Initial commit       |              | 2 hours ago  |

README.md

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### About

wb01-gleicher created by GitHub Classroom

Readme



### Releases

No releases published  
[Create a new release](#)

### Packages

No packages published  
[Publish your first package](#)

### Contributors 2

-  **YoungWu559** Young Wu
-  **gleicher** Michael Gleicher

**What just happened?**

**What is going on here?**

That's part B

# Summary: use GIT for Workbooks

Get your repository on GitHub

GitHub classroom creates a repo for you

You clone it to your computer

You complete the workbook ]

Use a local server to view it

Edit files in for\_students

Copy your work back to GitHub: add, commit, push

Course staff accesses your work on GitHub