

CS304

Software Engineering

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Slides adapted from cs409

Recap: Git commands

command	description
<code>git clone <i>url</i> [<i>dir</i>]</code>	copy a git repository so you can add to it
<code>git add <i>files</i></code>	adds file contents to the staging area
<code>git commit</code>	records a snapshot of the staging area
<code>git status</code>	view the status of your files in the working directory and staging area
<code>git diff</code>	shows diff of what is staged and what is modified but unstaged
<code>git help [<i>command</i>]</code>	get help info about a particular command
<code>git pull</code>	fetch from a remote repo and try to merge into the current branch
<code>git push</code>	push your new branches and data to a remote repository
others: <code>init</code> , <code>reset</code> , <code>branch</code> , <code>checkout</code> , <code>merge</code> , <code>log</code> , <code>tag</code>	

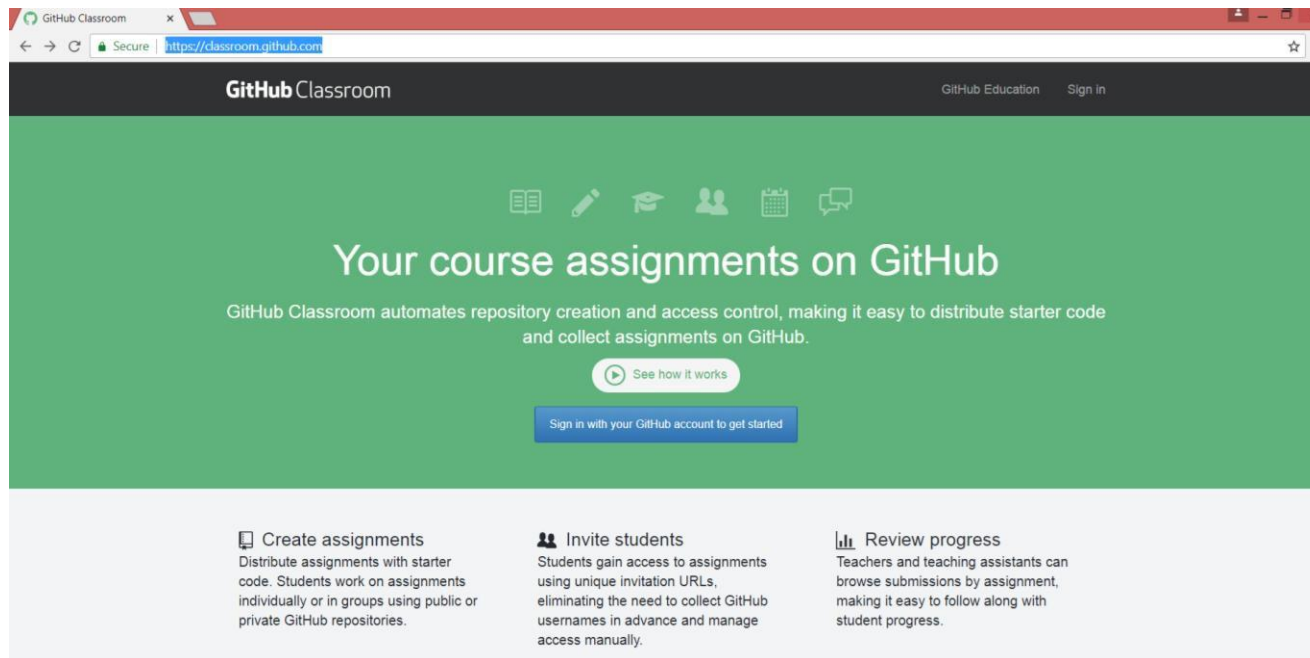
Software required

- Install Git:
 - Use **Git** for your preferred Operating System/ IDE
 - Git command in Ubuntu: `sudo apt-get install git-core`
 - Git for windows: <https://git-scm.com/download/win>
 - EGit for Eclipse: <https://www.eclipse.org/egit/>
 - *I prefer using Git commands on Ubuntu
- Install Your favourite IDE:
 - IntelliJ IDEA: <https://www.jetbrains.com/idea/>
 - Eclipse: <https://www.eclipse.org/downloads/>
 - Android Studio (Project):
<https://developer.android.com/studio/>
 - Netbeans: <https://netbeans.org/>

Collaboration through GitHub Classroom

Main Page

- <https://classroom.github.com/>



Our organization: cs304-fall2020-classroom-1

cs304-fall2020-classroom-1

cs304-fall2020

 Assignments 4  Students 157  TAs and Admins 1  Settings

Assignments

New assignment ▾



junit-lab

Group assignment for PairProgramming

Invite link ▾



mp0

Individual assignment

Invite link ▾



project-main-repository

Group assignment for ProjectTeam

Invite link ▾



project-proposal

Group assignment for ProjectTeam

Invite link ▾



List of Assignments: More coming soon...

cs304-fall2020-classroom-1

cs304-fall2020

 Assignments 4

 Students 157

 TAs and Admins 1

 Settings

Assignments

New assignment ▾



junit-lab

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project-proposal

Group assignment for ProjectTeam

Invite link ▾





First Assignment: mp0

Step 1:

Accept Invitation

- Go to the invitation links:
- <https://classroom.github.com/a/P3JeLUkK>

Step 2: Sign in to your existing account/ Create New Account

Sign in to **GitHub**
to continue to **GitHub Classroom**

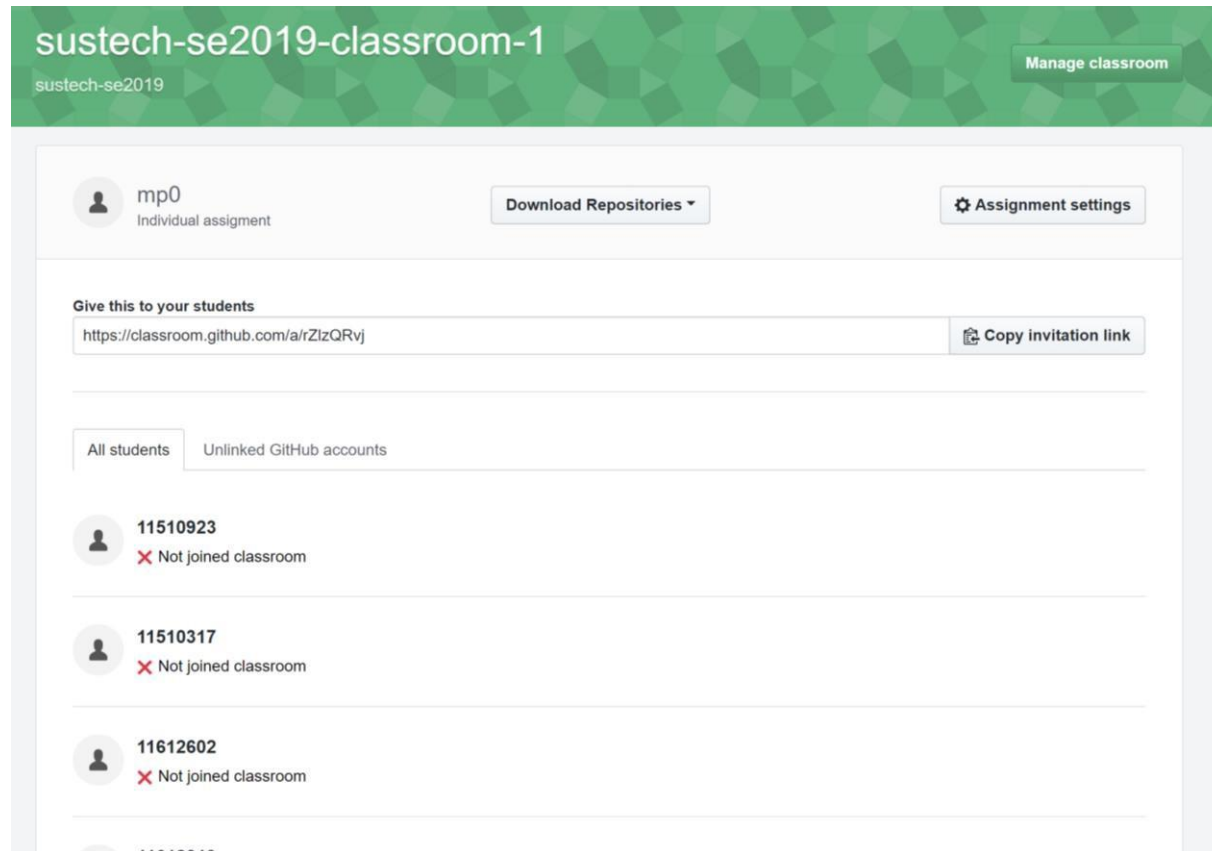
Username or email address

Password [Forgot password?](#)

[Sign in](#)

New to GitHub? [Create an account.](#)

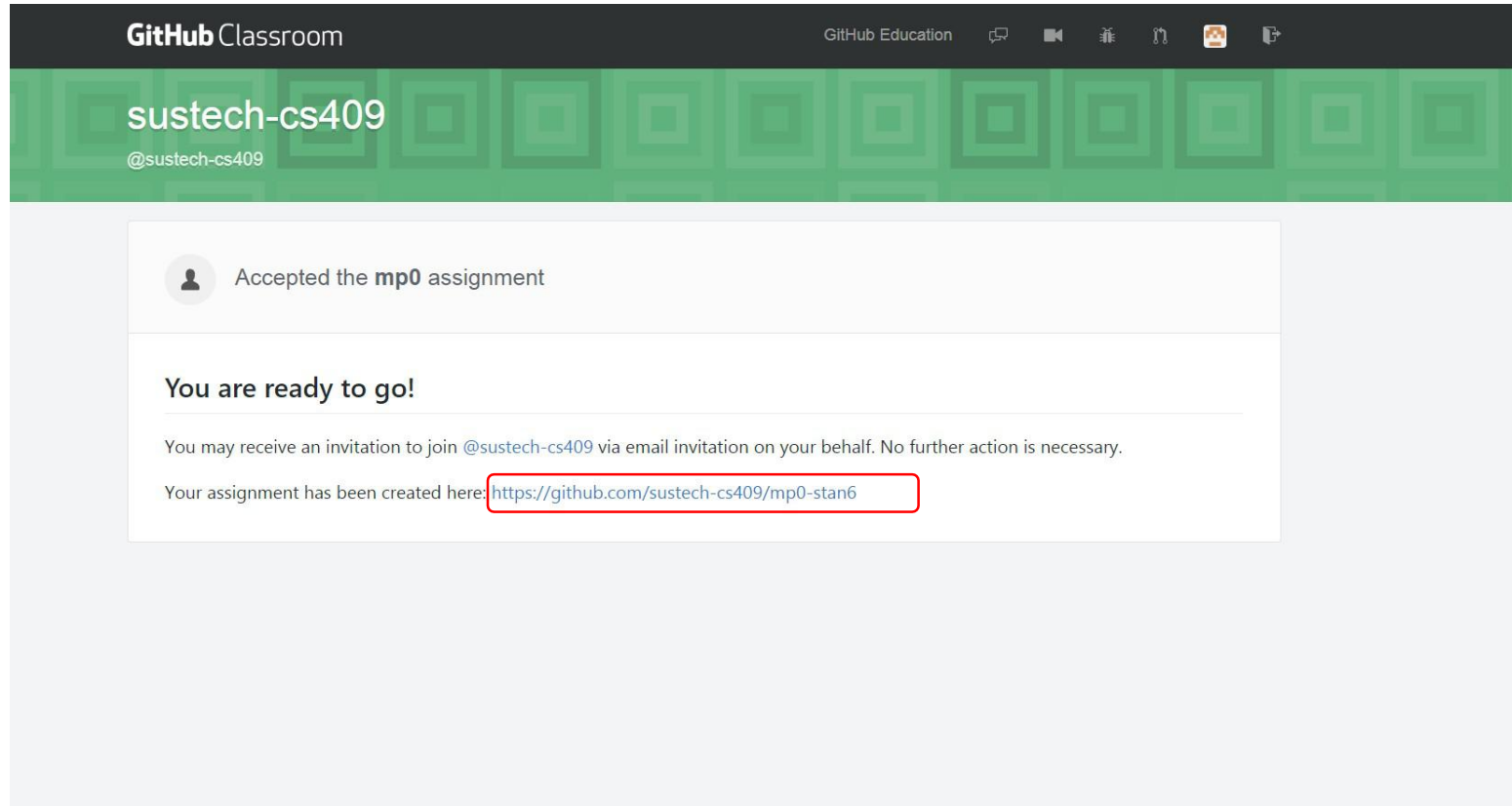
Select Your Student ID (Do not skip)



Please let me know if you have problem selecting your ID in this step:

- Select wrong id
- Your id doesn't exist

Repository created!



The screenshot displays the GitHub Classroom interface. At the top, a dark header bar contains the 'GitHub Classroom' logo on the left and 'GitHub Education' with several utility icons on the right. Below the header is a green banner with a repeating square pattern, featuring the text 'sustech-cs409' and '@sustech-cs409'. The main content area is a light gray box. It begins with a notification: a person icon followed by the text 'Accepted the mp0 assignment'. Below this is a section titled 'You are ready to go!' in bold. Underneath the title, there are two lines of text: 'You may receive an invitation to join @sustech-cs409 via email invitation on your behalf. No further action is necessary.' and 'Your assignment has been created here:'. The URL 'https://github.com/sustech-cs409/mp0-stan6' is provided and is highlighted with a red rectangular border.

GitHub Classroom

GitHub Education

sustech-cs409

@sustech-cs409

Accepted the mp0 assignment

You are ready to go!

You may receive an invitation to join @sustech-cs409 via email invitation on your behalf. No further action is necessary.

Your assignment has been created here: <https://github.com/sustech-cs409/mp0-stan6>

Step 3:

Get Your Repository in Your local machine

- Use **Git** from what you learned in previous slides
- Start working on mp0
 - Note: mp0 folder does not contain any starter code!
Refer to cs409-mp0.pdf for instruction.

GitHub & Git Basics

Writing README.md

Writing and Formatting README.md

- Styling headings:

```
# The largest heading  
## The second largest heading  
##### The smallest heading
```

The largest heading

The second largest heading

The smallest heading

Resource: <https://help.github.com/articles/basic-writing-and-formatting-syntax/>

Writing and Formatting README.md

- Styling text:

Style	Syntax	Keyboard shortcut	Example	Output
Bold	<code>** **</code> or <code>__ __</code>	command/control + b	<code>**This is bold text**</code>	This is bold text
Italic	<code>* *</code> or <code>_ _</code>	command/control + i	<code>*This text is italicized*</code>	<i>This text is italicized</i>
Strikethrough	<code>~~ ~~</code>		<code>~~This was mistaken text~~</code>	This was mistaken text
Bold and italic	<code>** **</code> and <code>__ __</code>		<code>**This text is extremely important**</code>	<i>This text is extremely important</i>

Writing and Formatting README.md

- Styling lists:

```
- George Washington  
- John Adams  
- Thomas Jefferson
```

- George Washington
- John Adams
- Thomas Jefferson

To order your list, precede each line with a number.

```
1. James Madison  
2. James Monroe  
3. John Quincy Adams
```

1. James Madison
2. James Monroe
3. John Quincy Adams

What if you have some big files that you do not want to commit?

Use GitIgnore

Ignoring files

- Gitignore file is a file that specifying the files or folders that we want to ignore.
- Several ways to specifying Gitignore files:
 1. Use specific filename. For example, if we want to ignore a file called `readme.txt`, then we just need to write `readme.txt` in the `.gitignore` file.
 2. Use the name of the extension. For example, if we want to ignore all `.txt` files, then write `*.txt`
 3. Use the name of the folder. For example, if we want to ignore folder named `test`. Then we can just write `test/` in the file.
- Save the file as `.gitignore`
 - **The name of the file should be `.gitignore`**

Extra “homework”

- Do you have your own website?
- Do you know that you can build your own personal website using GitHub pages?
 - Refer to: <https://pages.github.com/>

*Useful for future career:

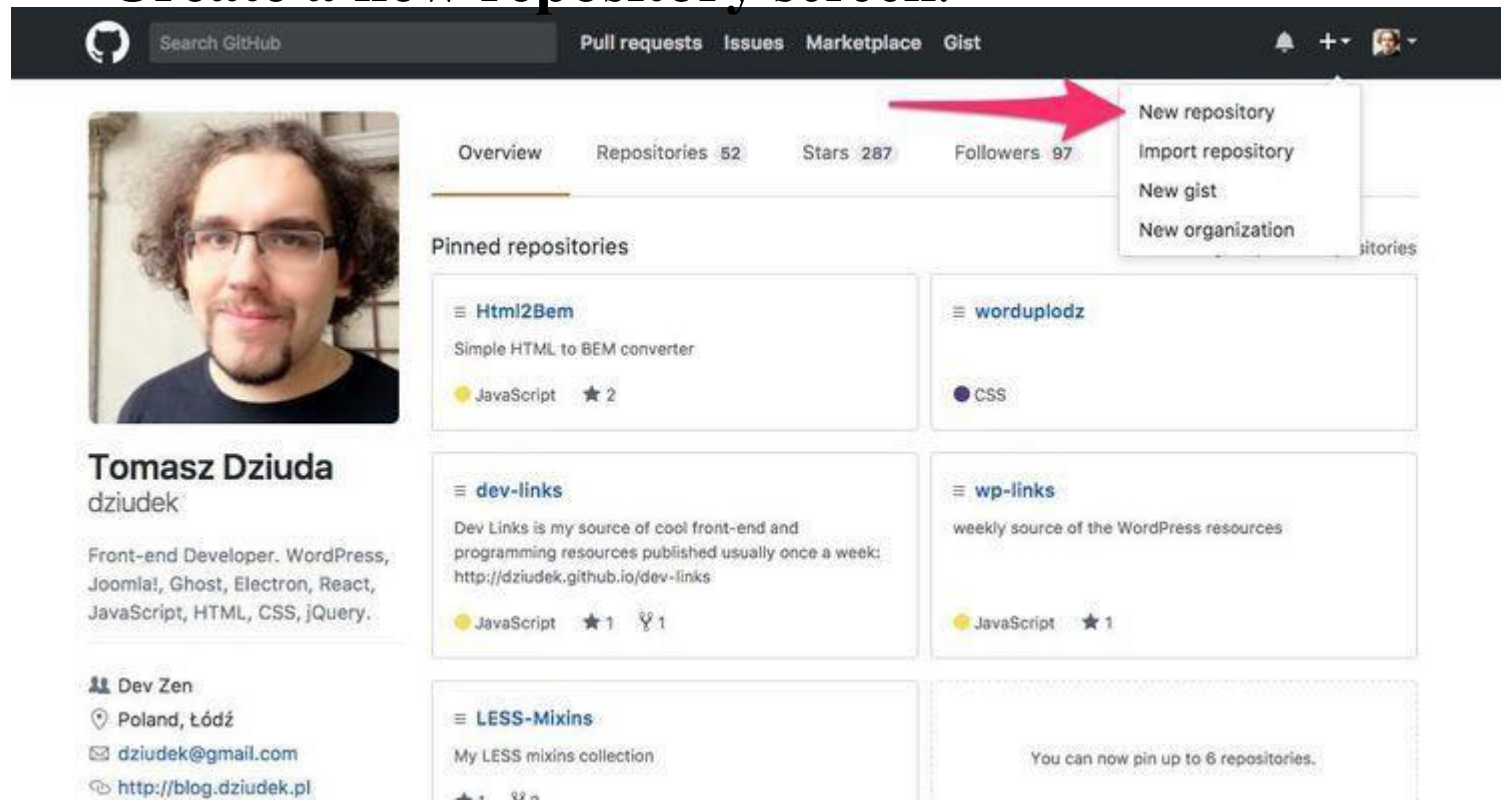
- Job interviews
 - Give a link to your CV/Resume that could be updated
- Research profile
 - Upload your new research works

Create Webpage with GitHub Pages

Slides from <https://getpublii.com/docs/host-static-website-github-pages.html> and <http://jmcglone.com/guides/github-pages/>

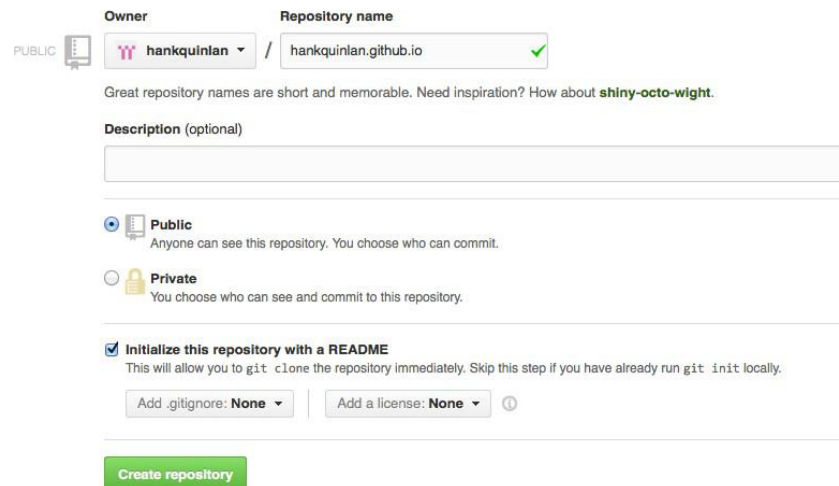
Step 1: Create New Repository

- Log-in to Github, then click the plus icon in the topbar to open a submenu;
- click on the **New repository** option to be taken to the **Create a new repository** screen.



Step 2: Select Repository name

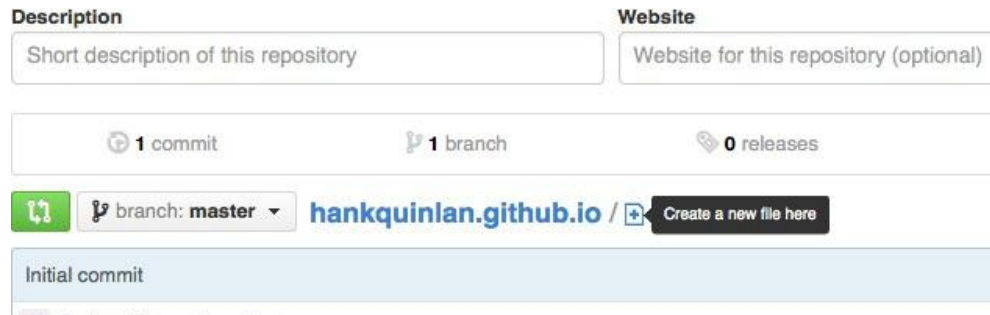
- Name your repository username.github.io, replacing username with your GitHub username.
- Leave the repository as Public (Github Pages are always public, even when the repository hosting it is made private).
- Click the green Create repository button at the bottom of the screen.



The screenshot shows the GitHub repository creation interface. At the top, there's a 'PUBLIC' label and a computer icon. The 'Owner' field is set to 'hankquinlan' with a dropdown arrow. The 'Repository name' field is 'hankquinlan.github.io' with a green checkmark. Below this, a hint says 'Great repository names are short and memorable. Need inspiration? How about [shiny-octo-wight](#).' The 'Description (optional)' field is empty. There are two visibility options: 'Public' (selected with a radio button and a computer icon, with the text 'Anyone can see this repository. You choose who can commit.') and 'Private' (unselected with a radio button and a lock icon, with the text 'You choose who can see and commit to this repository.'). Below these is a checked checkbox for 'Initialize this repository with a README' and a note: 'This will allow you to `git clone` the repository immediately. Skip this step if you have already run `git init` locally.' At the bottom, there are two dropdown menus: 'Add .gitignore: None' and 'Add a license: None' with an information icon. A green 'Create repository' button is at the very bottom.

Step 3: Create index.html

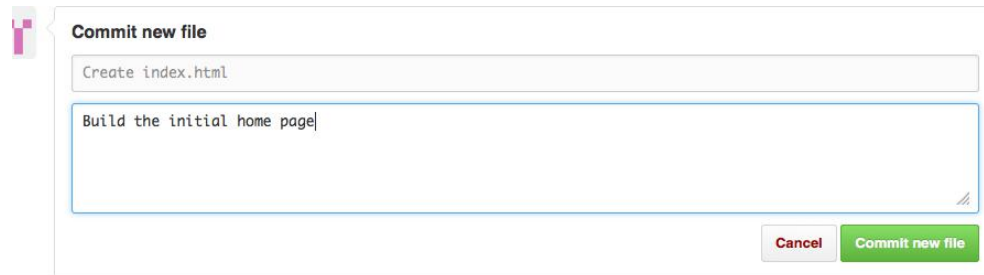
- Create an index.html page by clicking the plus icon next to your repository name and typing the file name directly in the input box that appears.



The screenshot shows the GitHub repository creation page. At the top, there are two input fields: "Description" with the placeholder "Short description of this repository" and "Website" with the placeholder "Website for this repository (optional)". Below these fields, there are three statistics: "1 commit", "1 branch", and "0 releases". Under the statistics, there is a green "Create repository" button, a dropdown menu showing "branch: master", the repository URL "hankquinlan.github.io", and a dark button labeled "Create a new file here". At the bottom, there is a light blue box labeled "Initial commit" with a text input field and a "Commit" button.

Step 4: Commit index.html

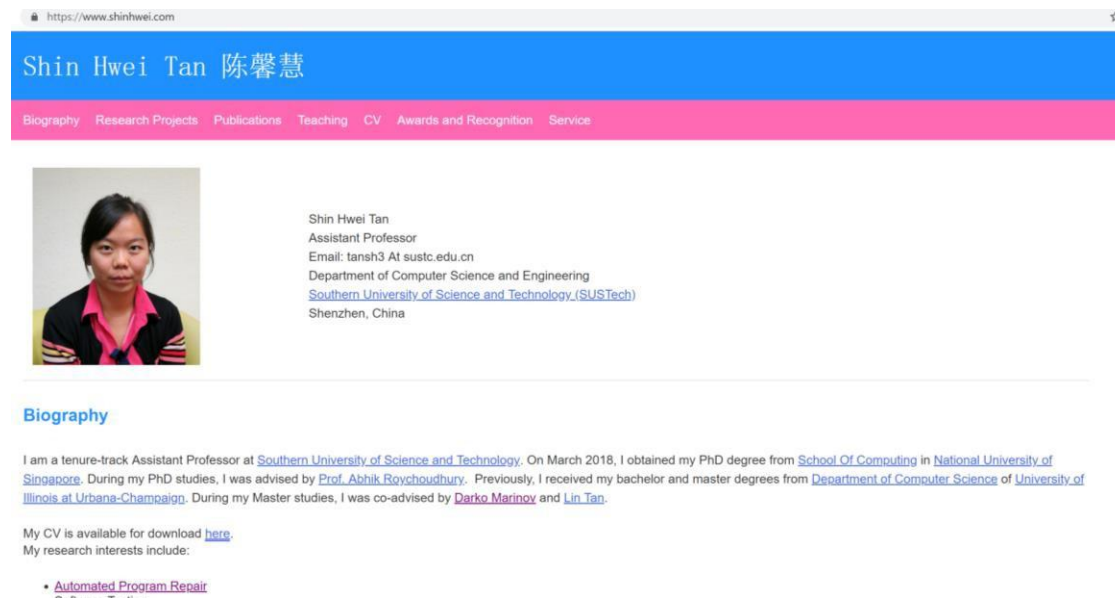
- Create an index.html page by clicking the plus icon next to your repository name and typing the file name directly in the input box that appears.



The screenshot shows a 'Commit new file' dialog box. It has a title bar with a plus icon and the text 'Commit new file'. Below the title bar is a text input field containing 'Create index.html'. Below that is a larger text area containing 'Build the initial home page'. At the bottom right of the dialog are two buttons: 'Cancel' and 'Commit new file'.

First GitHub Pages!

- Congrats! You just built your first GitHub Pages site. Usually the first time your GitHub Pages site is created it takes 5-10 minutes to go live.
- View it at <http://username.github.io>.



Assignments Deadline

- MP0 due on 9 March, 2021
- Project Proposal due on 12 March, 2021
 - Find your groupmate this week!