HTML CSS GIT GITHUB

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CSCI 4140 Tutorial 1
Jan. 21
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HTML Basics

- Browser retrieve HTML files (and related files) from web server

- Browser then render HTML code into a page
  - Show text with styles
  - Show images
  - Collect user inputs

HTML Elements

- HTML file contains HTML elements

  Format: `<tag>content</tag>`

- Content can be text, image, HTML elements or mix
- Note that the order is important

  Example: `<tag1>hello <tag2>world!</tag2></tag1>`

- Element with empty content

  Example: `<br />`

HTML Attributes

- Additional information to an element

- Name-value pairs: `name="value"`

```
<a href="index.html">Index Page</a>
```

- Attribute name: `href`
- Attribute value: `index.html`

HTML Basics

- Some common HTML tags

HTML tags	Usage
`<html>`	Define the root of HTML document
`<body>`	Define the start of page body
` `	Line break
`<table>`	Define a table (use with `<tr>` and `<td>`)
`<div>`	A division / section of page
`<img>`	Show an image (`src` attribute to define location)

- The tags define page structure
- Class / id attributes and CSS define style

HTML Forms

- Send data (user input) to server
- Server receive and process the data

`<form>`	Declare a HTML form
`<input>`	Checkbox, textbox... (type attributes)
`<button>`	Buttons
`<textarea>`	Text input field
`<select>`	Drop-down list
`<option>`	

- Use name attribute to distinguish and access from script

CSS Basics

- CSS = **Cascading Style Sheets**

- A **style sheet language** used to describe the **presentation** of a document written in HTML or XML

- CSS describes how the structured element must be **rendered** on screen, on paper, in speech, or on other media

- CSS has various **levels** and profiles:
  - CSS1: Published on December 17, 1996
  - CSS2: Published in May 1998
  - CSS2.1: Published on June 7, 2011
  - CSS3: Earliest drafts published in June 1999; published as modules

CSS Example

```
<html>
<head>
	<title>CSS Example: H1</title>
</head>
<body>
	<h1>Hello world!</h1>
</body>
</html>
```

Hello world!

CSS Example

```
<html>
<head>
	<title>CSS Example: H1</title>
	<style>
	 h1 {
		color: #FF0000;
		border: 1px dashed #333333;
	 }
	 </style>
</head>
<body>
	<h1>Hello world!</h1>
</body>
</html>
```

Hello world!

CSS Syntax

```
h1 {
    color: #FF0000;
    border: 1px dashed #333333;
}
.text{
    background-color: #AAAAAA;
}
```

- Red: selector
- Yellow: declaration
- Blue: declaration block

CSS Syntax

```
h1 {
    color: #FF0000;
    border: 1px dashed #333333;
}
.text{
    background-color: #AAAAAA;
    /* You can write comments. */
}
```

- Green: property
- Orange: value
- Purple: comment

CSS How to insert?

- Inline style (not recommended)

```
<div style="background-color: red; border: 1px solid;">
        This is ugly...
</div>
```

- internal stylesheet (still not recommended)

```
<head>
        <style> h1 { color: #FF0000; }</style>
</head>
<body>
        <h1>Hello world!</h1>
</body>
```

CSS How to insert?

- External stylesheet(s)

  <link href="style.css" rel="stylesheet" type="text/css" />

- Write the CSS declaration blocks in a **separate file**
- **Import** the CSS inside the <head> section
- You can import **multiple CSS**
- When the browser renders the page, the CSS styles are applied in the **same order of their appearance**
- This is recommended!

Sidetrack: How to store the code?

- Although there are no standards, most website uses similar structure to store the code (HTML, CSS, JavaScript, ...)
- One of the goals of CSS: **Separation of document content from document presentation**
- If you use inline styles or internal stylesheets and you want to change the color of h1, how many file you need to edit if there are 1000 .html files!?

```
1 css
    2 style.css
    2 print.css
1 js
    2 global.js
    2 ga.js
    2 jquery.js
1 images
    2 tywong.jpg
1 index.html
```

CSS Selector

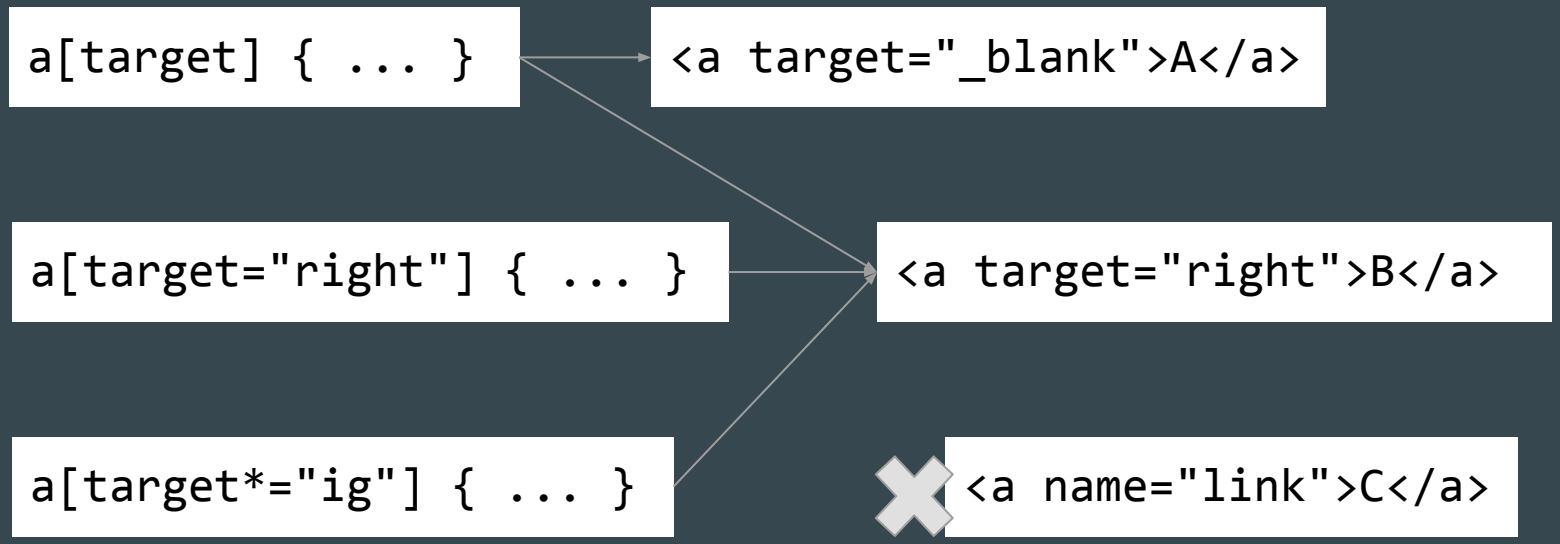
- To apply CSS on an element, we need to select it with selectors
  Element selector

ID selector (‘#’ + ID of the element)

Class selector (‘.’ + class of the elements)

CSS Selector

- To apply CSS on an element, we need to select it with selectors
  Attribute selector

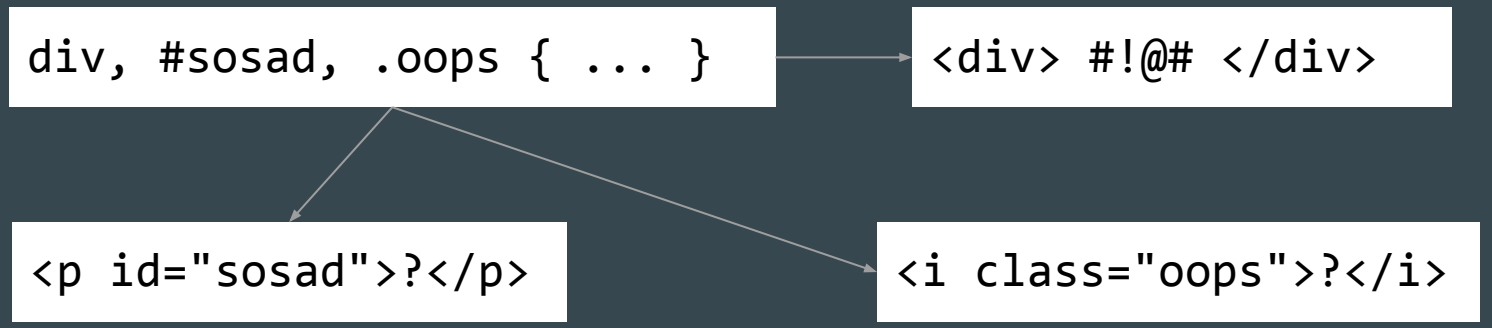


Read http://www.w3schools.com/css/css_attribute_selectors.asp for more examples!

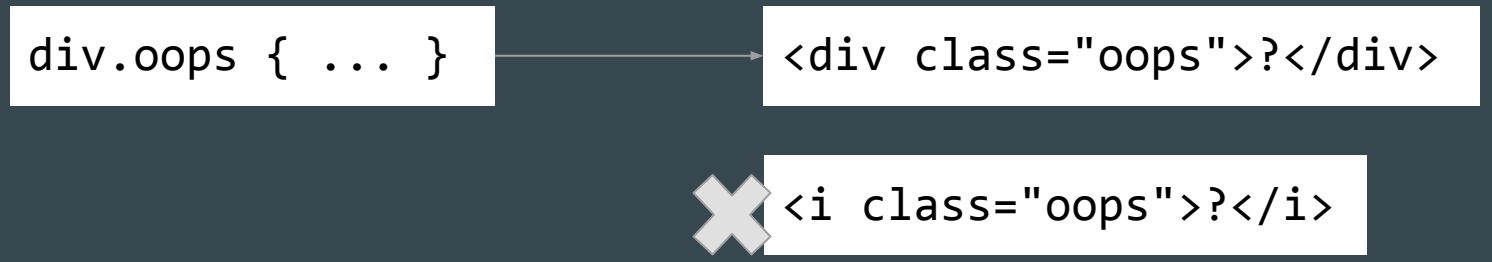
CSS Selector

- To apply CSS on an element, we need to select it with selectors

Multiple selectors (use “,” – works like “OR”)

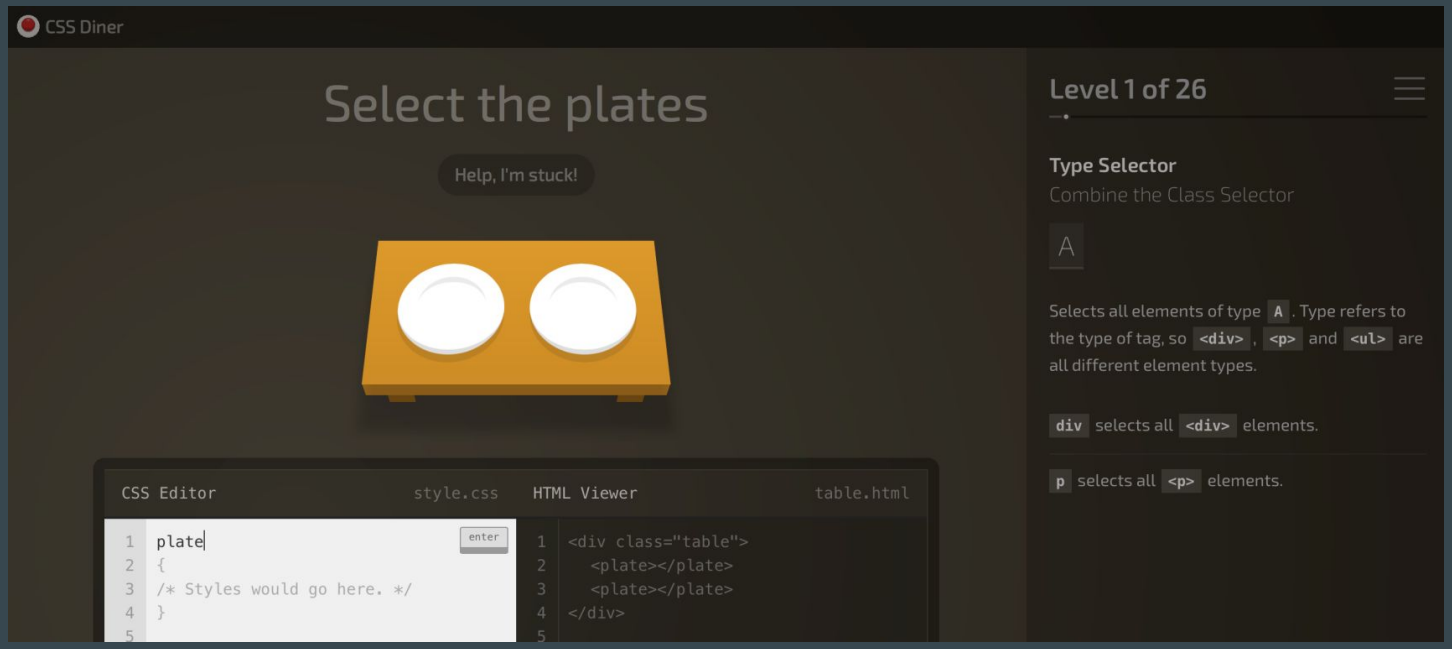


Multiple selectors (works like “AND”)



CSS Selector

- There are more variations in using CSS selectors
- Recommendation: http://flukeout.github.io
- An addictive game for learning CSS selectors!



CCS Properties

- There are too many of them...
- Start from http://www.w3schools.com/css/css_background.asp to learn the available properties yourself
- Yet another good reference (a “man page” of CSS): https://developer.mozilla.org/en-US/docs/Web/CSS/Reference
- You can almost customize everything (and forget about IE)
- Demo: Using **Chrome Developer Tools** to modify and try the CSS properties

GIT Version control

Managing your code

- Clear picture of development
- No need to worry about modifying wrong code
- History of development
- Compare with / restore old code
- Coordinate with others

Distributed Version Control System

- Everyone having a copy of repository in local
- Communicate (push / pull) with central repository (remote)
- Flexible for project with multiple developers

GIT Installation

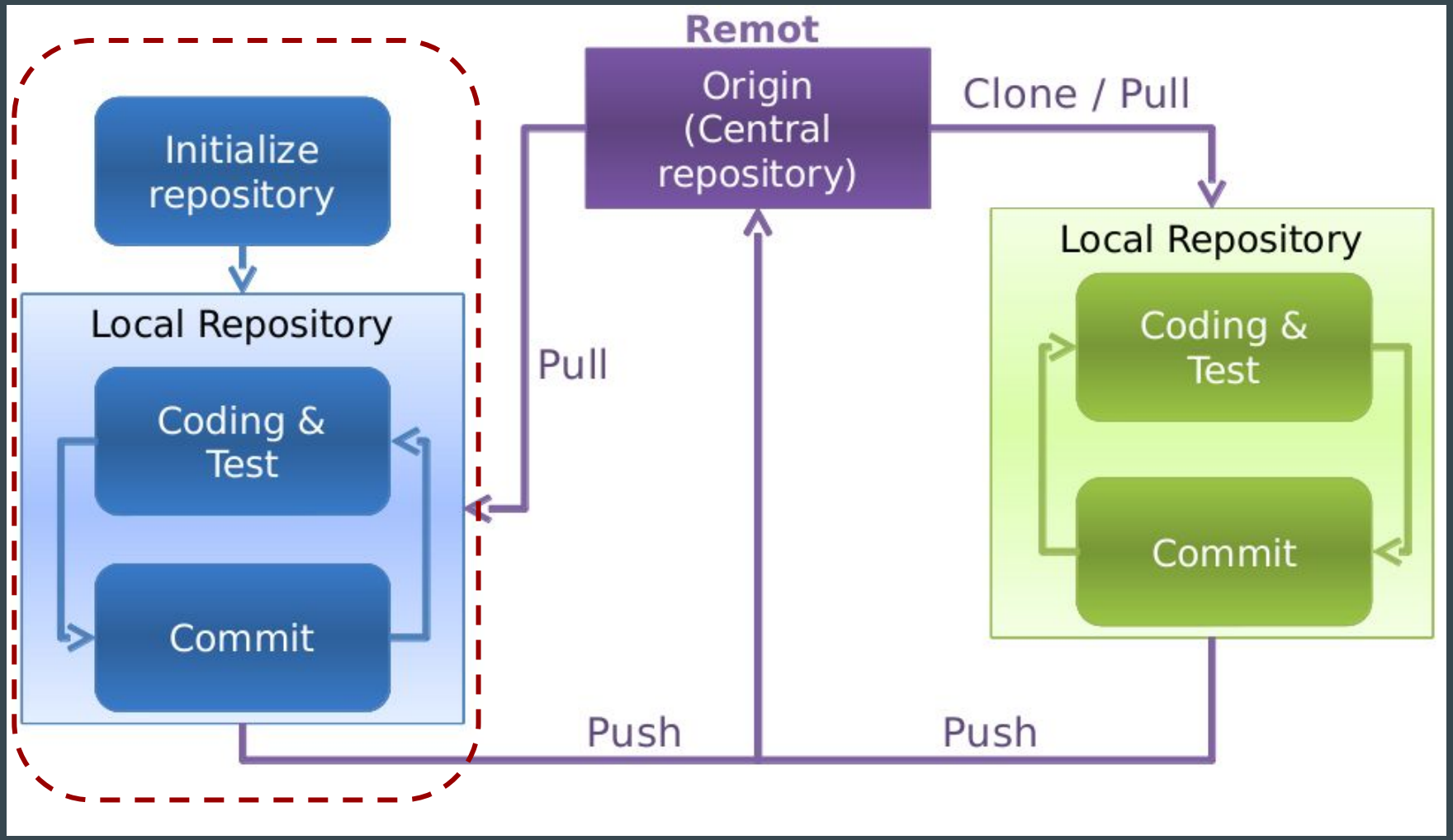
- Mac
  - Comes with command line tools
  - Prompt pop up by typing git in terminal

  - Or install with Homebrew (brew.sh)
  - `brew install git`

- Ubuntu
  - `sudo apt-get install git-core`

- Windows
  - Cygwin

GIT Workflow



GIT commands

- Initial git repository

  `Git init`
- Check status of repository
  - Check modified but unstaged files

  `Git status`
- Add file to git repository (index)
  - Make modified file become staged (ready to commit)

  `Git add <files>`
- Make staged change persistent (as commit)
  - Confirm a change / add of files

  `Git commit [-m <message>]`
- Log of all previous commit
  - With commit hash shown

  `Git log`

GIT File status

After `Git status` (see Demo)

- Unstaged
  - File changed from previous commit, and **not** tracked by git
- Staged
  - File changed from previous commit, which is tracked by git
- Untracked
  - File is **not** tracked by git
- Tracked
  - File **didn't changed** from previous commit, and the file is tracked by git

GIT Remote Repository

Synchronize with remote repository

- Clone the remote repository to local (Instead of git init)
  `Git clone <url>`

- Or pull the commit from remote to local machine (**Important!**)
  `Git pull`

- Work as usual
  `Git commit`

- After local edit and commit, push change to remote server
  `Git push`

GITHUB

Repository hosting service

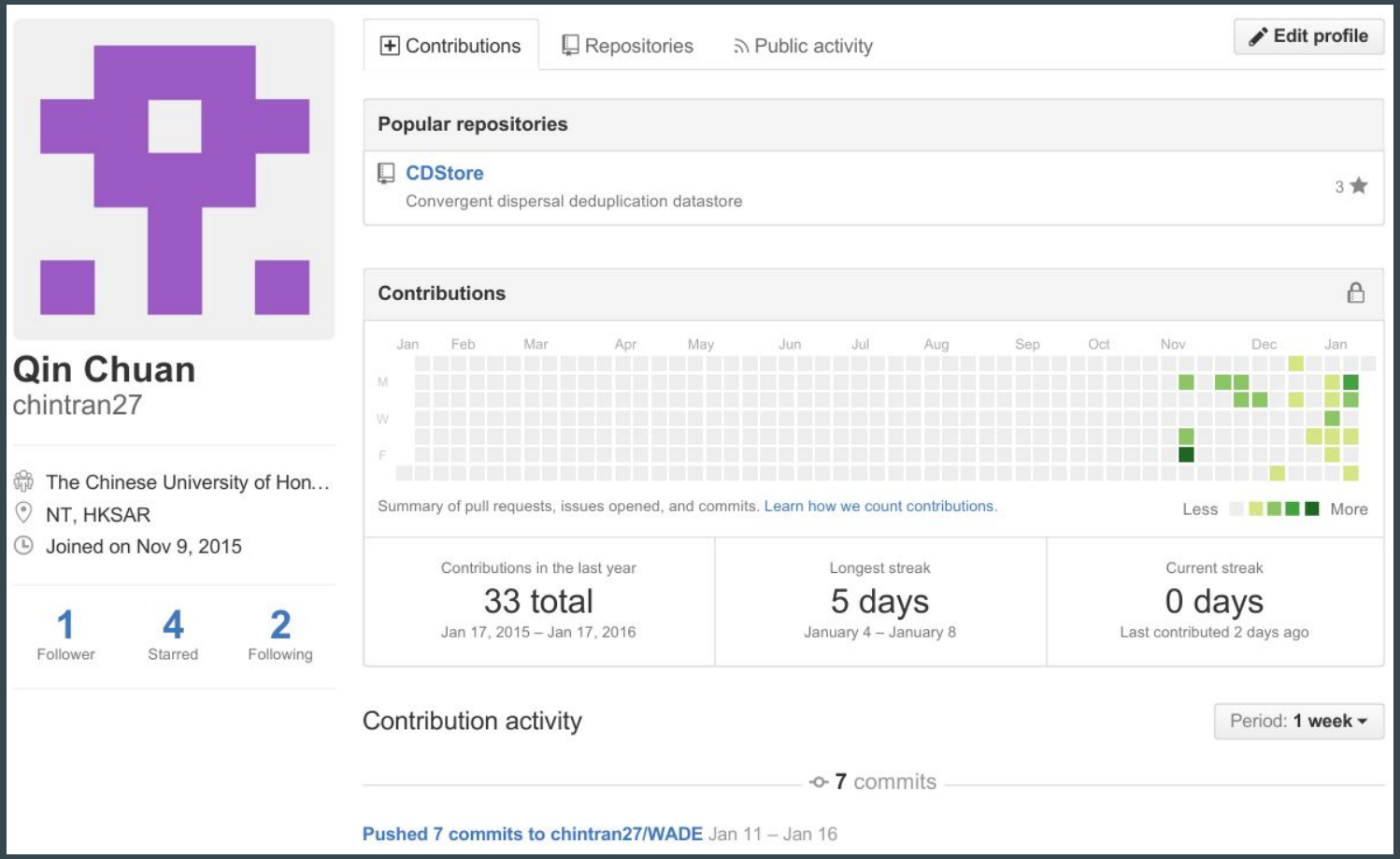
- Host your repository
- Manage team works

GitHub (https://github.com)

- Free user: All repositories are public
- Encourage social collaboration
- Education plan available: https://education.github.com/

- **We will use github for submission this year**

GITHUB Demo


Contributions
Repositories
Public activity
Edit profile
Popular repositories
CDStore
Convergent dispersal deduplication datastore
3
Contributions
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan
M
W
F
Summary of pull requests, issues opened, and commits. Learn how we count contributions.
Less More
Contributions in the last year
33 total
Jan 17, 2015 – Jan 17, 2016
Longest streak
5 days
January 4 – January 8
Current streak
0 days
Last contributed 2 days ago
Contribution activity
Period: 1 week
7 commits
Pushed 7 commits to chintran27/WADE Jan 11 – Jan 16
Qin Chuan
chintran27
The Chinese University of Hon…
NT, HKSAR
Joined on Nov 9, 2015
1
Follower
4
Starred
2
Following

Thank You