CS1520 Recitation: HTML, CSS and Git

Jeongmin Lee

TA: Jeong-Min Lee

- PhD Student in Computer Science Department
  - Research Topic: Machine Learning / Deep Learning / Time-Series Prediction
- Originally from South Korea 🇰🇷
- Hobby: Making Coffee ☕, Photography 📷 , ...
- TA Website: http://cs.pitt.edu/~jlee/cs1520
- Email: jlee@cs.pitt.edu

Office Hour & Logistics

- Friday 1:50pm - 3:50pm & by appointment (send me email)
- Sennott Square RM 5324
  - https://cs.pitt.edu/about/sennottmaps/

- Assignments are graded by the lecturer
  - questions w.r.t. grading → to Adam (A.C.Hobaugh@pitt.edu)

- These slides are uploaded to the TA website right before/after each recitation.

Office Hour & Logistics

- Purpose of Recitation
  - Help you to follow-up the course
  - Technical/Implementation-wise details are covered
  - Can be think of tutorials on each topic

- Please help me to improve the recitation 😃
  - Feedbacks are always welcome and appreciated (email / in-person)

Plan for Today

- 1. HTML
- 2. CSS
- 3. Git and Github

Plan for Today

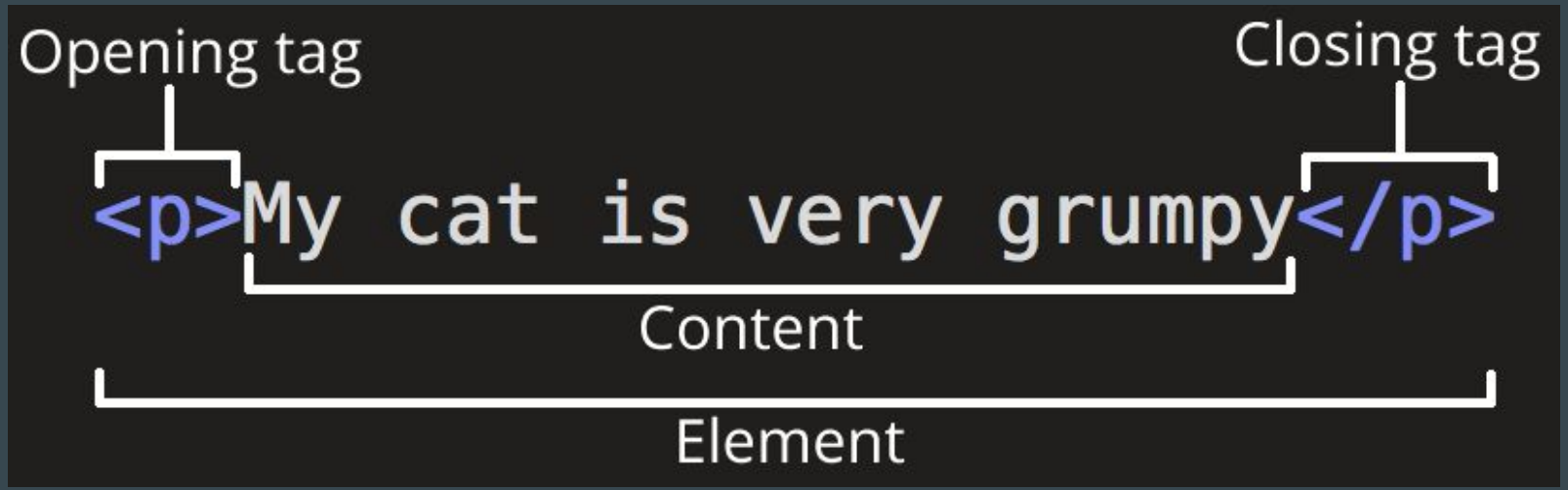
- 1. HTML
- 2. CSS
- 3. Git and Github

HTML

- Hypertext Markup Language
  - Hypertext : links a page to another page (hyperlink)
  - Markup : not for programming, but for markup (how to structure the pages and its contents)

- Consists of elements and attributes

HTML Elements



- An element = opening tag + content + closing tag

Figure: https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Getting_started

Kinds of Elements

- Box, Texts, Images, Links, ...
  - Text header <h1>One</h1>, <h2>Two</h2>,...
  - Paragraph A Paragraph!
  - Horizontal ruler <hr>
  - Image <img src=”image.jpg”>
  - Divider
  - Link Google
  - A text span   Text in Span

Kinds of Elements

- Lists
  - .. : unordered list
  - .. : ordered (numbered) list
  - .. : list item (enclose ul and ol item)
- Table
  - <table> .. </table>
  - <tr> .. </tr> : table row
  - <td> .. </td> : table data (table cell)
  - <th> .. </th> : table heading (special format applied)

Do Demo

- Open a text editor -- e.g., TextEdit (recommend: Sublime Text https://www.sublimetext.com)
- Copy/Write this and save it as “hello.html”
- Open the file on web browser. (file - Open File)
- Try with other the elements

```
<!DOCTYPE html>
<html>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

Do Demo

List Example

```
<!DOCTYPE html>
<html>
<body>

<h2>An unordered HTML list</h2>

<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>

</body>
</html>
```

Do Demo

Table Example

```
<!DOCTYPE html>
<html>
<body>

<h2>Basic HTML Table</h2>

<table style="width:100%">
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
  <tr>
    <td>John</td>
    <td>Doe</td>
    <td>80</td>
  </tr>
</table>

</body>
</html>
```

HTML Attributes

- Elements can have attributes
- An attribute should have:
  - A space between it and the element name
  - The attribute name, followed by an equal sign
  - An attribute value, with opening and closing quote marks

Figure: https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Getting_started

HTML Attributes

- There exist various attributes for each html element
  - e.g., hyperlink

- The attributes of id and class are universal: any element can have them
  - id: allow you to target a specific instance of an element (unique)
  - class: target a group of elements
- You will understand them more in following CSS section!

Figure: https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Getting_started

Plan for Today

- 1. HTML
- 2. CSS
- 3. Git and Github

CSS in detail

- What CSS is
- How to add CSS to HTML
- Selectors: ID and Class

CSS

- CSS stands for Cascading Style Sheets.
- CSS describes how HTML elements are to be displayed on the web browser.
- CSS saves a lot of time and work
  - It can control the layout/style of multiple web pages all at once.

CSS

- With CSS, you can specify tons of details on how HTML elements are displayed
  - color, size, position, margin, ...

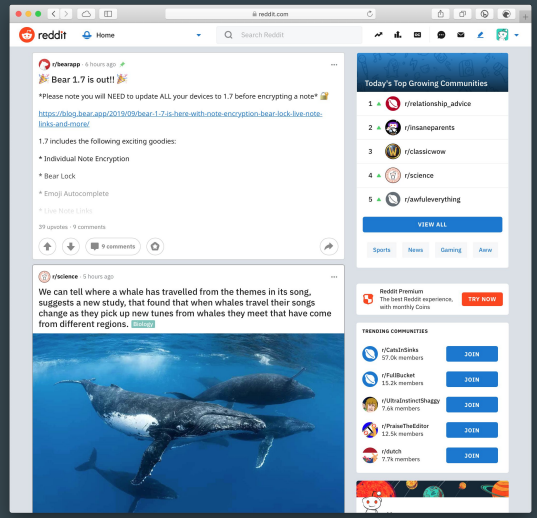
CSSpractice.html

```html
<!DOCTYPE html>
<html lang="en-US">
    <head>
        <link rel="stylesheet" href="css/style.css" />
        <title>HTML Page with CSS</title>
    </head>
    <body>
        <header>
            Fake Industry Expo Announcement
        </header>
        <article>
            Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
            velit esse cillum dolore eu fugiat nulla pariao csstur. Excepte
        </article>
        <footer>
            &copy; Copyright Imaginary Organization 2016
        </footer>
    </body>
</html>
```

style.css

```css
body {
    font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
}
article {
    color: #5C373C;
    margin: 10px;
}
footer {
    font-size: x-small;
    font-style: italic;
    background-color: #C14860;
    padding: 10px;
}
header {
    font-size: x-large;
    font-weight: bold;
    text-align: center;
    background: -moz-linear-gradient(#051118, #5C373C);
    color: #CAA893;
    border: thin #CAA893 inset;
    margin: 20px 30px;
    padding: 10px 20px;
}
```

HTML + CSS =



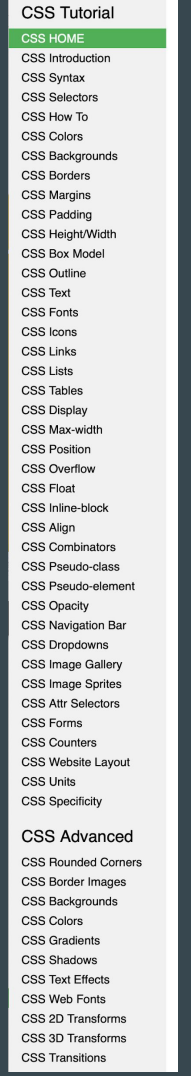
A website with nice look (or not nice)

CSS

- With CSS, you can specify tons of details on how HTML elements are displayed
  - color, size, position, margin, ...
- There are TONS of things you can adjust about
  -- but the primary topic of the course is not CSS itself.
- We will focus on “how to use it”

CSS

- With CSS, you can specify tons of details on how HTML elements are displayed
  - color, size, position, margin, ...
- There are TONS of things you can adjust about -- but the primary topic of the course is not CSS itself.
- We will focus on “how to use it”
- For more detail, refer this: https://www.w3schools.com/css/default.asp



CSS in detail

- What CSS is
- How to add CSS to HTML
- Selectors: ID and Class

CSS

- CSS can be added to HTML elements in 3 ways:
  - Inline - by using the style attribute in HTML elements
  - Internal - by using a <style> element in the <head> section
  - External - by using an external CSS file
    The most common way to add CSS, is to keep the styles in separate CSS files.

Inline

- An inline CSS is used to apply a unique style to a single HTML element.
- It is used as an attribute of an HTML element.
- This example sets the text color of the <h1> element to blue:

```
<h1 style="color:blue;"> a Blue Heading </h1>
```

Internal CSS

- An internal CSS is used to define a style for a single HTML page.
- An internal CSS is defined in the <head> section of an HTML page, within a <style> element:

Internal CSS

(Try it Yourself!)

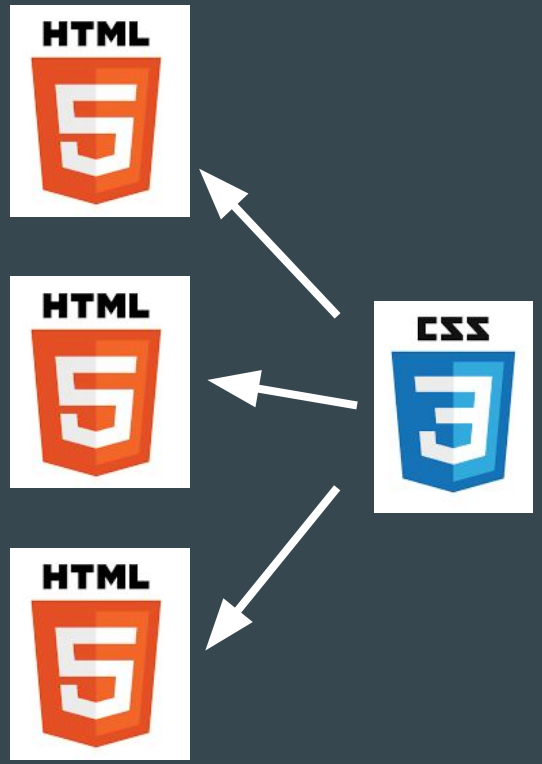
```
<!DOCTYPE html>
<html>
<head>
<style>
body {background-color: powderblue;}
h1   {color: blue;}
p    {color: red;}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

External CSS

- An external style sheet is used to define the style for multiple HTML pages.
- With an external style sheet, you can change the look of an entire web site, by changing one file!



- To use an external style sheet, add a link to it in the <head> section of the HTML page:

External CSS

(Try it Yourself!)

style.css:

```
body {
    background-color: blue;}
h1 {
    color: blue;}
p {
    color: red;}
```

```
<!DOCTYPE html>
<html>
<head>
 <link rel="stylesheet" href="style.css">
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

CSS in detail

- What CSS is
- How to add CSS to HTML
- Selectors: ID and Class

Selectors

- In HTML, there are types of attribute that you can use them as selectors for CSS and Javascript.
  - Class attribute
  - ID attribute

Class Attribute

- Class allows you target a group of elements

```
<html>
 ...
<p class="intro"> Hello world. </p>

<p class="intro"> I like to code. </p>

<p class="info"> Snow in Pittsburgh </p>
 ...
</html>
```

ID Attribute

- ID allows you target a single specific element

```
<html>
  ...
<p id="unique"> Hello world. </p>

<p id="wrong"> I like to code. </p>

<p id="wrong"> Snow in Pittsburgh </p>
  ...
</html>
```

How to use with CSS

- Depends on target, the prefix is different:
  - ID: #
  - Class: .
  - HTML element: no . or # but the element name

ID Attribute

HTML

```
<html>
 ...
<p id="unique"> Hello world. </p>

<p class="intro"> I like to code. </p>

<p class="info"> Snow in Pittsburgh </p>
 ...
</html>
```

CSS

```
...
p{
  font-size: 14; }

#unique {
  color: orange;}

.intro {
  color: blue;}

.info {
  color: red;}
```

Plan for Today

- 1. HTML
- 2. CSS
- 3. Git and Github

Git and Github

- Git is an open source distributed version control system
  - A program that helps you to control versions of your code
- Github is a web-based code hosting service
  - Github uses Git
  - You can use either its web-interface or command-line interface

Git Overview

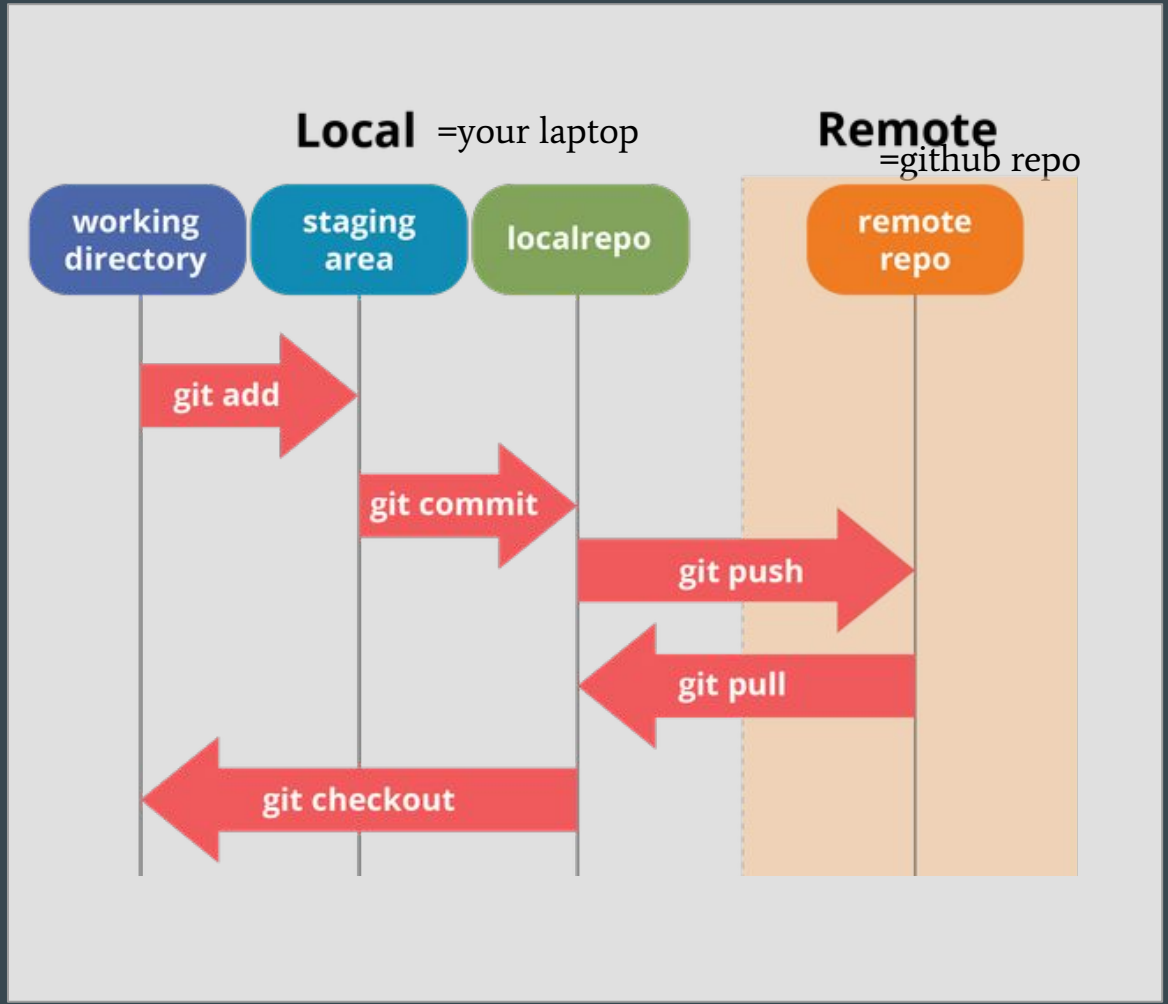


Image: https://www.quora.com/What-is-git-and-why-should-I-use-it

Let’s do it.

1. Make your own GitHub Repository
   - Make an Github account first http://github.com
   - Make a your own repository on Github
   !! Remember/Copy somewhere the name of the repo

2. On your computer, install git installer and open a terminal/bash
   Windows: https://git-for-windows.github.io/
   On terminal/bash, type >> git

Let’s do it.

3. Configure your info
    - Name and email address

```
git config --global user.name “First Last”

git config --global user.email “email@email.com”
```

Let’s do it.

4. Create a repo

```
git init myrepo
```

Let’s do it.

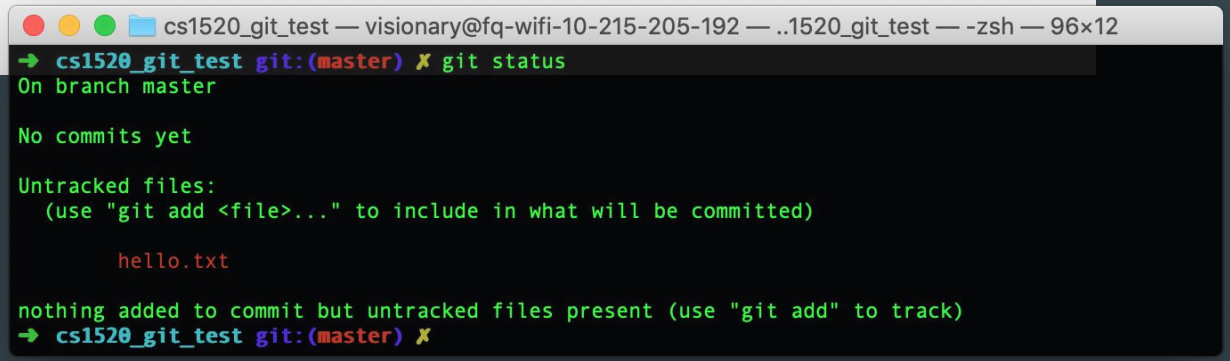
5. Open a text editor, write something and save it as “hello.txt”file and add it to my repo.

Or, simply do this on terminal:

```
echo “hello world” >> hello.txt
```

Let’s check current status:

```
git status
```

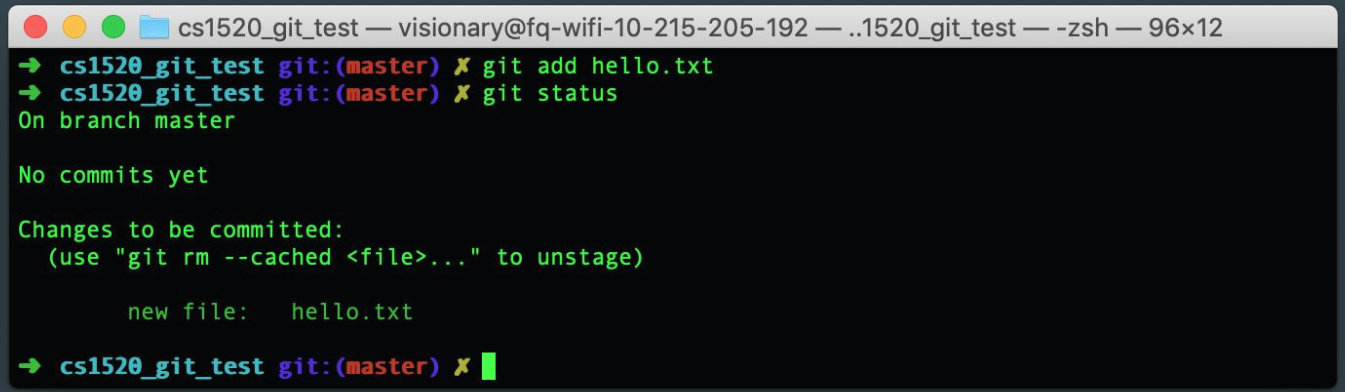


Let's do it.

We need to register the file into our repo (=add)

```
git add hello.txt
```

- This is how to **register** a file to the repository.
- But the updates/contents are not tracked until commit.



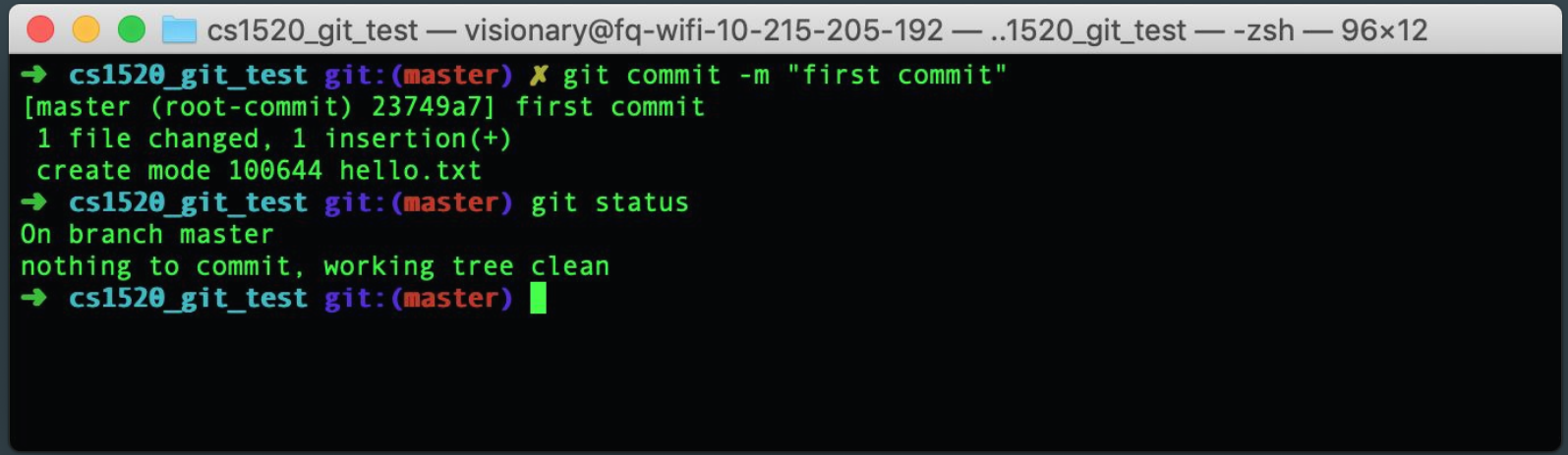
Let’s do it.

6. Commit it

```
git commit -m “a commit message”
```

- Commit makes a mark (or snapshot) of current states of the all the files on your repo
- -m “message” adds a simple message about the current commit.
- “Commit” is a <unit> of version in Git

Let’s do it.


cs1520_git_test — visionary@fq-wifi-10-215-205-192 — ..1520_git_test — -zsh — 96×12
➜ cs1520_git_test git:(master) ✗ git commit -m "first commit"
[master (root-commit) 23749a7] first commit
1 file changed, 1 insertion(+)
create mode 100644 hello.txt
➜ cs1520_git_test git:(master) git status
On branch master
nothing to commit, working tree clean
➜ cs1520_git_test git:(master)

Let’s do it.

Let’s check **the history of commits**

```
git log
```

- You will see commit id of each commit

Let’s do it.

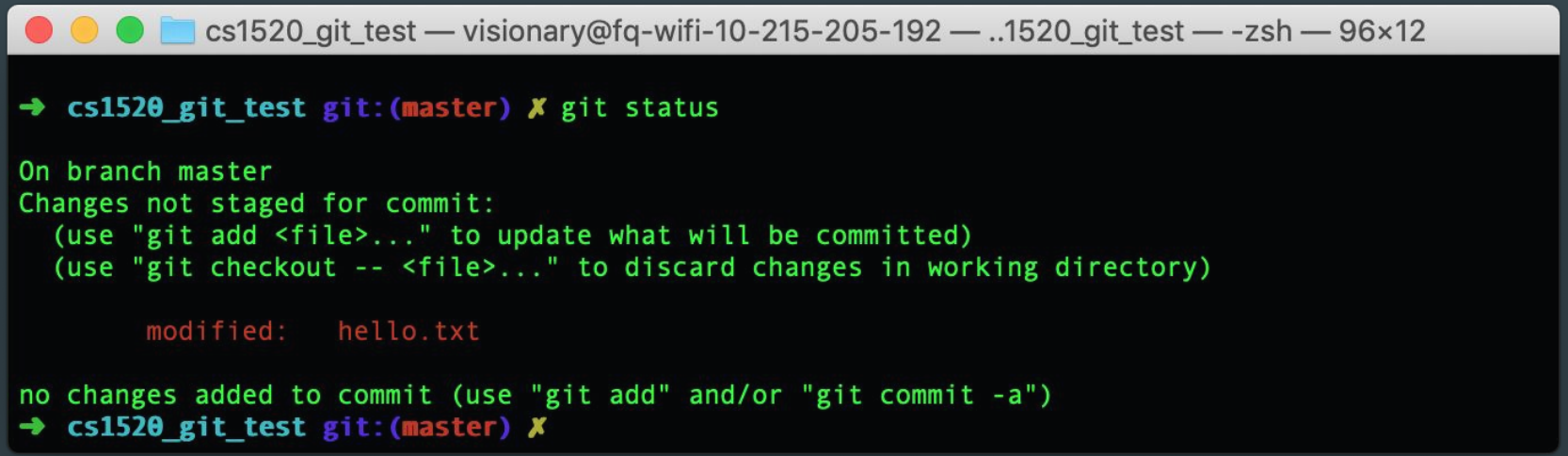
7. for sake of learning, let’s edit it again the same file (Open the file on the text editor and add a new text, or simple do this on terminal:)

```
echo “new line” >> hello.txt
```

Let’s do it.

8. Let’s see status

```
git status
```



Let’s do it.

8. Let’s do another commit

```
git commit -m “updated!”
```

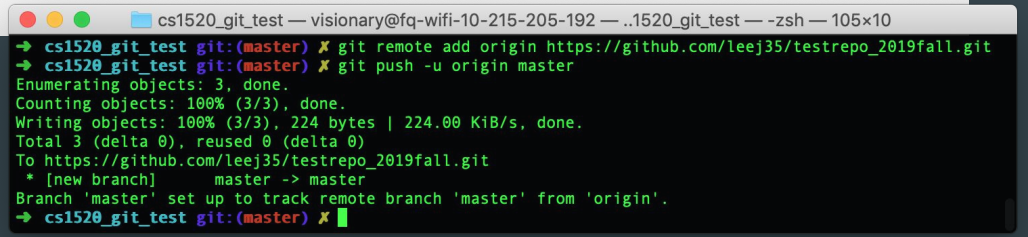
Let’s work on GitHub

- Add your github repo to your local git repo

```
git remote add origin https://github.com/UserName/reponame.git
```

  - !! Put your github username and the name of the repo you made earlier

```
git push --set-upstream origin master
```



Let's work

- Remember!

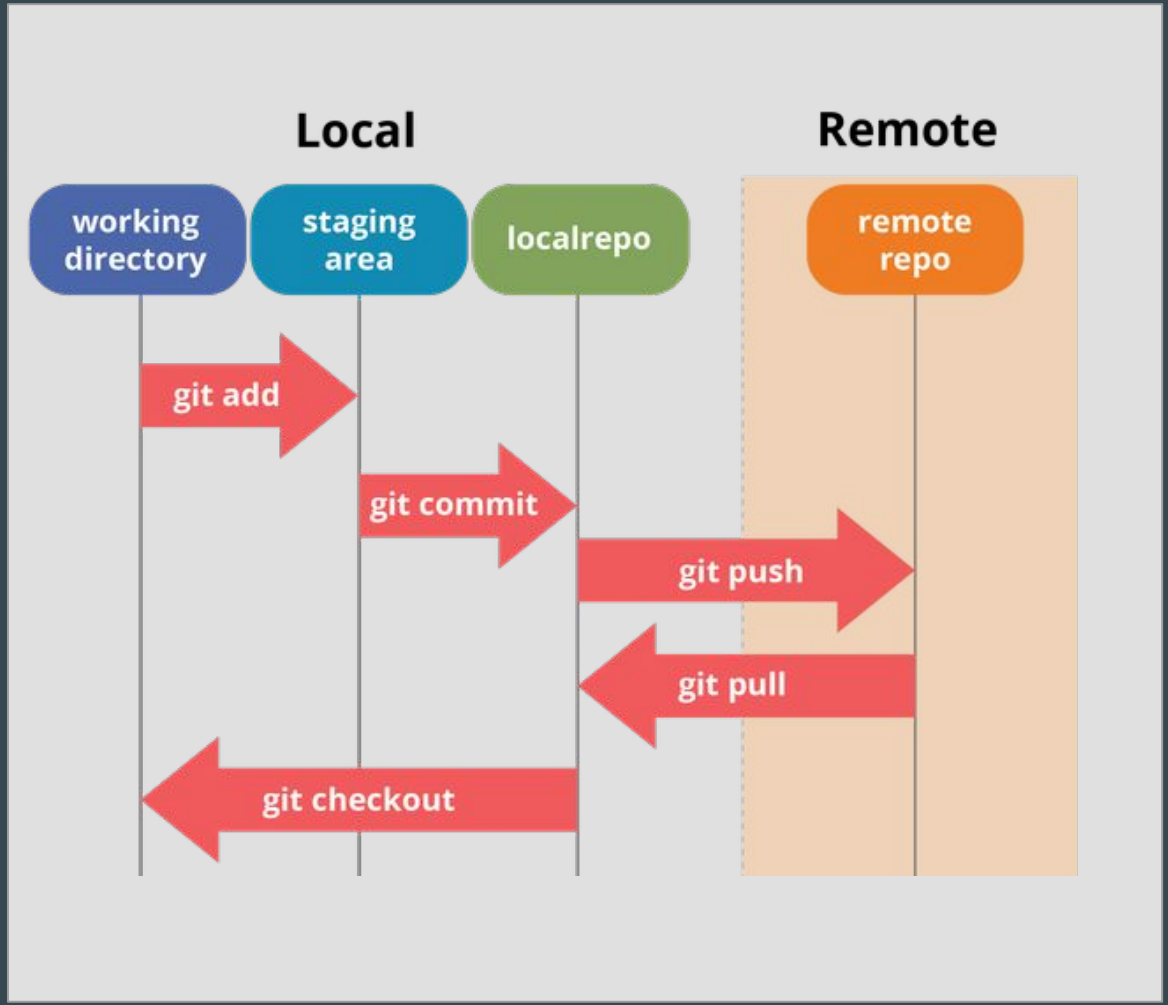


Image: https://www.quora.com/What-is-git-and-why-should-I-use-it

Let’s work on GitHub

- Push (= upload current local to the Github repo)

```
git push
```

- Then go to your github repo on browser and see.

Let’s work on GitHub

- Pull (=sync from github repo to local repo;like download and update)

```
git pull
```

Closing remarks

- Only basic git commands are covered here.
- There exist plenty of other commands (such as branch/diff/merge/stash) and you can check them out here:
  - https://dzone.com/articles/top-20-git-commands-with-examples
  - https://try.github.io
  - https://git-scm.com/docs/gittutorial

Questions?