

TOPIC 2: HTML AND GIT

2.1 Objectives

The objectives of this topic are

- 1) Introduction of several tags:
 - a. Heading: <h1>, <h2>, <h3>, <h4>, <h5> and <h6>
 - b. Image
 - c. Table:
 - i. <table>
 - ii. <tr>
 - iii. <th>
 - iv. <td>
- 2) Attribute in HTML tags
- 3) Repository: Git and Github.com

2.2 Requirements

Before you start this topic please read following requirements:

- 1) Install git in your device. For windows user you can use following link:
<https://github.com/git-for-windows/git/releases/download/v2.28.0.windows.1/Git-2.28.0-64-bit.exe>
- 2) Create an account in github.com

2.3 HTML Tags

In this section we will learn several tags commonly use in HTML page.

2.3.1 Heading

Heading mainly used to format chapter or title, or sub chapter. Usually the headings create a hierarchy in your document. Heading in text usually bolder and the font size also greater than normal text. There six headings in HTML:

- 1) Heading 1, the usage is <h1>The text</h1>.
- 2) Heading 2 <h2>The text</h2>.
- 3) Heading 3 <h3>The text</h3>.

- 4) Heading 4, the usage is `<h4>The text</h4>`.
- 5) Heading 5, the usage is `<h5>The text</h5>`.
- 6) Heading 6, the usage is `<h6>The text</h6>`.

Easy right? The usage for this tag has no different from tags that you have learned before, so make a HTML file and **try it by yourself** and see the different between each heading tags.

2.3.2 Image

It is common for text to have images. The text is easier to understand and fun to read if there are images attached to it. A HTML tag used to display image is ``. This tag has no pairs, so there is no closing tag. To display an image using this tag is by filling the image address in this tag' attribute call `src`, by following format

```

```

Maybe you wonder, what is image address? Image address is can by any address, for example any image URL, image name (with extension), or image path.

Example scenario: for example, you have a folder and insider your folder you have

- 1) A HTML file called exercise-2.1.html
- 2) An image for example image-1.png (You can replace any image)
- 3) A folder called images, and inside the folder there has:
 - a. An image called image-1.jpg (You can replace any image)

After that the code for exercise-2.1.html:

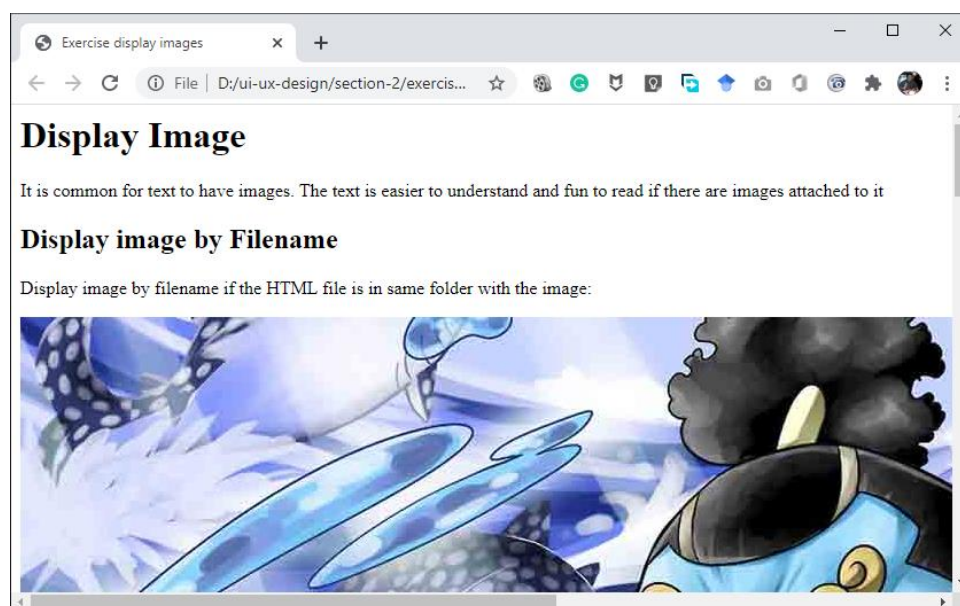
```

<html>
  <head>
    <title>Exercise display images</title>
  </head>

  <body>
    <h1>Display Image</h1>
    <p>It is common for text to have images. The text is easier to understand and fun to read if there are images attached to it</p>
    <h2>Display image by Filename</h2>
    <p>Display image by filename if the HTML file is in same folder with the image:</p>
    
    <h2>Display image by The Path</h2>
    <p>Display image by the image path if the html file is not in the same folder with the images. For example the image is in the sub folder as following example:</p>
    
    <h2>Display image by URL</h2>
    <p>You also can display image the come from internet by specified the URL. For Example:</p>
    
  </body>
</html>

```

And if you open it in your web browser the result as follow:



The page is too long so I just display part of it.

2.3.3 Table

For tabular data you could display it in table format. The basic HTML tag for table are

- 1) The opening tag for table `<table>`, the closing tag is `</table>`
- 2) Row in table: `<tr>` (table row)
- 3) The data inside the table row you could use `<th>` or `<td>`. `<th>` is for table heading and `<td>` is for table data.

Example for a table

Number	Name	Gender
1	Ani	Female
2	Joko	Male
3	Wawan	Male
4	Agus	Male
5	Dewi	Female

Pay attention for that table. If you want to make that table, you can see the following code:

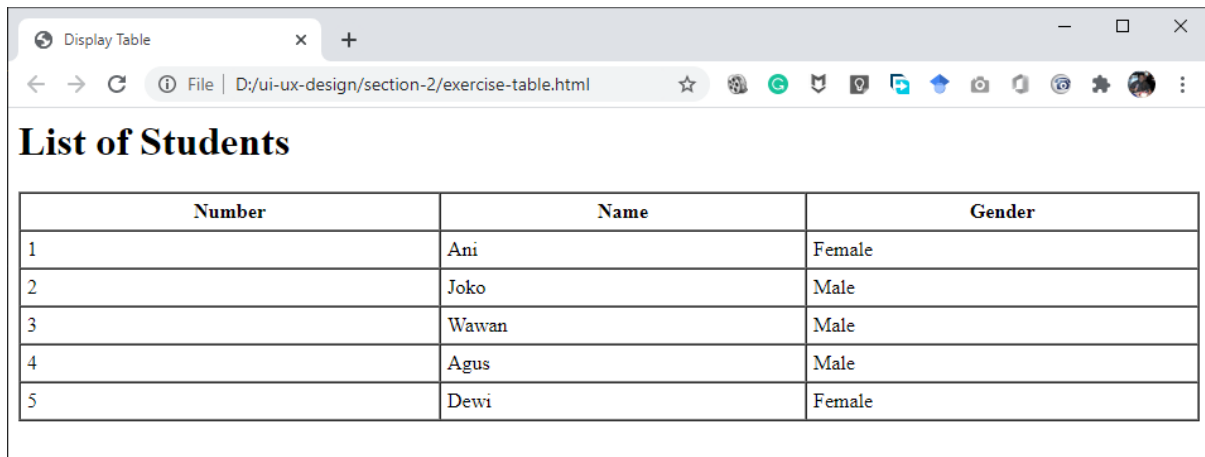
```

<html>
  <head>
    <title>Display Table</title>
  </head>

  <body>
    <h1>List of Students</h1>
    <table border="1" width="100%" cellpadding="5">
      <tr>
        <th>Number</th>
        <th>Name</th>
        <th>Gender</th>
      </tr>
      <tr>
        <td>1</td>
        <td>Ani</td>
        <td>Female</td>
      </tr>
      <tr>
        <td>2</td>
        <td>Joko</td>
        <td>Male</td>
      </tr>
      <tr>
        <td>3</td>
        <td>Wawan</td>
        <td>Male</td>
      </tr>
      <tr>
        <td>4</td>
        <td>Agus</td>
        <td>Male</td>
      </tr>
      <tr>
        <td>5</td>
        <td>Dewi</td>
        <td>Female</td>
      </tr>
    </table>
  </body>
</html>

```

The above code can be saved and named as exercise-table.html. If you pay attention in <table> tag, it has additional information such as border, width, cellpadding and cellspacing. That information is called attributes and we will learn more about it in the next section. If you open the document in web browser it will display like bellow image:



The screenshot shows a web browser window with the title 'Display Table'. The address bar shows the file path 'D:/ui-ux-design/section-2/exercise-table.html'. The main content area displays a table titled 'List of Students'.

Number	Name	Gender
1	Ani	Female
2	Joko	Male
3	Wawan	Male
4	Agus	Male
5	Dewi	Female

2.4 Attribute in HTML Tags

In previous section you already know little bit about HTML attribute. Every HTML tag commonly has several attributes. The attribute of html tag has a function based on the tag. It can be used to change the appearance the appearance in web browser such as alignment of the text, size of image and so on.

2.4.1 Attribute for Paragraph `<p>`, `<td>`, `<th>`

Tag `<p>`, `<td>`, and `<th>` has same function is to display text. Since it used to display text, their have some attribute called align.

Attribute align

For example, tag `<p>`, if you just write the tag as that, it will display text and the alignment of text is left. It is default appearance. If you want to change it, you could use attribute called **align**. The possible value of this attribute is:

- 1) justify: the text will align to justify
- 2) left: the text will align to left
- 3) center: the text will align to center
- 4) right: the text will align to right

attribute valign

Another attribute is valign. This attribute used in `<td>` and `<th>`. This attribute used to configure the vertical align of the text in table. The value of this attribute can be (1) top, (2) middle, and (3) bottom.

2.4.2 Attribute for <table>

For tag <table> there are several attributes as you seen in previous example. The attributes are:

- 1) Border: this attribute used to display table with border. The value of this attribute can be any integer indicating the thickness of the border.
- 2) Cellpadding: this attribute used to configure the distance between border in cell (td or th). It can any integer value, however if you want to make compact border table you could fill it with 0.
- 3) Cellspacing: this attribute used to configure between the data inside the cell with the border of <td>. The value of this attribute can be any integer value.
- 4) Width: this attribute used to configure the width of the table. The value could be any integer value or percent (0-100%). If you fill with integer value, the size will be in pixel for example 200px, 300px, etc. and width of the table will be fixed. However, if you fill with percent, the size will be dynamic, depend of the container or the size of window.

2.4.3 Mandatory attribute

Some attribute sometime mandatory to make the tag functioning correctly for example link <a> need to specify the URL in attribute "href" and image should be supplied with the address of image in "src"; and without those attribute the tag cannot function properly.

Beside the attribute above, there are many attributes exist, but we cannot discuss all of it since there are many attributes. The important thing is you able to use it. We will discuss another attribute as we go along.

2.5 Repository: Git and Github.com

Git is one of software for versioning control. In its website, **Git** defined itself as a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency. Git can manage your version of your code as your code changes. Right now, git become mandatory software used for developer. It is not only use to manage version for the source code, but it used to many purposes such

as deployment, collaboration and so on. Meanwhile, GitHub is a repository used to store your code and it is work based on git.

Before using git and GitHub, make sure you

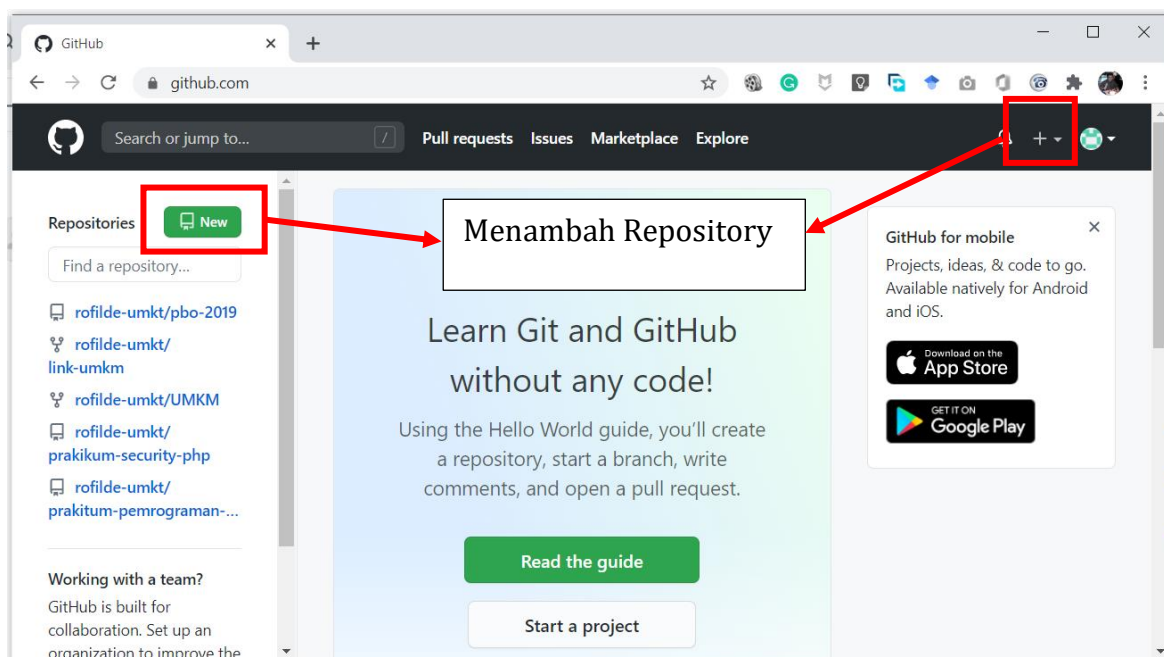
- 1) installed git
- 2) register to GitHub
- 3) store your code inside a folder, for example I store all the code inside folder called ui-ux-design

For preparation to use your git, follow the instructions:

- 1) open CMD
- 2) type following code:
 - a. `git config --global user.email "yourname@youremail"`
 - b. `git config --global user.name "Your Name"`
- 3) Finish

2.5.1 Create Repository

After you finished the preparation above, the next step is creating a repository in GitHub, so before creating the repository, please login to GitHub using your account.



To create a repository, you can press “new” button or by clicking “+” menu as display in above figure. The page used to create a repository is as follow:

Create a New Repository

github.com/new

Search or jump to... Pulls Issues Marketplace Explore

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

Owner * Repository name *

rofilde-umkt / ui-ux-design ✓

Great repository names are short and memorable. Need inspiration? How about **probable-tribble**?

Description (optional)

☒ **Public**
Anyone on the internet can see this repository. You choose who can commit.

☐ **Private**
You choose who can see and commit to this repository.

Initialize this repository with:
Skip this step if you're importing an existing repository.

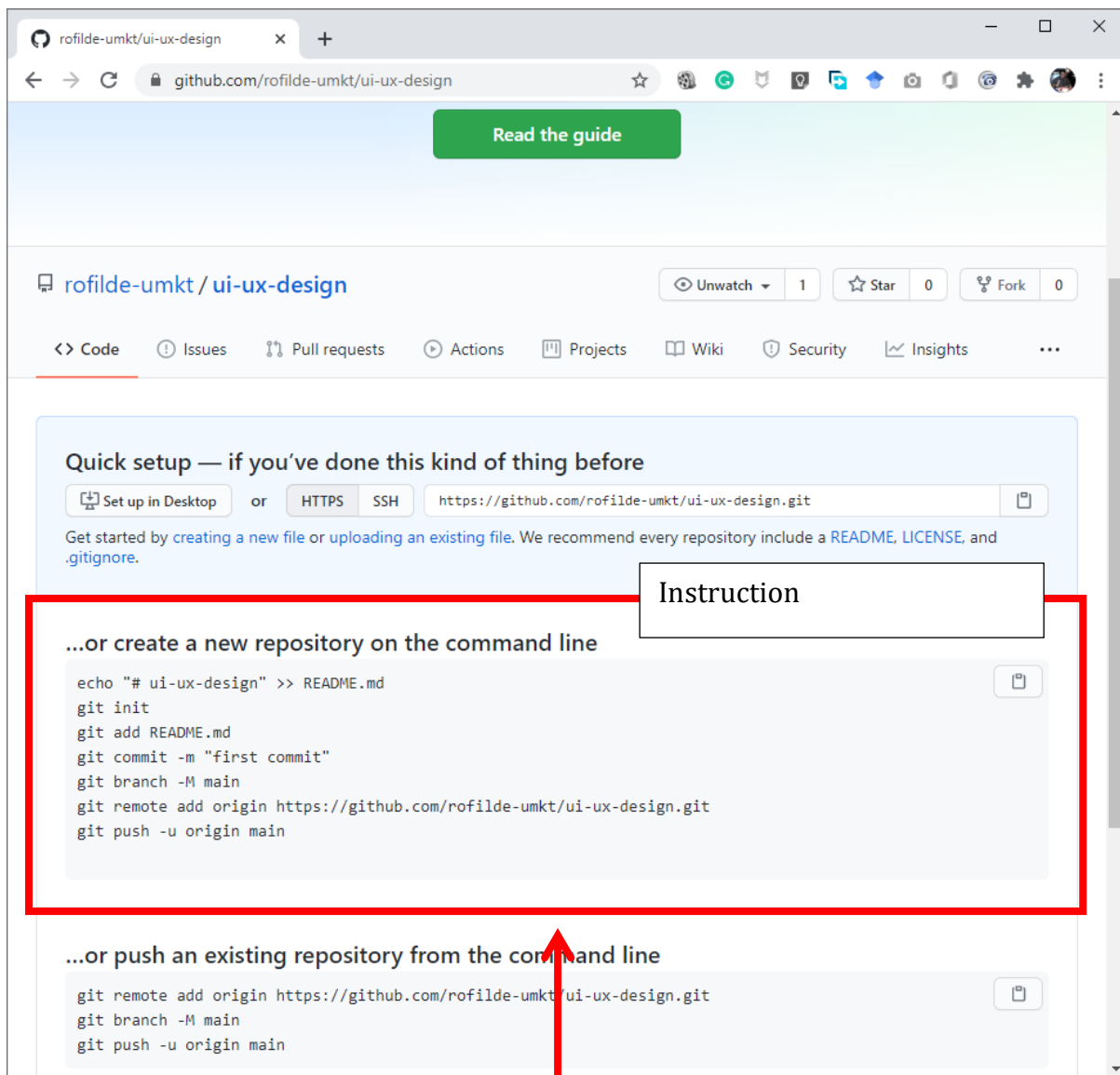
☐ **Add a README file**
This is where you can write a long description for your project. [Learn more.](#)

☐ **Add .gitignore**
Choose which files not to track from a list of templates. [Learn more.](#)

☐ **Choose a license**
A license tells others what they can and can't do with your code. [Learn more.](#)

Create repository

In this stage, you just need to fill the **Repository name** and click button “**Create repository**”. After that you see the page as follow:



Up to this point you have created the repository successfully, but your repository is empty. For the next stage we will upload our source to this repository, but before that you should not close this page because there are instructions that you should follow to connect your source to the repository.

2.5.2 Upload to Repository

From the last discussion we already created a repository. Now we want to upload our source to that repository using git, so follow the following instructions:

- 1) Open CMD and change the directory to our source code folder.
- 2) Follow instructions as state in the web page. The given instructions is very important, it set your directory to upload and download the source code to your

repository in GitHub. But its not upload your all source code rather it just uploads file called README.md, to upload all your source code will given in the last stage.



```
D:\>cd ui-ux-design

D:\ui-ux-design>echo "# ui-ux-design" >> README.md

D:\ui-ux-design>git init
Initialized empty Git repository in D:/ui-ux-design/.git/

D:\ui-ux-design>git add README.md

D:\ui-ux-design>git commit -m "first commit"
[master (root-commit) d296cdb] first commit
1 file changed, 1 insertion(+)
create mode 100644 README.md

D:\ui-ux-design>git branch -M main

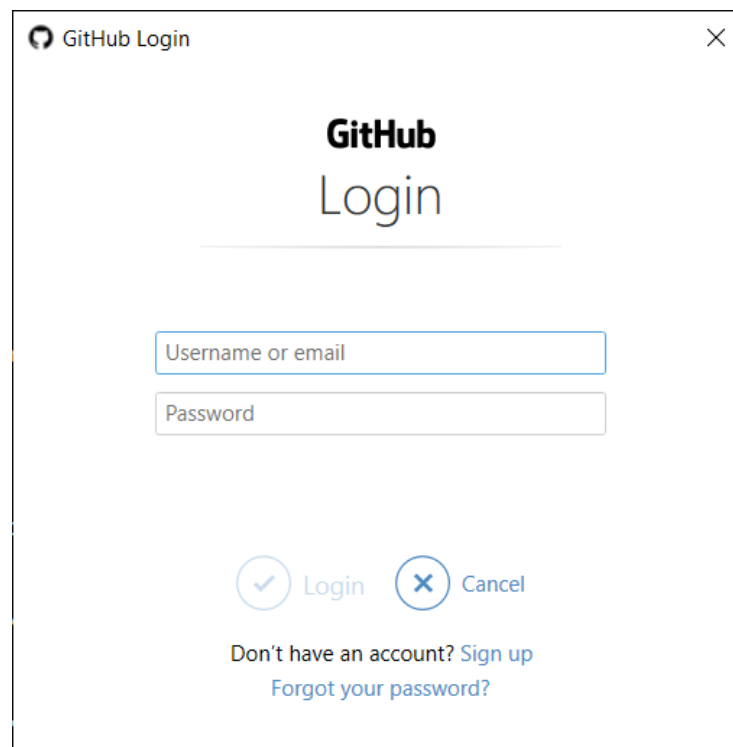
D:\ui-ux-design>git remote add origin https://github.com/rofilde-umkt/ui-ux-design.git

D:\ui-ux-design>git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 233 bytes | 233.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/rofilde-umkt/ui-ux-design.git
 * [new branch]      main -> main
Branch 'main' set up to track remote branch 'main' from 'origin'.

D:\ui-ux-design>
```

Above image is an example if you follow the instructions.

- 3) After you follow the instruction and the source code being uploaded to repository, sometimes they ask for the login as follow, just login using your username and password.



GitHub Login

GitHub
Login

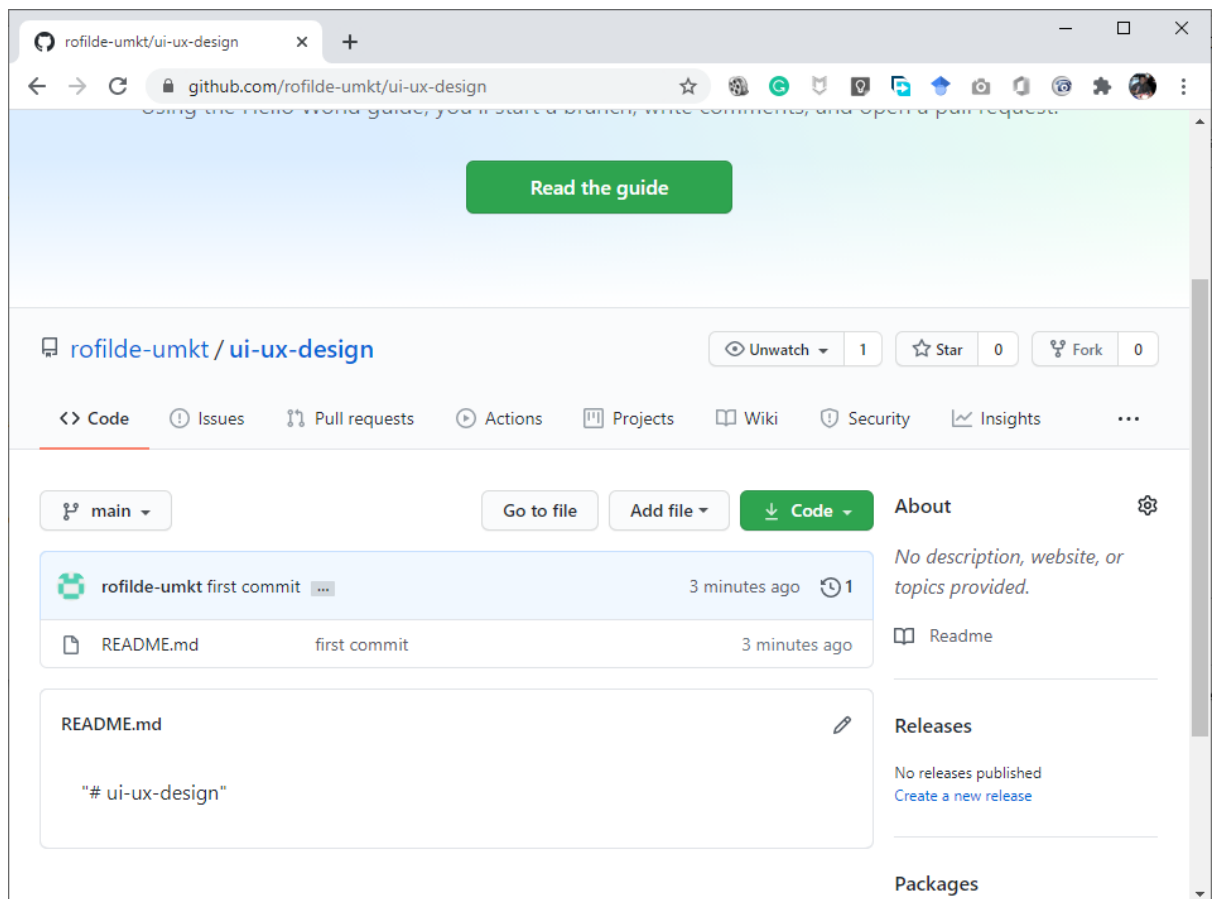
Username or email

Password

☒ Login ☐ Cancel

Don't have an account? [Sign up](#)
[Forgot your password?](#)

If you succeeded, you could refresh the web page (your account) and it will look like below:



Up to this point you succeeded to using git to upload one file. To upload all your source code, follow the next stage.

- 4) To upload all your code, in CMD please follow the instruction below:
 - a. `git add .`
 - b. `git commit -am "All source code"`
 - c. `git push origin main`

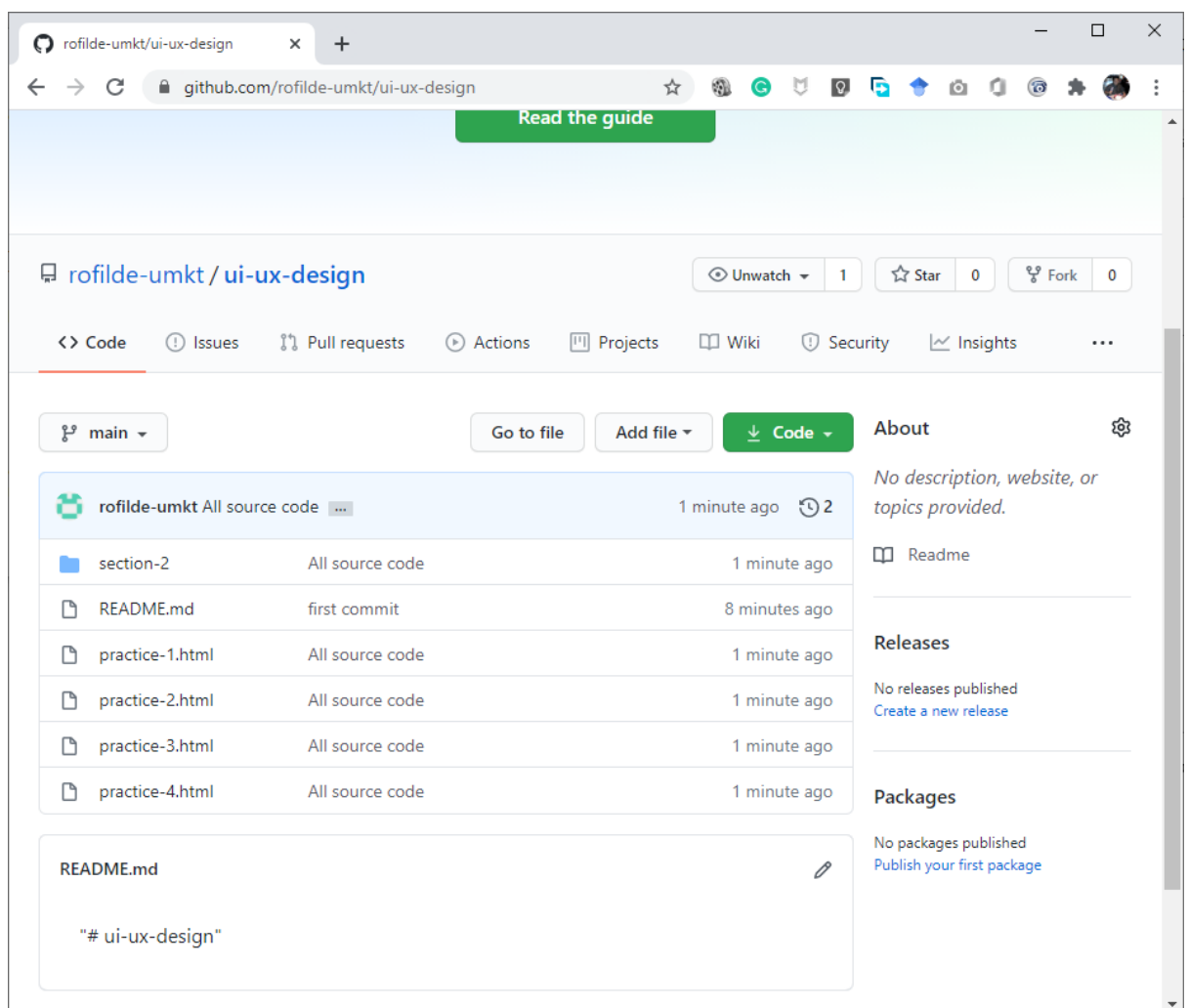
```
Command Prompt
D:\ui-ux-design>git add .

D:\ui-ux-design>git commit -am "All source code"
[main 5a403be] All source code
 8 files changed, 130 insertions(+)
 create mode 100644 practice-1.html
 create mode 100644 practice-2.html
 create mode 100644 practice-3.html
 create mode 100644 practice-4.html
 create mode 100644 section-2/exercise-image.html
 create mode 100644 section-2/exercise-table.html
 create mode 100644 section-2/image-1.jpg
 create mode 100644 section-2/images/image-1.jpeg

D:\ui-ux-design>git push origin main
Enumerating objects: 13, done.
Counting objects: 100% (13/13), done.
Delta compression using up to 16 threads
Compressing objects: 100% (11/11), done.
Writing objects: 100% (12/12), 132.71 KiB | 18.96 MiB/s, done.
Total 12 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/rofilde-umkt/ui-ux-design.git
   d296cdb..5a403be  main -> main

D:\ui-ux-design>
```

5) After you run the instruction in point 4, go back to web page and refresh you will see as follow:



As you can see, all the source code already in your repository.

2.6 Assignments

- 1.) Type source code exercise-table.html and change the information inside the page
- 2.) Type source code exercise-image.html and change the image with your image/photos
- 3.) Find 10 more attribute and how to use it.
- 4.) Follow the instruction to create a repository using git and GitHub and give me your GitHub repository Link.