



## Lab 1

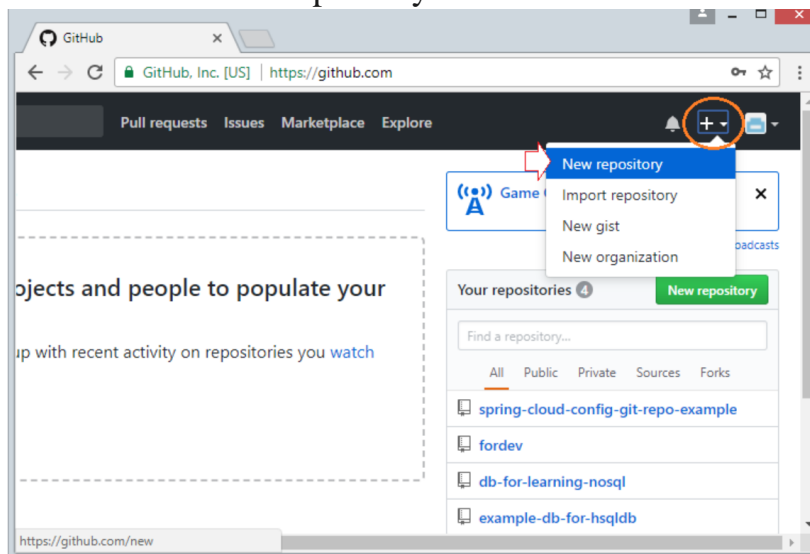
### Question 1. Github



Create a Github account: <https://github.com/signup>

The screenshot shows the GitHub sign-up page. It has a dark background with a white sign-up form in the center. The form includes fields for 'Username' (with a placeholder 'Pick a username'), 'Email' (with a placeholder 'you@example.com'), and 'Password' (with a placeholder 'Create a password'). Below the password field is a note: 'Use at least one letter, one numeral, and seven characters.' At the bottom of the form is a green button that says 'Sign up for GitHub'. Below the button is a small disclaimer: 'By clicking "Sign up for GitHub", you agree to our [terms of service](#) and [privacy policy](#). We'll occasionally send you account related emails.'

#### - Create GitHub Repository



The image consists of two screenshots of the GitHub web interface. The top screenshot shows the 'Create a new repository' page. The 'Owner' is 'o7planning' and the 'Repository name' is 'my-first-project'. The 'Description' is 'My First Project on GitHub'. The visibility is set to 'Public'. The 'Create repository' button is highlighted with a red arrow. The bottom screenshot shows the repository page for 'o7planning/my-first-project'. It displays cloning instructions for Desktop, HTTPS, and SSH, and provides command-line instructions for creating a new repository or pushing an existing one.

**Create a new repository**

A repository contains all the files for your project, including the revision history.

Owner: o7planning / Repository name: my-first-project

Great repository names are short and memorable. Need inspiration? How about urban-waddle.

Description (optional): My First Project on GitHub

☒ Public: Anyone can see this repository. You choose who can commit.

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

☐ Initialize this repository with a README: This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: None | Add a license: None

**Create repository**

**o7planning / my-first-project**

Quick setup — if you've done this kind of thing before

Set up in Desktop or HTTPS SSH <https://github.com/o7planning/my-first-project.git>

We recommend every repository include a README, LICENSE, and .gitignore.

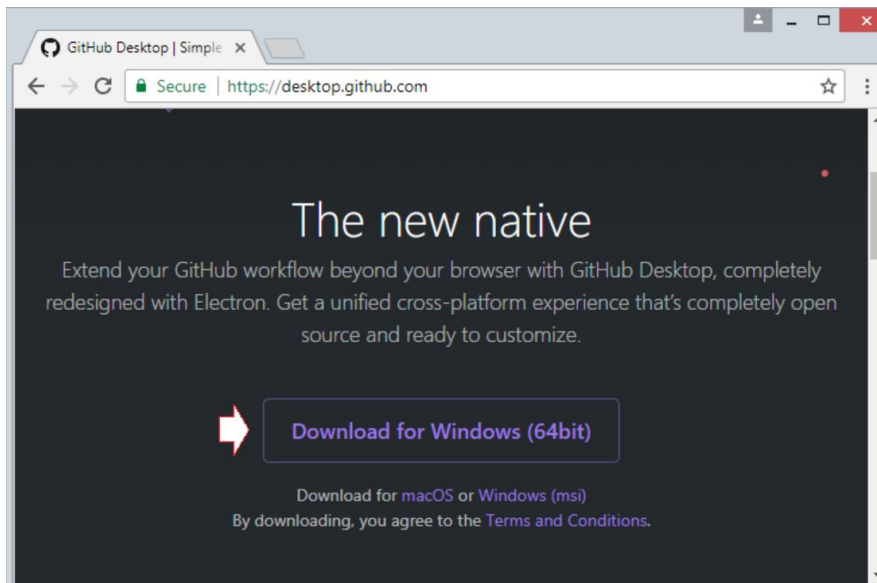
...or create a new repository on the command line

```
echo "# my-first-project" >> README.md
git init
git add README.md
git commit -m "first commit"
git remote add origin https://github.com/o7planning/my-first-project.git
git push -u origin master
```

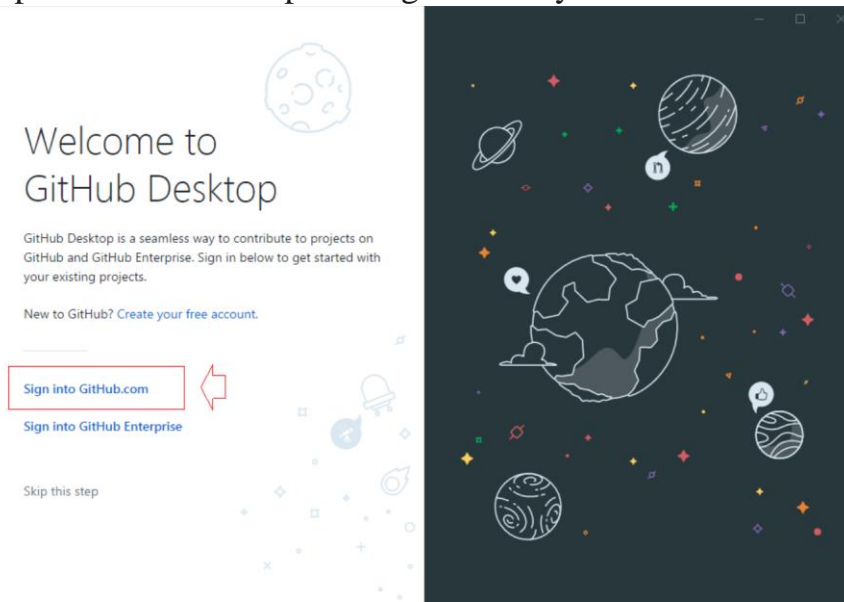
...or push an existing repository from the command line



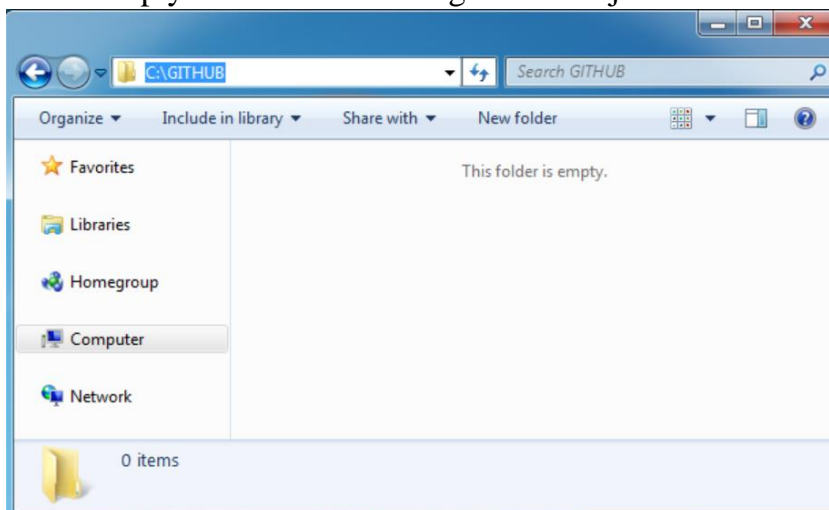
Download Github Desktop and install: <https://desktop.github.com/>



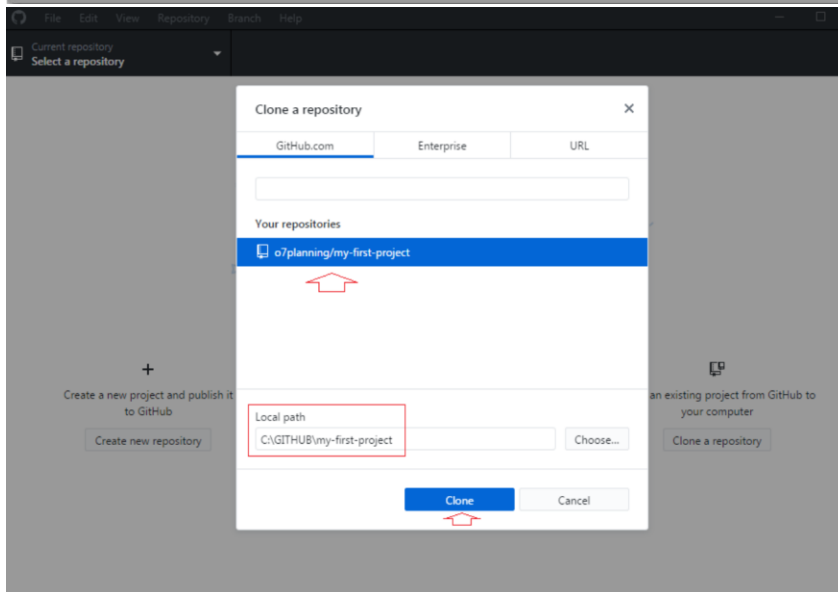
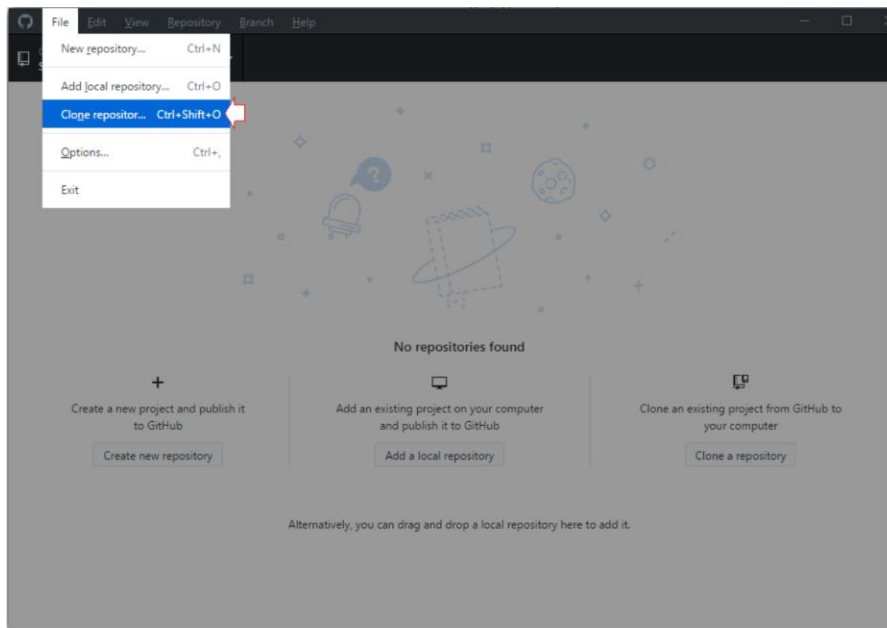
- Open Github Desktop and Sign in with your Github account



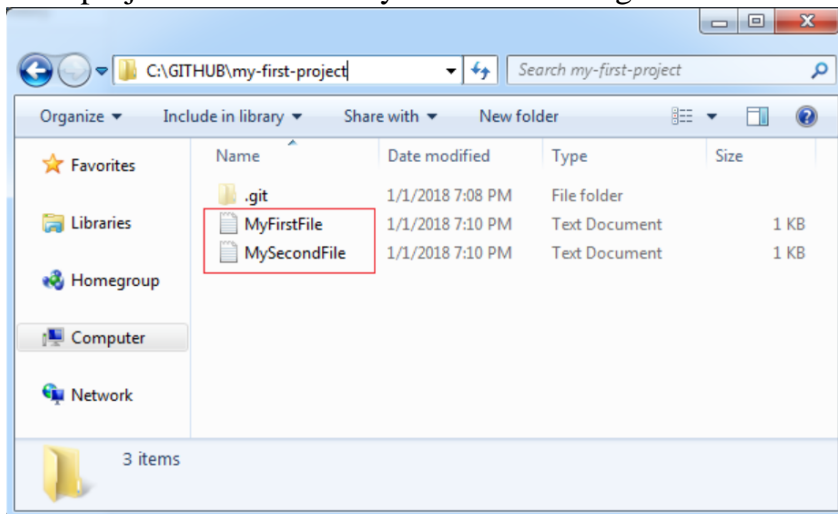
Create an empty folder to store assignment/Project.

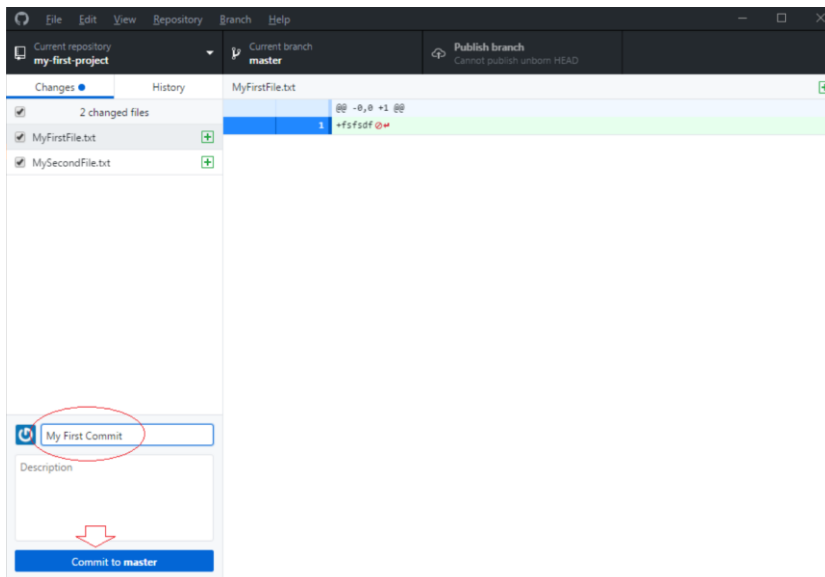


On **GitHub Desktop**, select a repository you created on GitHub to clone



Create a project to the directory and commit to github





## Question 2. Using Java to solve the problems below

- Write a program to sum the first digit and the last digit of a number.
- Write a program to find the minimum between three numbers.
- Write a program that displays the Hailstone sequence: With some positive number ( $n > 0$ ):
  - If  $n$  is an even number, divide by 2.
  - If  $n$  is an odd number, multiply it by 3 and add 1.
  - Repeat two steps above until  $n$  equals 1.

• For example, choose  $n = 5$

```
C:\Users\Admin\Desktop\Java Exercise\Solve>java Hailstone
5
5 is odd, so we take 3*n+1: 16
16 is even, so we take n/2: 8
8 is even, so we take n/2: 4
4 is even, so we take n/2: 2
2 is even, so we take n/2: 1
```

- Write a program to sum all even numbers of an array. (**using primitive array**).
- Write a Java program: Enter an array and make the following requests: (**using ArrayList**):
  - Write a function to remove the first specific element from an array and return *true*, if the element does not exist in an array return *false*.
  - Write a function to insert an element a specific position into an array. (After insertion you can replace the last element with the element before) (Ex:  $a = [1,2,4,3]$  insert 5 at position 2

→ [1,2,5,4])

c. Write a function to find the duplicate values of an array of integer values. (Ex: a = [1,3,1,3,2,4] → [1,3])

d. Write a function to remove the duplicate values of an array of integer values. (Ex: a = [1,3,1,3,2,4] → [1,3,2,4])

6. Write a Java program: Enter a string, making the following requests.

- a. Find the length of the string.
- b. Count the number of words in string.
- c. Concatenate one string's contents to another.
- d. Check if a string is palindrome or not.

**Submitted: github link (public) and all source code (\*.rar file) submitted to moodle**