Lab 4: GitHub Setup and First Repository

Lab overview

In this lab activity, you will set up your GitHub account, configure Git locally, create your first repository, and practice basic repository management. This lab provides the foundation for working with GitHub and prepares you for remote operations in subsequent labs.

In this lab, you will:

- Setup your GitHub account
- Configure Git and GitHub authentication for secure access
- Create and configure a new GitHub repository

Estimated completion time

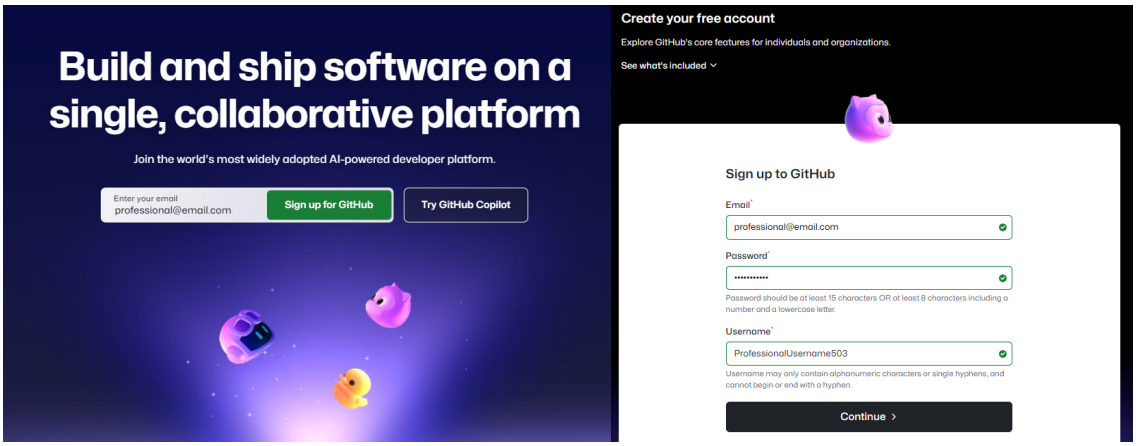
30 minutes

Task 1: GitHub Account Setup and Configuration

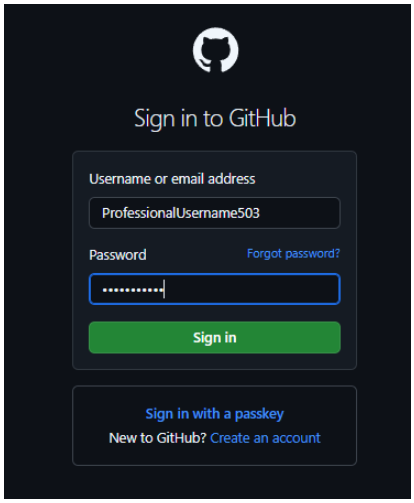
In this task, you will create a GitHub account and configure Git locally with your credentials.

1. Open a web borwser window, navigate to **github.com** and , if you do not currently have an account, create a new account, using your email address.

   You will need access to this e-mail account, as you will receive a verification code on your email that you will use to verify your new GitHub account.



2. Once your account is setup, you can now sign in using either your username or email.



3. Open **Git Bash** and configure your global Git settings:

```
git config --global user.name "Your Name"

git config --global user.email "your.email@example.com"
```

4. Generate a new SSH key.

```
ssh-keygen -t ed25519 -C "your.email@example.com"
```

4.1. Press Enter three times to accept default file location.

4.2. Start the ssh agent.

```
eval "$(ssh-agent -s)"
```

```
$ eval "$(ssh-agent -s)"
Agent pid 1645
```

4.3. Add your SSH key to the agent:

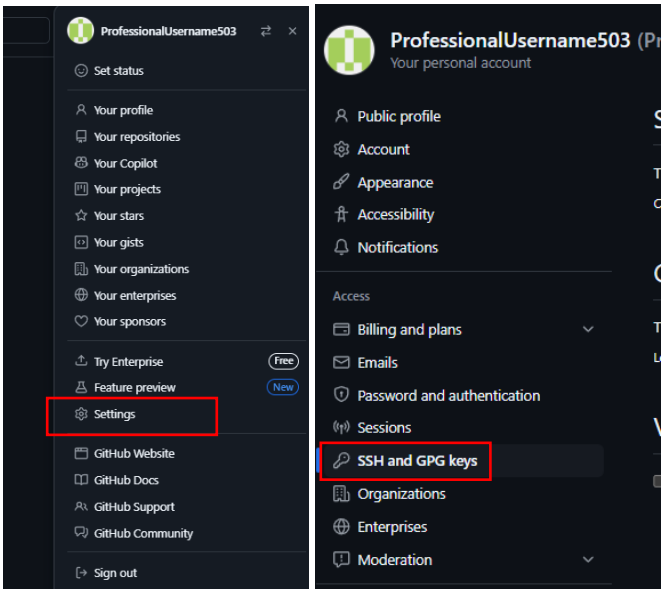
```
ssh-add ~/.ssh/id_ed25519
```

5. Get the content of the generated SSH key, and copy it.

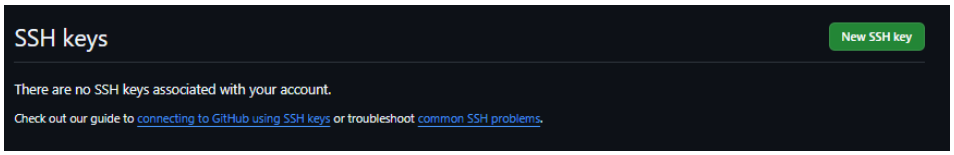
```
cat ~/.ssh/id_ed25519.pub
```

```
$ cat ~/.ssh/id_ed25519.pub
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIPllRuMq6r7SRbFO5SSZ
QiaFcOOWdcTNbOmG/ld2WoMd [redacted]gmail.com
```

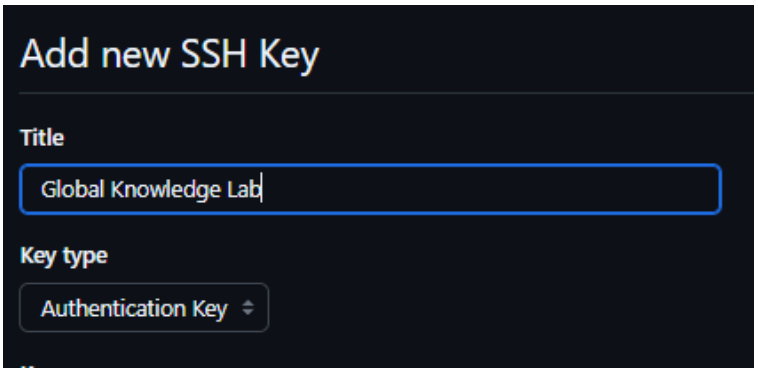
6. Go to your GitHub Profile (top right of your GitHub page) and select **Settings** -> **SSH and GPG Keys**



7. Create new SSH Key.

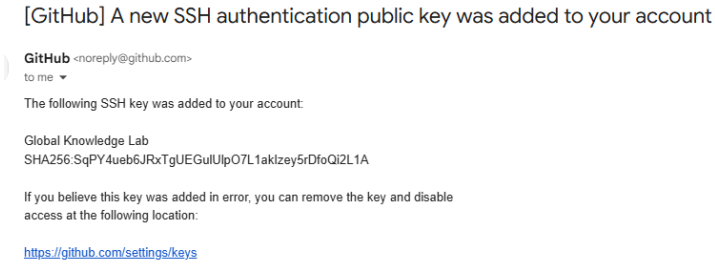


7.1. give a title to the computer you machine you are accessing



7.2. Paste the ssh key we copied earlier in the key box, and click on Add SSH key

8. You will receive a notification on your email that a new SSH authentication public key was added to your account.



9. Test your SSH connection in **git bash**:

`ssh -T git@github.com`

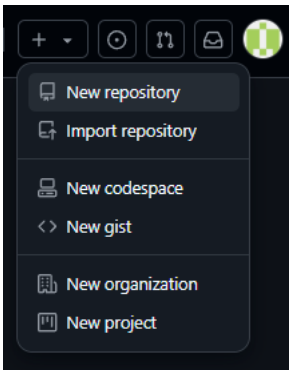
Type yes to continue connecting.

```
$ ssh -T git@github.com
Hi ProfessionalUsername503! You've successfully authenticated, but GitHub does not provide shell access.
```

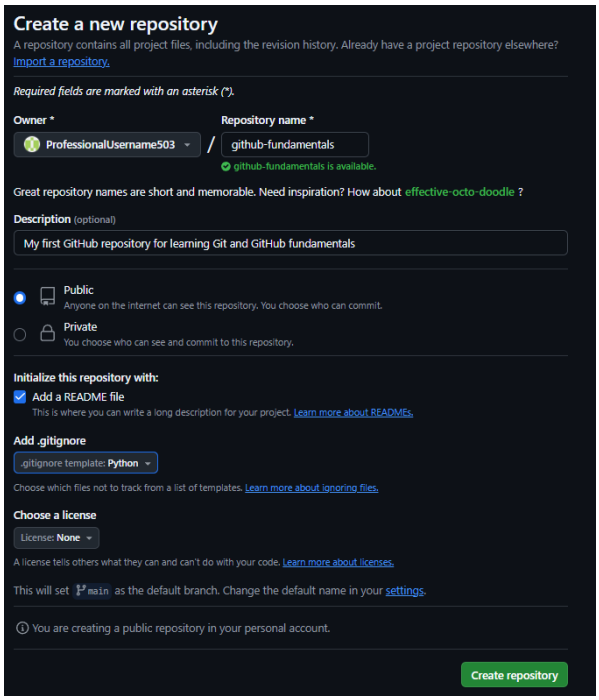
Task 2: Repository Creation and Setup

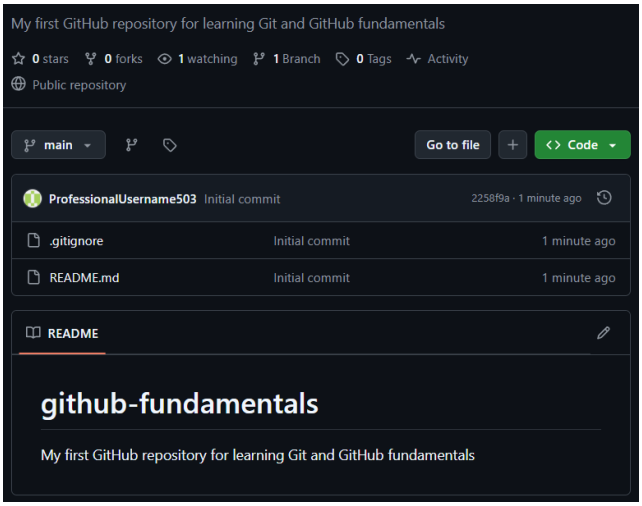
In this task, you will create your first GitHub repository and set up its essential components.

1. Go to the GitHub **Home** web page (from the Settings page, click the 'hamburger' menu top left and select Home), click the "**+**" icon in the top-right corner of GitHub and select "**New repository**"



2. Configure the repository
   2.1. Name your repository "**github-fundamentals**"
   2.2. Add a description: "My first GitHub repository for learning Git and GitHub fundamentals"
   2.3. Choose "**Public**" visibility
   2.4. Check the "**Initialize this repository with: Add a README file**" checkbox.
   2.5. Add a **.gitignore template** for your preferred programming language (e.g. **Python**)
   2.6. Click "**Create repository**"





Lab review

1. Which Git command is used to configure your username globally?
   A. git set --global user.name
   B. git config --global user.name
   C. git --config global.user.name
   D. git global --config user.name
2. What message indicates a successful SSH connection test with GitHub?

Lab solutions

1. Answer is B. git config --global user.name
2. The successful SSH verification message from GitHub should read:
   "Hi username! You've successfully authenticated, but GitHub does not provide shell access"

STOP

You have successfully completed this lab.