Git and Github quick guide training

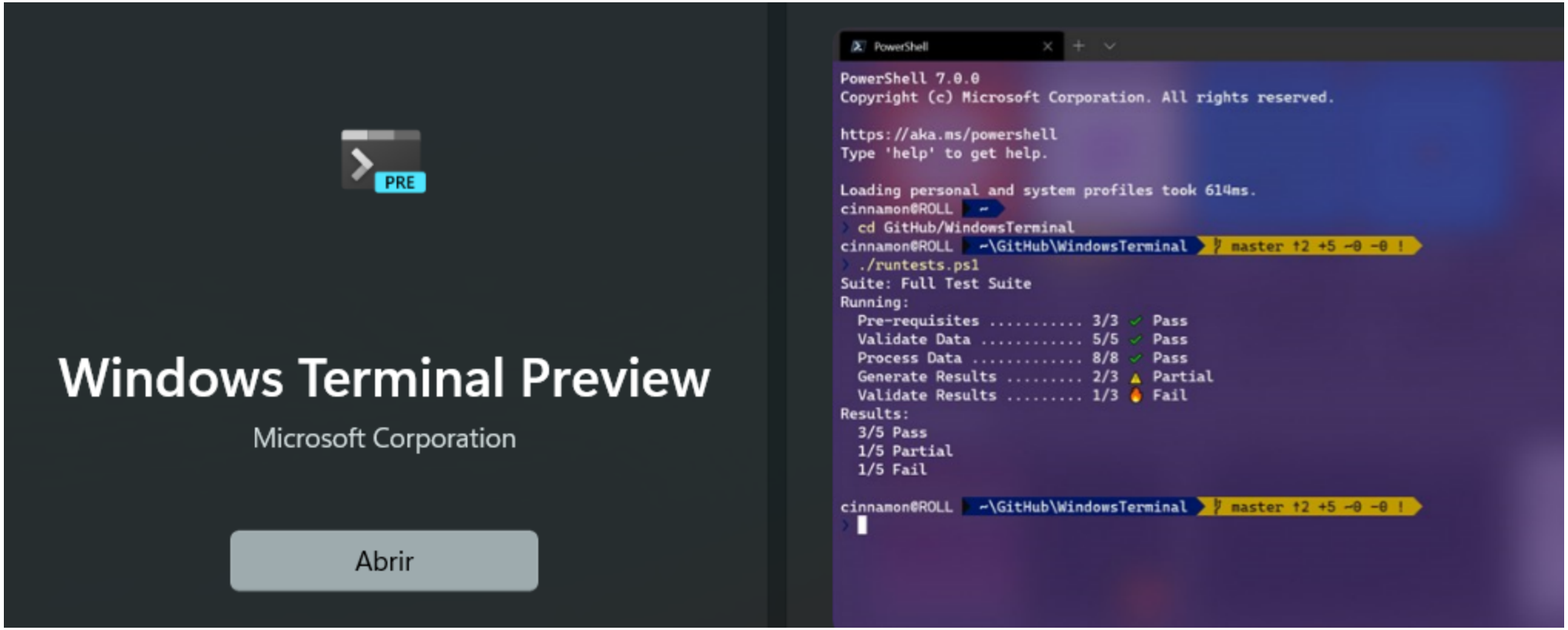
Module one

Part 1

- Installation of Windows Terminal (Powershell)
- Installation of Git for Windows
- Customization of Powershell and Git Bash (Born again shell) using oh-my-posh

Install Git-for-Windows

Install Windows Terminal



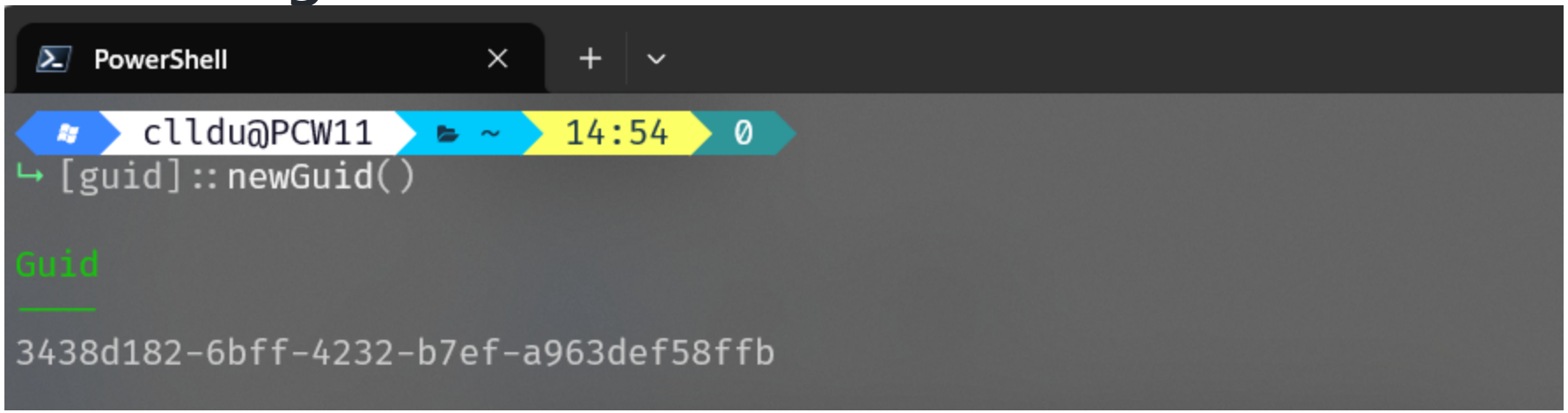
Install Powershell

https://github.com/PowerShell/powershell/releases

v7.3.6 Release of PowerShell

PowerShell-7.3.6-win-x64.msi
758E130DC13708A72CEE29DB0B8EFD987376A4A4A22114C3B00D50CF7295D35E

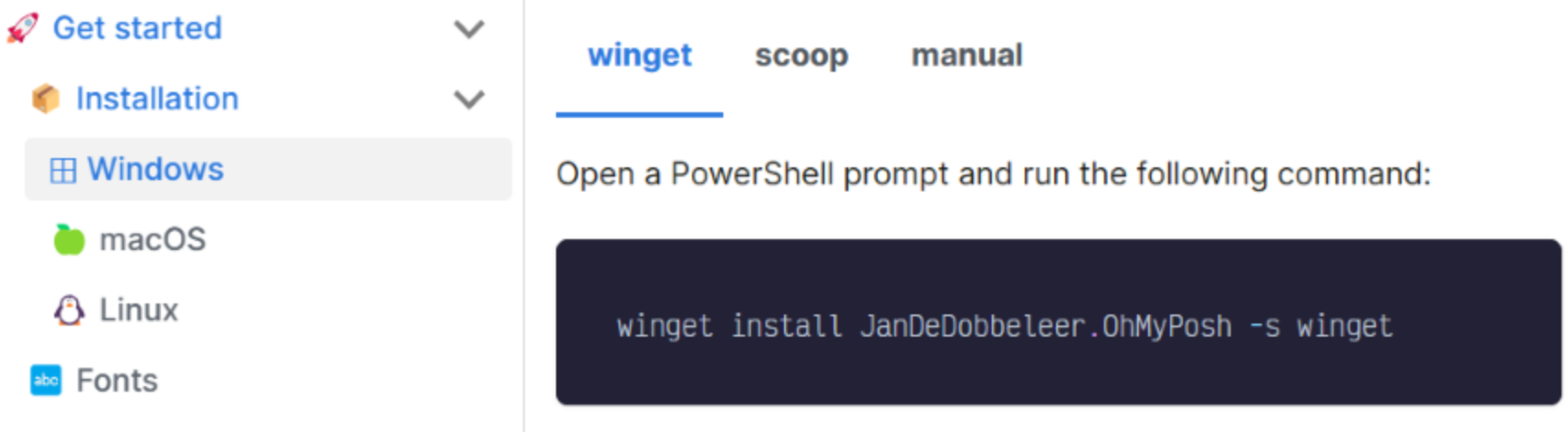
Create a 'guid'



Abrir o arquivo json

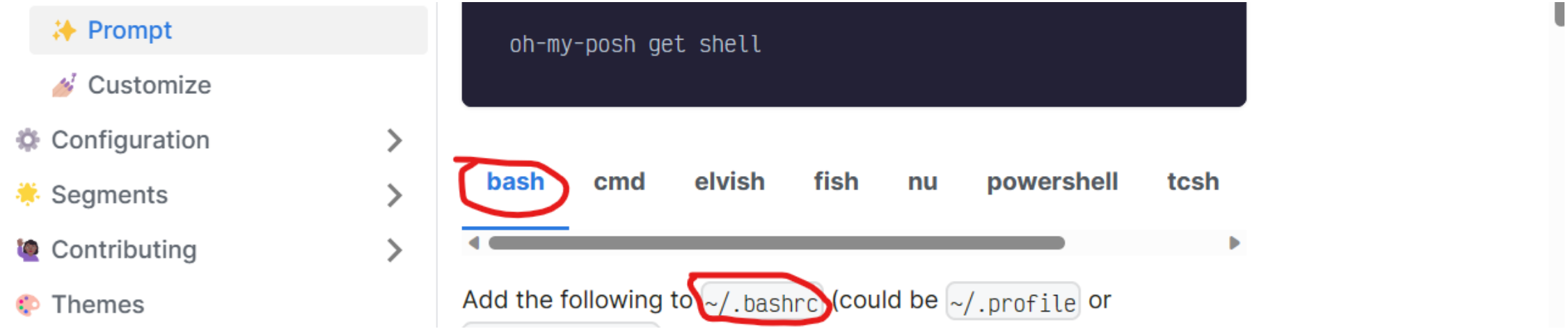
Install Oh-my-Posh

Winget to install Oh-my-posh



Install Nerd Fonts

Create a '.bashrc' file

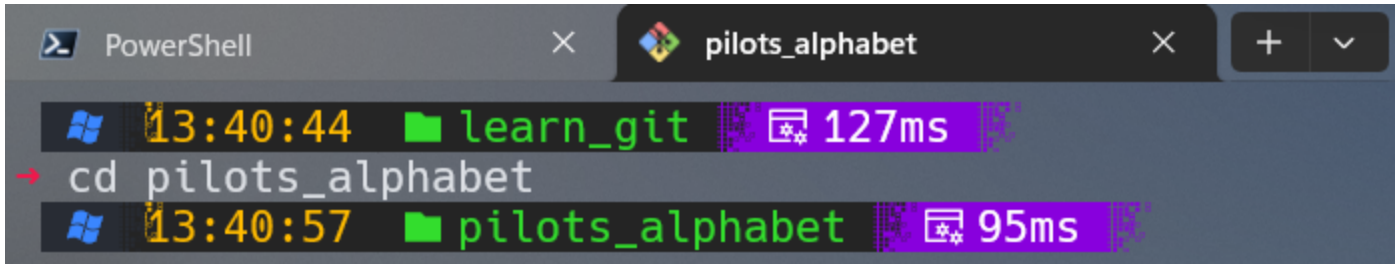


Open ".bashrc"

eval "$(oh-my-posh init bash)"

eval "$(oh-my-posh init bash --config "C:/Users/yourname/craver.omp.json")"
C:/Users/yourname/appData/Local/Programs/oh-my-posh/themes/craver.omp.json

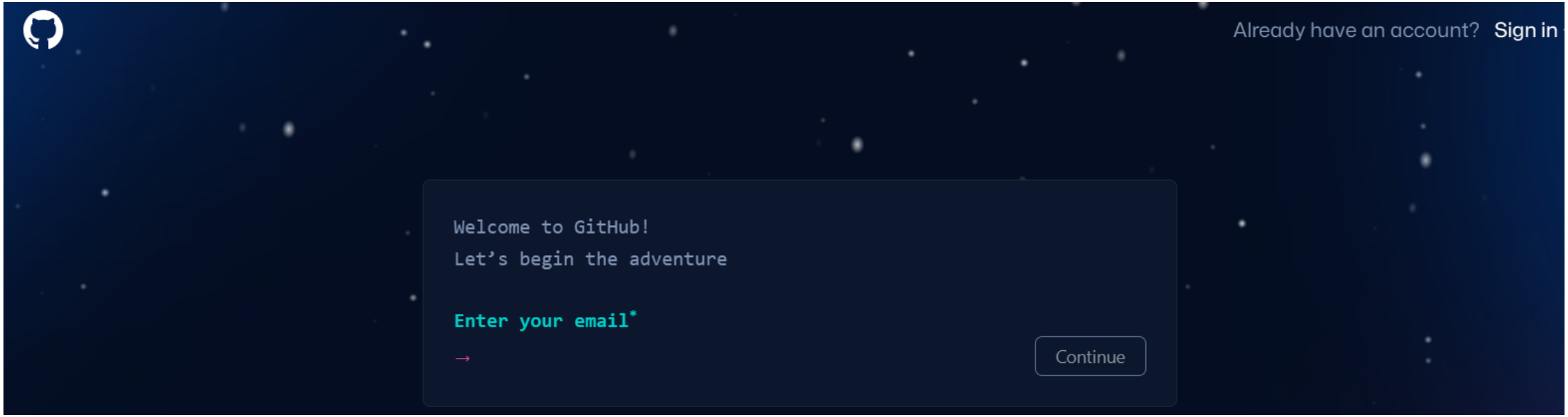
Git bash terminal



Part 2

- *Setting up a Github account*
- *Git configuration*
- *Connecting Git to Github*

Sign up at Github



Git configuration

1. Set your identity:

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

2. Handle end-of-line character differences:

```
git config --global core.autocrlf true
```

3. Prevent conversion warning messages:

```
git config --global core.safecrlf false
```

4. Set Notepad as the default editor (replace "notepad" with the command for your preferred editor):

```
git config --global core.editor "notepad"
```

To list all your current Git configuration settings, you can use:

```
git config --list
```

Remember that these commands will affect your global Git configuration. If you want to configure settings for a specific repository, you can omit the `--global` flag and run these commands within the repository directory.

What's the best way to make your connection with GitHub safe?

To ensure a safe connection with GitHub, follow these best practices:

1. **Enable Two-Factor Authentication (2FA):** Use 2FA to add an extra layer of security to your GitHub account.
2. **Use Strong Passwords:** Create complex passwords that include a mix of letters, numbers, and symbols. Avoid using easily guessable information.

3. **SSH Keys:** Use SSH keys for authentication instead of passwords. This provides stronger security and is less susceptible to phishing attacks.
4. **Regularly Update:** Keep your operating system, browser, and any development tools up to date with the latest security patches.

5. **Review App Permissions:** Review and revoke unnecessary third-party app permissions that have access to your GitHub account.
6. **Beware of Phishing:** Be cautious of emails or messages asking for your GitHub credentials. Always verify the source before providing any sensitive information.

7. **Monitor Account Activity:** Regularly review your GitHub account activity for any suspicious login attempts.
8. **Use Verified Tools:** Only use reputable Git clients and development tools.

9. **Private Repositories:** If you're working on sensitive projects, consider using private repositories to limit access.
10. **GitHub Security Settings:** Explore GitHub's security settings and features, such as security alerts, dependency insights, and code scanning.

By implementing these practices, you can significantly enhance the security of your connection with GitHub.

Connecting Git to GitHub

The process is made up of the following steps:

- *SSH Keys generation (private and public)*
- *Private key registration with SSH*
- *Public key registration on GitHub*

Ed25519

Ed25519 was introduced in OpenSSH 6.5 of January 2014: "Ed25519 is an elliptic curve signature scheme that offers better security than ECDSA and DSA and good performance". Its main strengths are its speed, its constant-time run time (and resistance against side-channel attacks), and its lack of nebulous hard-coded constants.

```
ssh-keygen -t ed25519 -C "unique name to identify this key"
```

```
 15:54:10  .ssh  108ms
→ ssh-keygen -t ed25519 -C "clldscotti@gmail.com" -f /c/users/clldu/OneDrive/Documentos/ssh_keys/.ssh/id_ed25519
Generating public/private ed25519 key pair.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /c/users/clldu/OneDrive/Documentos/ssh_keys/.ssh/id_ed25519
Your public key has been saved in /c/users/clldu/OneDrive/Documentos/ssh_keys/.ssh/id_ed25519.pub
The key fingerprint is:
SHA256:gADvYhUdzlMXnKwaDR4Qe/oW1MNGf6CQhMCJuRcMZAU clldscotti@gmail.com
The key's randomart image is:
+--[ED25519 256]--+
|*E*=*+ooo+o      |
|++oo=** ++.      |
| ..+o*=*.. .     |
|..o +oo+. .      |
|.o.. .o S        |
|..  ...          |
|     o           |
|     .           |
|                 |
+----[SHA256]-----+
 16:19:42  .ssh  23.163s
→ ls
id_ed25519  id_ed25519.pub
 16:28:47  .ssh  102ms
→ eval "$(ssh-agent)"
Agent pid 924
 16:31:32  .ssh  114ms
→ ssh-add /c/users/clldu/onedrive/Documentos/ssh_keys/.ssh/id_ed25519
Enter passphrase for /c/users/clldu/onedrive/Documentos/ssh_keys/.ssh/id_ed25519:
Identity added: /c/users/clldu/onedrive/Documentos/ssh_keys/.ssh/id_ed25519 (clldscotti@gmail.com)
 16:33:33  .ssh  11.796s
→ ssh -T git@github.com
The authenticity of host 'github.com (140.82.112.3)' can't be established.
ED25519 key fingerprint is SHA256:+DiY3wvvV6TuJJhbpZisF/zLDA0zPMSvHdkr4UvCOqU.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.
```

Part 3

Hosting your project on Github

- *The phonetic website project*
- *Hosting your project*
- *Clonning the repository*
- *Adding files to the project*
- *Adding files to the index(staging area)*
- *Commiting changes to the repository*
- *Pushing a new version to Github*

Links

Git (and/or GitHub), for Dummies
https://blog.stackademic.com/git-and-or-github-for-dummies-6a363d86e1b5

Top Git & GitHub Tips & Tricks for Smooth Development
https://blog.stackademic.com/top-git-github-tips-tricks-for-smooth-development-a3b66746ca9c

Links

Setting Up SSH Access for Private GitHub Repositories
https://medium.com/@ak4634/setting-up-ssh-access-for-private-github-repositories-2e6ec8ff551b

How Do I Delete a Git Branch Locally and Remotely?
https://medium.com/git-happy/how-do-i-delete-a-git-branch-locally-and-remotely-97bc772520a7