Git-Init a Repository

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Main Steps

Step0: Open the terminal at the local repository location
Step1: Init a empty git repository. It will create a directory `.git` under the repository

```
git init
```

Step2:

```
git remote add origin [ADDRESS]
```

Step3:

```
git add .
```

Step4:

```
git commit -m "[COMMENT]"
```

Step5:

```
git push origin master
```

Useful Commands

- Pull:

```
git pull
```

- Display the local branch:

```
git branch
```

- Display the remote branch:

```
git branch -r
```

- Display both the local and remote branch:

```
git branch -a
```

- Create a local branch:

```
git branch [NAME]
```

- Create a remote branch:

```
git push --set-upstream origin [REMOTENAME]
git push origin [REMOTENAME]
```

Common Issues

Issue1-Push: Update is rejected because the tip of the current branch is behind

Solution1: Pull the latest version of this branch from the remote repository

```
git pull
```

Solution2: For reserve both remote repository and local repository,

1. Create a new branch to save this local repository:

```
git branch [NAME]
```

2. And then push to this new branch:

```
git push -u origin [NAME]
```

Solution3: Force git to update without this warning.**(CAUTION USE!)**

```
git push --force
```

Issue2-Push: Authentication failed because the support for password authentication was removed on August 13, 2021

Solution: Use the personal access token to replace the password:

1. Open the Github: `setting` --> `Developer settings` --> `Personal access token`
2. Click `Generate new token`
3. Enter the token name and select `repo`
4. Copy the token
5. Use the token to replace the password when `git push`

Issue3-Push: Fatal: Unable to access '`https://github/xxx`': Failed to connect to github.com port 443: Timed out

Solution1: Open the terminal with VPN
Solution2: Enter this proxy command: and then push again

```
git config --global https.proxy
```

If you want to unset the proxy:

```
git config --unset https.proxy
```

Issue4-Init: '[`SUBDIRECTORY`]' does not have a commit check out

Reason: this sub directory is already have a `.git`
Solution: Delete the `.git` of the sub directory

[END]