

Git Basics

Git can be downloaded from <http://git-scm.com> and it is available for Linux, Mac, and Windows. Instructions and tutorials can be found at <http://git-scm.com/doc>. Git is not GitHub.

Configure Git so remote repositories know who is accessing them (optional). Add `--global` to configure the options globally.

```
git config user.name "name"
git config user.email "email"
```

Repositories can be created locally and then pushed to a remote source or cloned from an existing repository.

Create a local repository (perform inside the directory to be placed under version control)	<code>git init</code>
Create a local copy of a remote repository	<code>git clone <url> <dir></code>

Files can be managed through multiple methods. They must be added to the version control system before they can be managed.

Add a single file to version control	<code>git add <filename></code>
Add all files recursively from current directory	<code>git add .</code>
Remove a file from source control and delete it	<code>git rm <file></code>
Move or Rename a file and keep revision history	<code>git mv <file from> <file to></code>
Add all file and directory changes and register file deletions	<code>git add --all .</code>
Commit the files to the local repository	<code>git commit -m 'Put message here.'</code>

Pushing files to a remote repository. The repository and branch values are optional.

```
git push <repository> <branch>
```

Working with remote repositories

List the remote repositories of a project	<code>git remote -v</code>
Add a remote repository to the project	<code>git remote add <name> <url></code>
Rename the reference to a remote repository	<code>git remote rename <old_name> <new_name></code>
Remove the reference to a remote repository	<code>git remote remove <name></code>

If git push fails with 'Git PUSH results in RPC failed, result=22, HTTP code = 411' then try the following command;

```
git config http.postBuffer 524288000
```

Use git ignore files to ignore local build files, logs, temporary files, etc. Github has several examples, see: <https://github.com/github/gitignore>

When installing on a Windows system, the recommended options are to

- **Adjusting your PATH:** Use Git from with Windows Command Prompt
 - Do NOT use the 'Use Git and optional Unix tools...' option.
- **Choosing the SSH executable:** Use OpenSSH
 - Do NOT use the Tortuse or putty plugin.
- **Configuring the line ending conversions:** Use 'Checkout Windows and commit Unix-style line endings'