15-441 GIT Cheat Sheet

CREATE

Creating a Git repository

```
$ git init   ## Initializes git inside the pwd
```

Creating a remote

```
## Create a repo on Github / bitbucket  OR
## Use AFS as follows
## Create a folder for your repository in AFS
## Give access rights to your partner:
$ fs setacl . <partner's-andrewid> rlidwk
## Create a remote in current dir
$ git init --bare
```

Cloning from Remote

```
$ git clone <url>
## For afs, the URL looks like:
## andrewid@linux.andrew.cmu.edu:/afs/.../p2
## For github / bitbucket, the URLs are
## provided on the repo page. E.g.,
## git@github.com:githubname/repo.git
```

Adding Remote named “origin” to the Local Repository

```
$ git remote add origin <url>
```

COMMITS

Committing your changes

```
$ git add <files>   ## Add files for committing
$ git commit -m "meaningful commit message”
```

Pushing to a remote named “origin”

```
$ git push origin <branch>
```

Pulling from a remote named “origin”

```
$ git pull origin <branch>
```

BRANCHES

Creating a branch named branch-new

```
$ git branch branch-new
```

Switching to a branch named branch-new

```
$ git checkout branch-new
```

MERGE

Merging branch-new into branch-master

```
$ git checkout branch-master
$ git merge branch-new
## Review and fix conflicts if any and commit
## changed files.
```

TAGS

Create a tag

```
$ git tag <tag-name>
```

List tags

```
$ git tag -l
```

Delete a tag

```
$ git tag -d <tag-name>
```

UNDO

Discard all local changes in your working directory (!!!)

```
$ git reset --hard HEAD
```

Discard local changes in a specific file (!!!)

```
$ git checkout HEAD <filename>
```

Revert a commit by creating a new UNDO commit

```
$ git revert <commit>
```

Reset repository to a previous commit and discard all the changes since then (!!!)

```
$ git reset --hard <commit>
```

Reset repository to a previous commit and preserve changes since then as unstaged

```
$ git reset <commit>
```

STATUS AND HISTORY

Show changed files since last commit

```
$ git status
```

Show commit history

```
$ git log
```