

# Local Git Repo - #3 Checkout

#git-workshop

Git makes it really easy to look at (and potentially restore) earlier versions of files. We'll explore a few options here.

## Checkout

### Discard local changes

This one is fairly straightforward. Say we've made some changes to `pangram2.txt`, and we decide we no longer want them.

```
$ echo "not a pangram" > pangram2.txt
```

You can use `git status` to verify that we have changes made. `checkout` allows us to discard the changes.

```
$ git checkout -- pangram2.txt
```

Careful! `checkout` is not a "safe" operation, and you will lose any **uncommitted** work.

### Examining a previous commit

The `git checkout` command lets you, for lack of a better phrase, "check out" alternate versions of one or many files.

Let's say we want to go back in time to before we added our text files. We would want to go back in our log to `331d681` in this case, right after we added the markdown file but before we added the text files. Use the following command to do so:

```
$ git checkout 331d681
```

Is git preventing you from checking out because of untracked changes? You'll need to discard/commit them first.

This will change the contents of the repo to match those at the time of the commit. There should be just the `README.md` file present. If you do `git log`, you should see that the log is much shorter:

```
$ git log --oneline
```

```
331d681 (HEAD) Add README.md
```

Don't worry, our work isn't lost! To go back to the state before, simply do the following:

```
$ git checkout master
```

All of the above also applies to branch names (since they essentially refer to a commit id).

### Examining a previous file version

Instead of changing the entire repo to be some previous state, we could just examine previous versions of certain files. It works similarly, but now we specify a file name.

In this example, we want to look at the contents of `pangram2.txt` before the most recent commit. We look through out commit history, and pick we want to use.

```
$ git checkout f9e7d7b -- pangram2.txt
```

This looks similar to discarding local changes. Note that `checkout` will stage any differences between the file restored and the current state of the repository