# Introduction to version control with Git

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ThoughtWorks®

# What is Git?

- Git is a version control system (VCS) that allows you to keep track of changes made to a file, so you can recall specific versions of the file over time.
- Other version control systems include centralized VCSs such as Subversion and distributed VCSs like Mercurial.

# Setup

- Installing Git

```
apt-get install git
```

- Configuring your settings

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

- Initializing a local repo

```
git init
```

# Tracking changes I

- Checking the status of your repo

```
1 git status
```

- Undoing changes to files
  - Single file:

```
1 git checkout filename
```

  - Multiple files:

```
1 git checkout .
```

- Staging and Unstaging files

# Tracking changes II

- Single file:

```
1 git add filename
```

- Multiple files:

```
1 git add .
```

- Committing your files
  - Single file:

```
1 git commit filename
```

# Tracking changes III

- Multiple files:

```
1 git commit .
```

- Ignoring files
  - Create a file '`.gitignore`' and add the filenames (or file patterns) you wish to ignore
- Amending a commit

```
1 git commit --amend
```

- Commit History

```
1 git log
```

# Remote repositories I

- Initializing from a remote repo

```
git clone [remote_url]
```

- Setting up a repo on GitHub, BitBucket, etc.
- Adding a remote repo manually

```
git remote add [remote_url]
```

- Pulling from a remote

```
git fetch [remote_name]
git pull [remote_name]
```

# Remote repositories II

- Pushing your work

```
git push [remote_name]
```

# Just gitting started

- Branching
- Merging and merge conflicts
- Working with multiple remotes

# Questions and Exercises