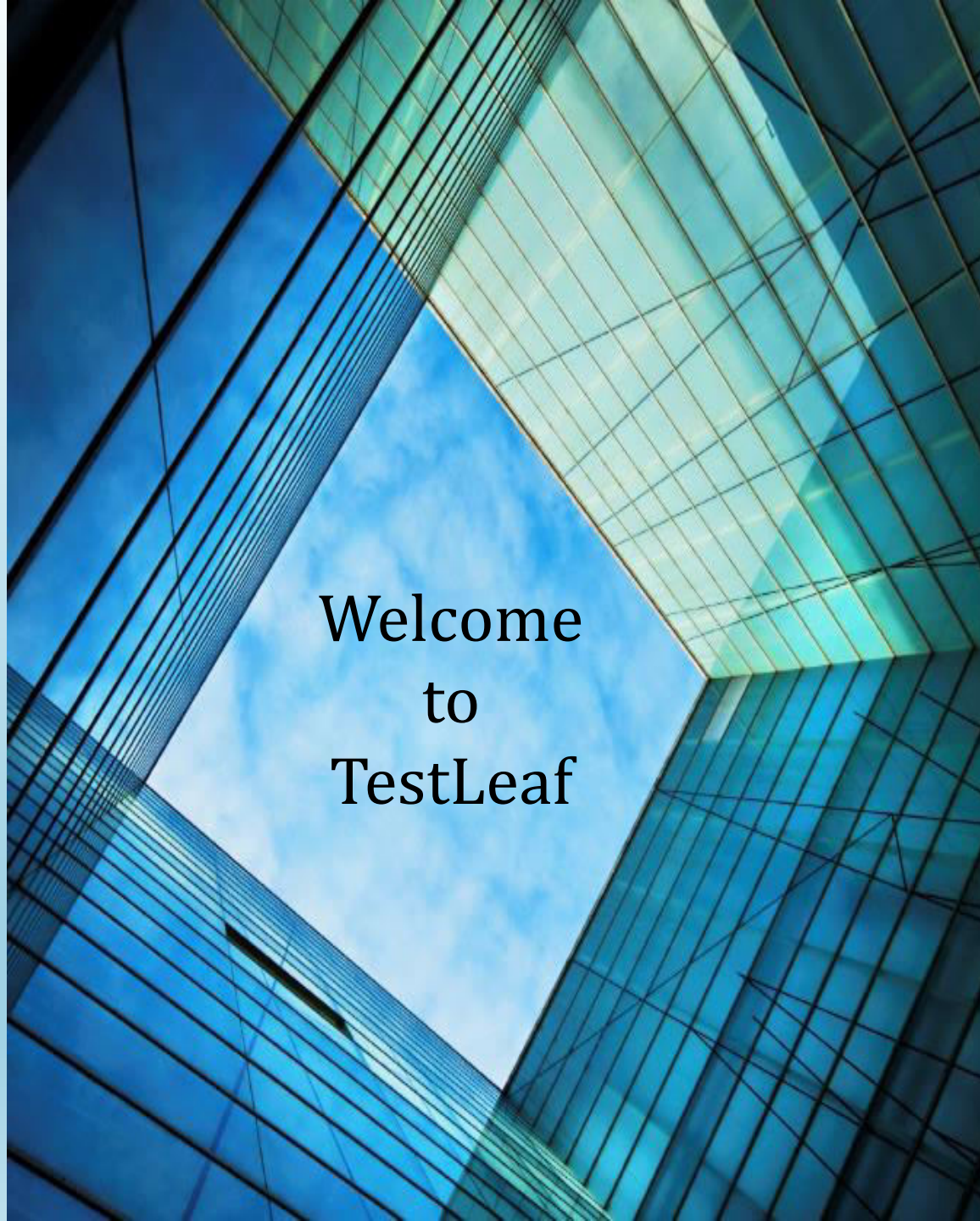
# GIT and GitHub



## Git

- **Git** is an extremely fast, efficient, distributed version control system used for collaborative development of software. Git was designed and developed by Linus Torvalds (Linux Founder).

- Installing Git is simple.
  Download and follow the steps of installation.
  - http://msysgit.github.io/
- Find detailed installations:

Linux
http://help.github.com/linux-set-up-git/
Windows
http://help.github.com/win-set-up-git/
OSX
http://help.github.com/mac-set-up-git/

# Installation [GIT]

**Setting Up Info**

- Git tracks who makes each commit by checking the user's name and email. To set these, enter the code below, replacing the name and email with your own. The name should be your *actual name*, not your GitHub username.

```
$ git config --global user.name "Firstname Lastname"
$ git config --global user.email "your_email@youremail.com"
```

- More options include
  git config --global color.ui auto
  git config --global color.diff auto

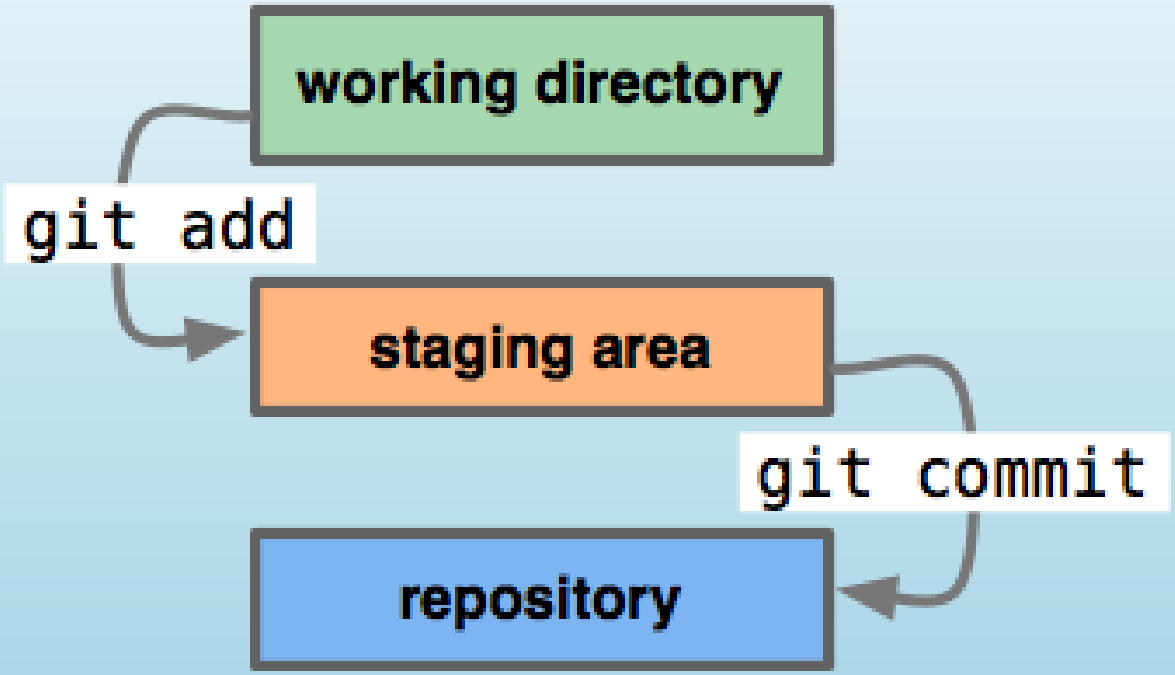
  Find more customization options here:
  http://book.git-scm.com/5_customizing_git.html



```
$ git init
$ git status
$ git add my_file myfile2
$ git add .
$ git commit -m "First
 Commit“
$ git log
$ git show #Commit hash
```



# GIT Workflow




The process is like sending a package. git add is adding an item to the package. git commit is sealing the package and writing a note on it. git push (which I'll explain shortly) is sending the package to the recipient.

- GitHub provides services that are related to Git. It’s a website that helps you manage Git-controlled projects.
- GitHub allows users to put their Git repositories on the cloud, and to perform Git-based operations through a web interface.
- There are many other websites like GitHub, such as **Bitbucket** and **GitLab**. GitHub and Bitbucket are cloud-based solutions, but GitLab allows you to set up this functionality on your own servers.
- https://www.youtube.com/watch?v=4XpnKHJAok8

## Need for GitHub

- **…or push an existing repository from the command line**
- git remote add origin https://github.com/sevijay/LinkedIn.git
  git push -u origin master



**Copying a Git Repository with Clone**

- If you need to collaborate with someone on a project, or if you want to get a copy of a project so you can look at or use the code, you will clone it. To do this run the following command:

**$ git clone [url]**

url = unique url of the remote repository.

For example to clone a repository at

git@github.com:dadepo/Padly.git you type

**git clone http/ssh url**



**Updating from a remote repository**

- Git has two commands to update itself from a remote repository.

```
git pull
```

The difference in these two commands in the simplest terms is that, "git pull" does a "git fetch" followed by a "git merge".



## Updating a remote repository

- To update a remote repository with changes you have made locally you run the following command

```
git push [alias] [branch]
```

* If someone else has pushed since you last fetched and merged, the Git server will deny your push until you are up to date.



- **Initializing the Git Repo**

  git init

- **Checking Git Status**

  git status

- **Adding the file to staging area**

  git add <filename>

- **Store the staged file to Git Repo**

  git commit –m “comment”

- **History of commits**

  git log

- **Create remote repo to github server**

  git remote add origin <URL>

- **Push local repo changes to origin repo**

  git push –u  origin master

- **Pull down new changes from repo**

  git pull origin master

- **To clone the existing repo to local**

  git clone git://github.com/RnP/recoveries.git

- **Remove and Rename file from working directory**

  git rm <filename>

  git mv <old file name> <new file name>

http://help.github.com/

http://learn.github.com/p/intro.html

http://gitref.org/index.html

More Resources on Git