



Git Crash Course



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Objectives

- ▣ Brief Introduction
- ▣ Git Installation
- ▣ Practical Hands on Basic Commands
- ▣ Detailed Commands
- ▣ Alternatives to Git
- ▣ Github Pages (Free Hosting in 1 minute)
- ▣ Bonus trick
- ▣ Summary

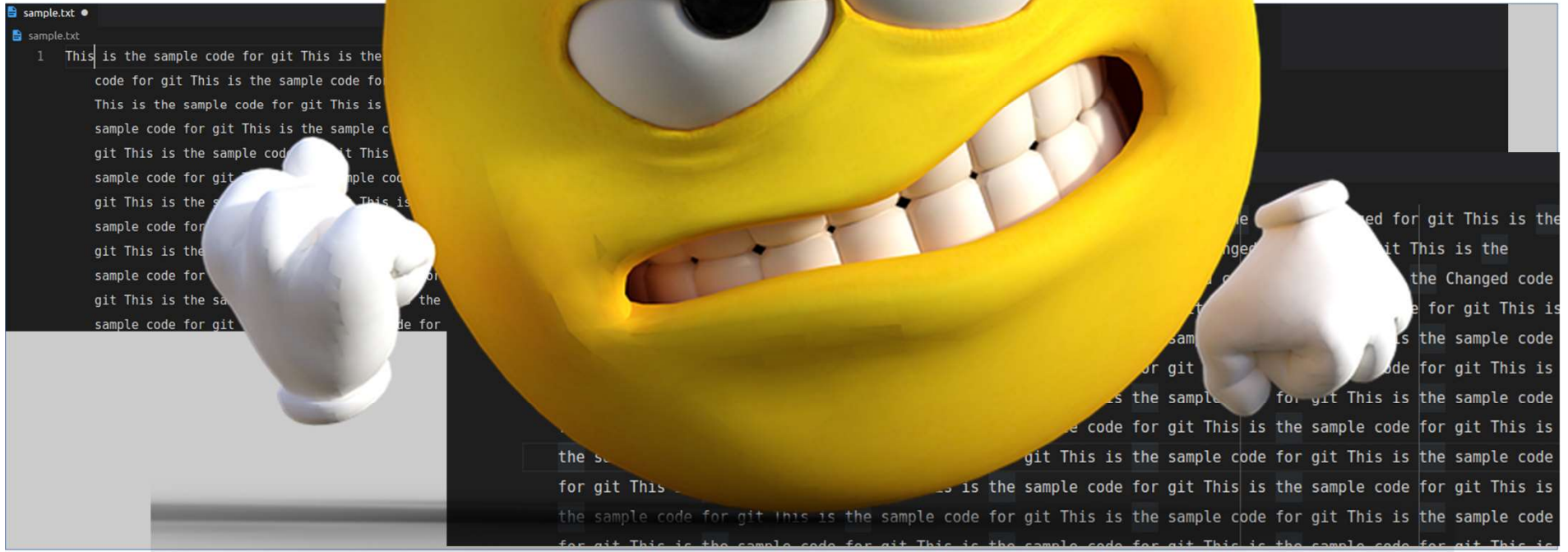
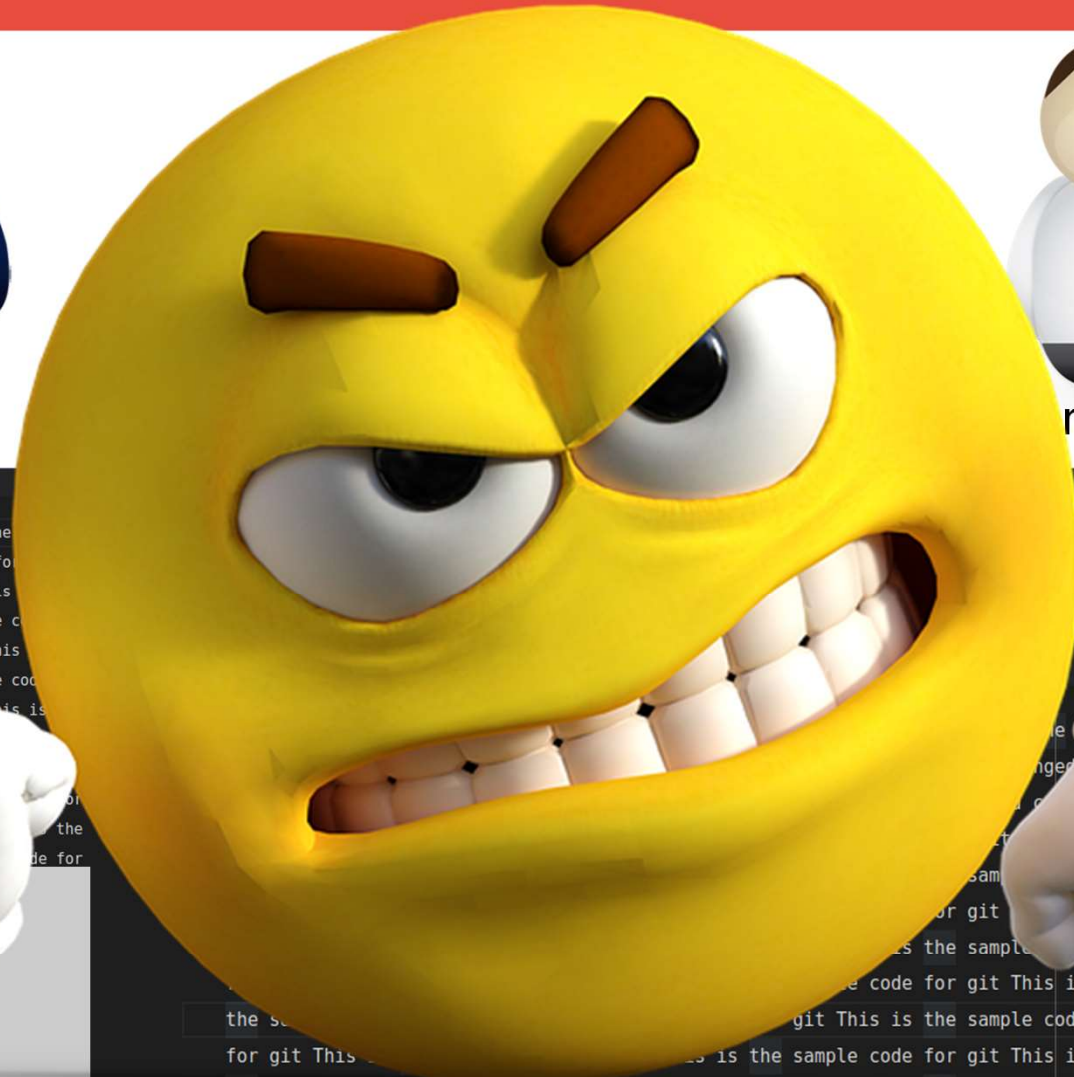
If there is no Git?



Satish



Ankatesh

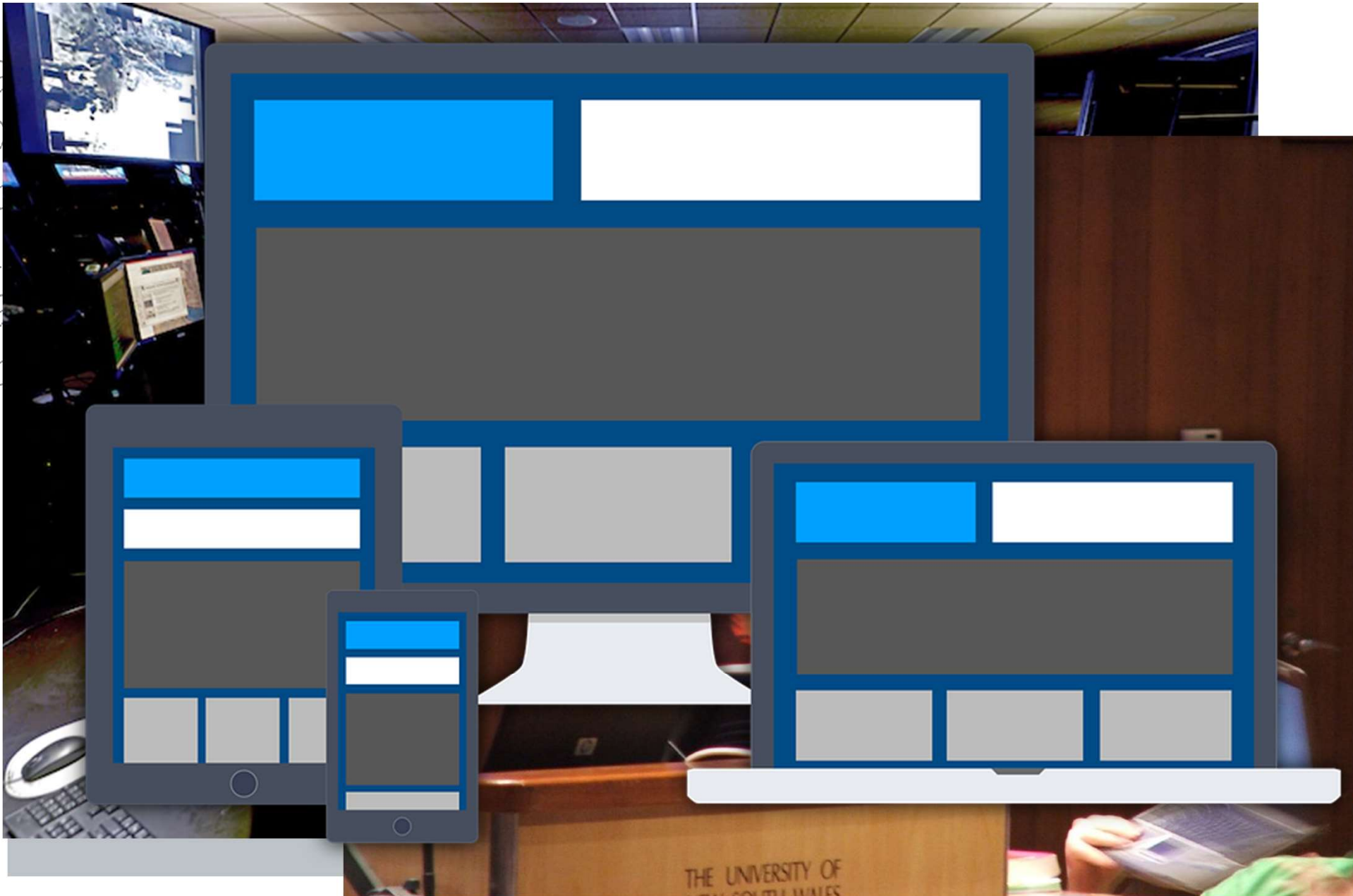


Git in Reality

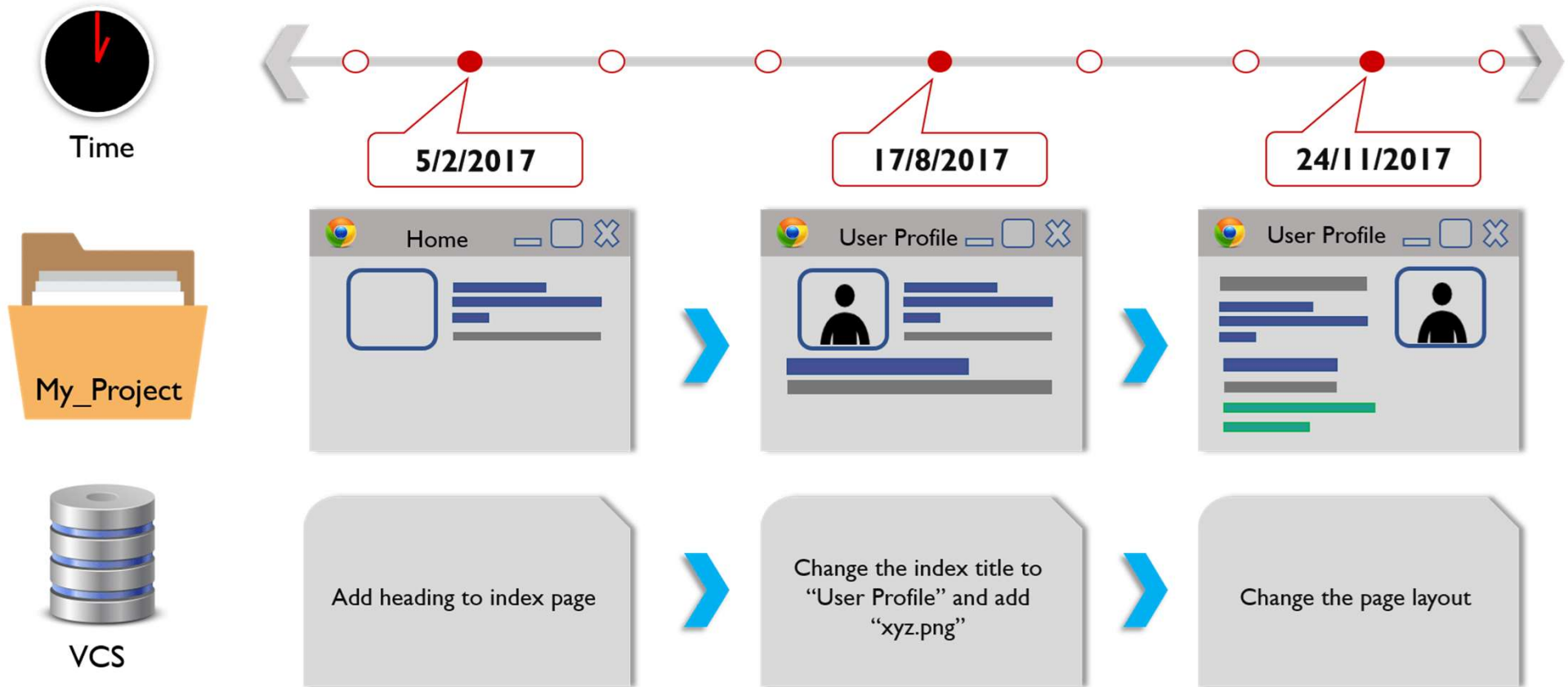


Git Introduction

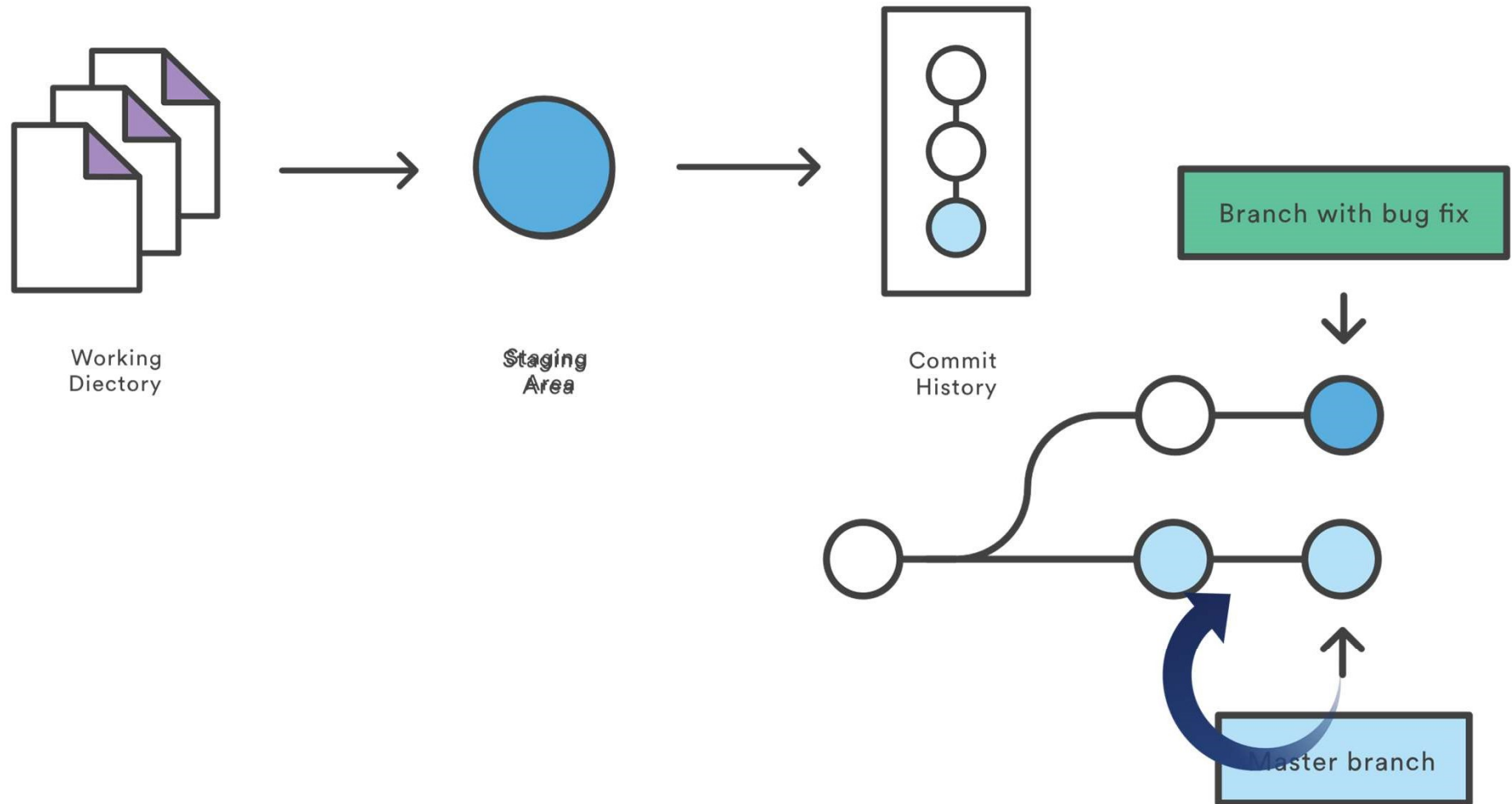
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Version Control System



Example



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Installation

<https://git-scm.com/downloads>

```
sudo apt-get install git
```

```
git --version (git -v)
```

Signup into github.com

Signin

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Practical Hands on Basic Commands

- ✓ Create Repository.
- ✓ Two different repositories.
- ✓ Public, Private.
- ✓ Contributors.
- ✓ Transfer ownership.
- ✓ Archived and readonly
- ✓ Delete project.
- ✓ Github pages.

Practical Hands on Basic Commands

- ✓ Create new repository
- ✓ Clone
- ✓ Make some changes
- ✓ Check the status
- ✓ Add the changes (one by one or all at once)
- ✓ Commit the changes
- ✓ Push the changes

- ✓ Git init
- ✓ Add the remote
- ✓ Make some changes

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Detailed Commands

- ✓What are branches in git?
- ✓Create branch
- ✓Checkout the branch.
- ✓Shortcuts in vscode for the same.
- ✓Check branches
- ✓Check current branch indication. (git checkout -b bname)
- ✓Make some changes
- ✓Add ,commit and push to the current branch.
- ✓Git push origin branch_name.
- ✓Create pull request and merge the code in master branch.

Detailed Commands

- ✓ Pull the latest code using `git pull origin master`.
- ✓ Pull the code if changes are not committed?
- ✓ We might get conflicts or it might abort.
- ✓ Git pull gets the latest files from remote and merges them.
- ✓ Git fetch will get the latest files but it won't merge.
- ✓ Git merge `branch_name`.
- ✓ Simply, `git pull = git fetch + merge`.
- ✓ Delete branch `git branch -d branch_name`.
- ✓ Fork: take a copy of the original one and we can make changes. It won't affect the original repository until we pull the request.

Objectives

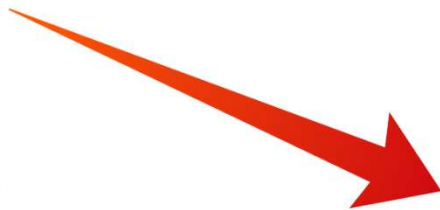
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Alternatives to Git

- ✓SVN (Subversion)
- ✓BitBucket
- ✓Gitlab
- ✓Perforce
- ✓Mercurial
- ✓Git Flow
- ✓BitKeeper
- ✓Bazaar
- ✓CVS

Clone a project and push changes

```
$ bk clone bk://bkbits.net/bkdemo/bk_demo
$ cd bkdemo
# edit files using your favorite editor
$ bk -Ux new
$ bk commit -y"Comments"
$ bk push
```



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Bonus trick

- ✓ Save username and password
- ✓ Git config credential.helper store (Enter once, leave from next time automatically push or pull the code)
- ✓ Better to avoid this.
- ✓ Better to use cache instead with timeout.
- ✓ git config credential.helper cache
- ✓ Default time is 5 mnts.
- ✓ git config credential.helper 'cache --timeout=300'
- ✓ $300/60=5$ mnts is seconds.
- ✓ If you want to remove the cached credentials in middle before timeout then you can use it.

git credential cache exit

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Summary

- ✓Git is a version control system also known as scm(source code management).
- ✓Widely used tool in many companies.
- ✓Easy to install and Easy to use.
- ✓Many popular projects hosted till now such as React,Flutter,Vue etc.,
- ✓Clone,push,pull,merge,branch,checkout
- ✓Fork, fetch, conflicts resolve and Global configurations to store credentials.
- ✓Github pages to host website in less time.

→Please comment which feature you like the most in git and which