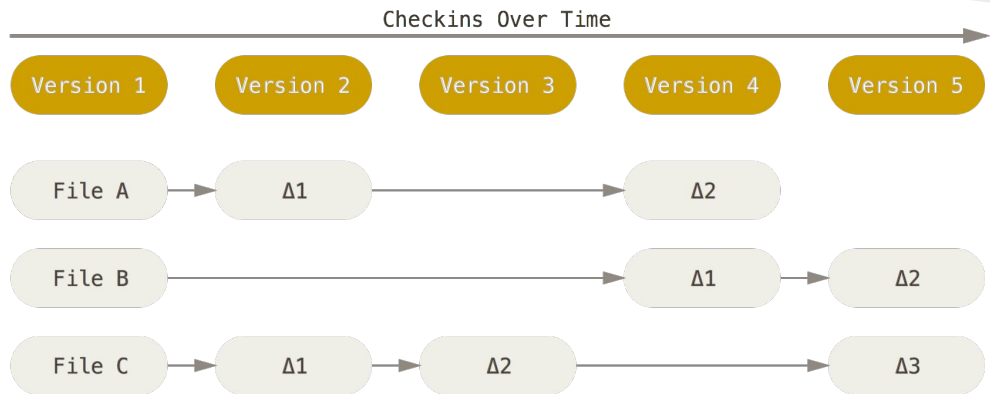


The word "Git" is written in a white, serif font, centered horizontally. The background is a dark purple gradient that transitions into a white gradient at the bottom, creating a stylized horizon effect.

Git

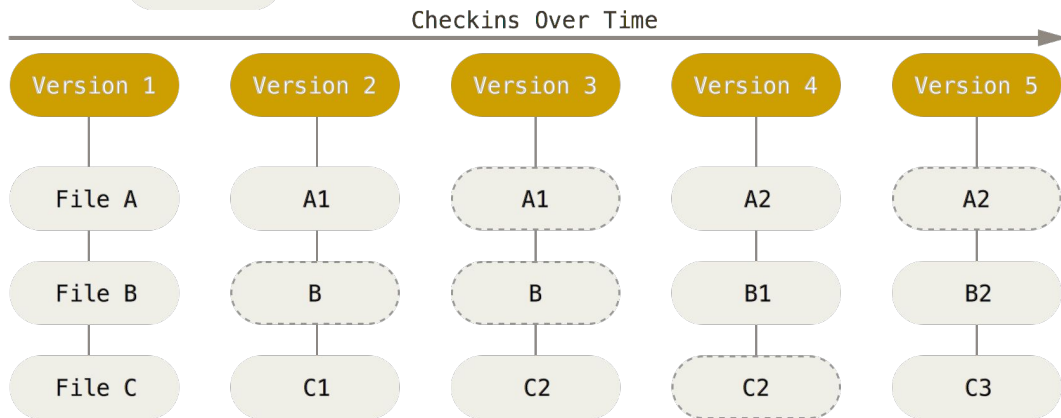
Basics

Snapshots, Not Differences

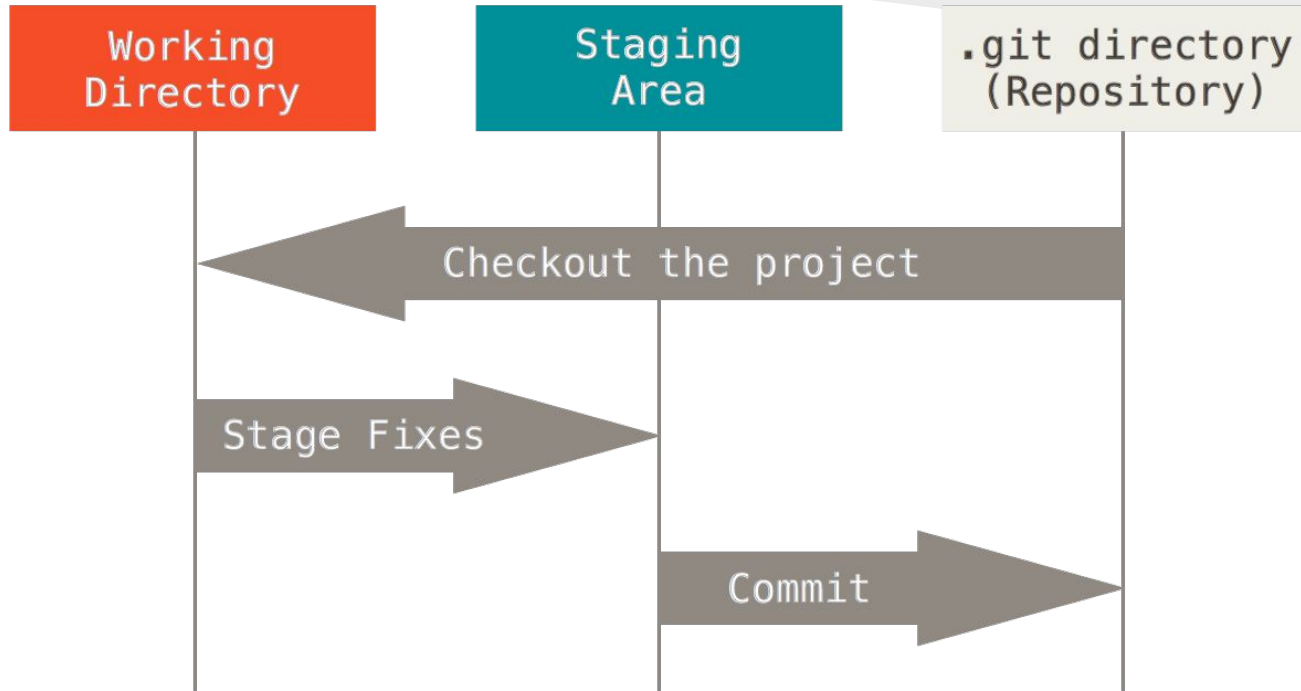


Subversion, etc.

Git



The Three States



...

- Git Has Integrity
- Git Generally Only Adds Data
- Nearly Every Operation Is Local

Setting Up

Installing Git

- <http://git-scm.com/download/win>
- <http://windows.github.com/>

Configuration Scopes

- `/etc/gitconfig` file
(`git config --system`)
- `$USER_HOME/.gitconfig`
(`git config --global`)
- `.git/config`

Configuring Variables

```
git config --global user.name name
```

```
git config --global user.email email
```

```
git config --global core.editor editor.exe
```

```
1 [user]
2   name = firstname_lastname
3   email = firstname_lastname@epam.com
4 [core]
5   editor = c:/_SOFT_/Notepad++Portable/Notepad++Portable.exe
6 [merge]
7   tool = c:/_SOFT_/WinMergePortable/WinMergePortable.exe
8
```

Checking Settings

```
git config --list
```

```
git config user.name
```

Creating

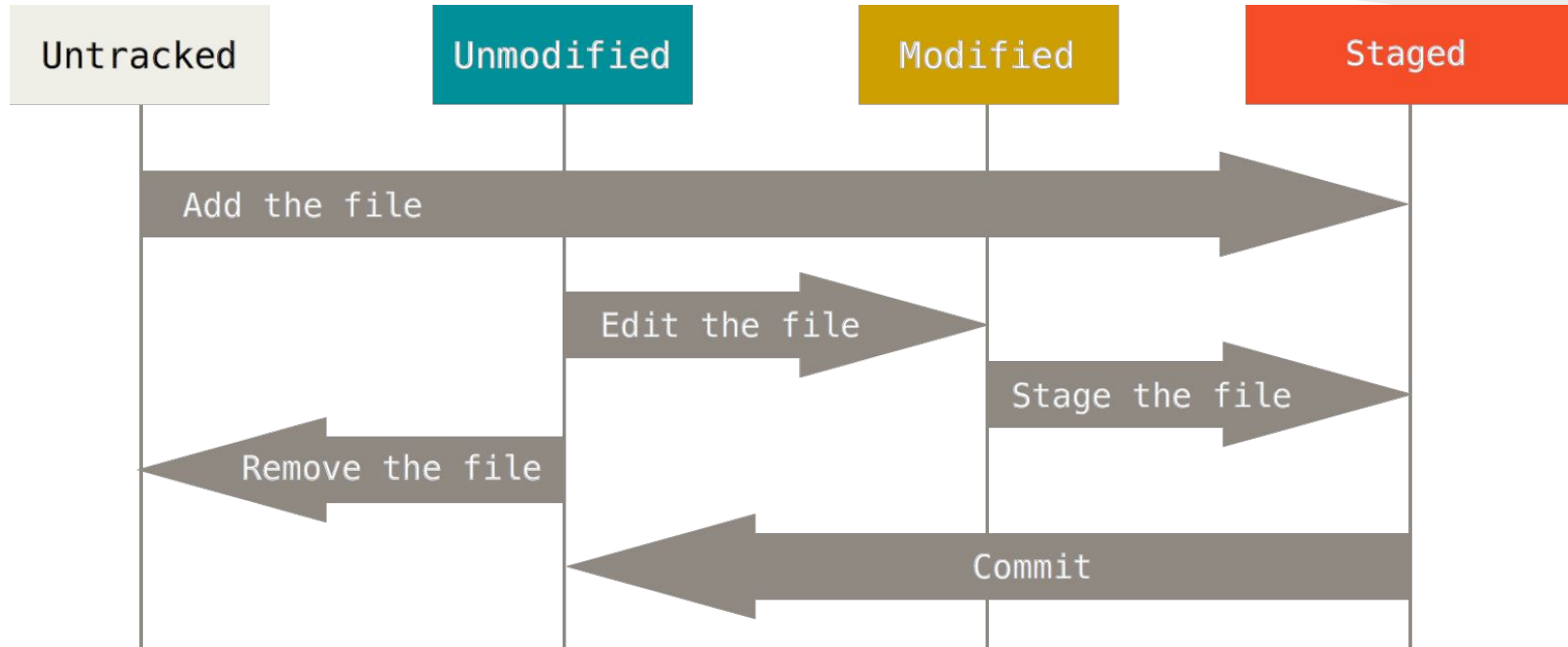
Initializing a Repository

```
git init
```

```
git clone https://bitbucket.org/repository
```

Snapshotting

Files Status



Recording to the Repository

```
git status [--short]
```

```
git add file/directory
```

```
git diff [--staged]
```

```
git commit [-a] -m "message"
```

```
git rm [-f][--cached] file/directory
```

```
git mv from to
```

Ignoring Files

`.gitignore`

```
1 *.idea  
2 *.iml  
3 *.class  
4 /target/
```

<https://github.com/github/gitignore>

Viewing the History

git log

Option	Description
<code>-n</code>	Show only the last n commits
<code>--since</code> , <code>--after</code>	Limit the commits to those made after the specified date.
<code>--until</code> , <code>--before</code>	Limit the commits to those made before the specified date.
<code>--author</code>	Only show commits in which the author entry matches the specified string.
<code>--committer</code>	Only show commits in which the committer entry matches the specified string.
<code>--grep</code>	Only show commits with a commit message containing the string
<code>-S</code>	Only show commits adding or removing code matching the string

Option	Description
<code>-p</code>	Show the patch introduced with each commit.
<code>--stat</code>	Show statistics for files modified in each commit.
<code>--shortstat</code>	Display only the changed/insertions/deletions line from the <code>--stat</code> command.
<code>--name-only</code>	Show the list of files modified after the commit information.
<code>--name-status</code>	Show the list of files affected with added/modified/deleted information as well.
<code>--abbrev-commit</code>	Show only the first few characters of the SHA-1 checksum instead of all 40.
<code>--relative-date</code>	Display the date in a relative format (for example, "2 weeks ago") instead of using the full date format.
<code>--graph</code>	Display an ASCII graph of the branch and merge history beside the log output.
<code>--pretty</code>	Show commits in an alternate format. Options include oneline, short, full, fuller, and format (where you specify your own format).

Undoing

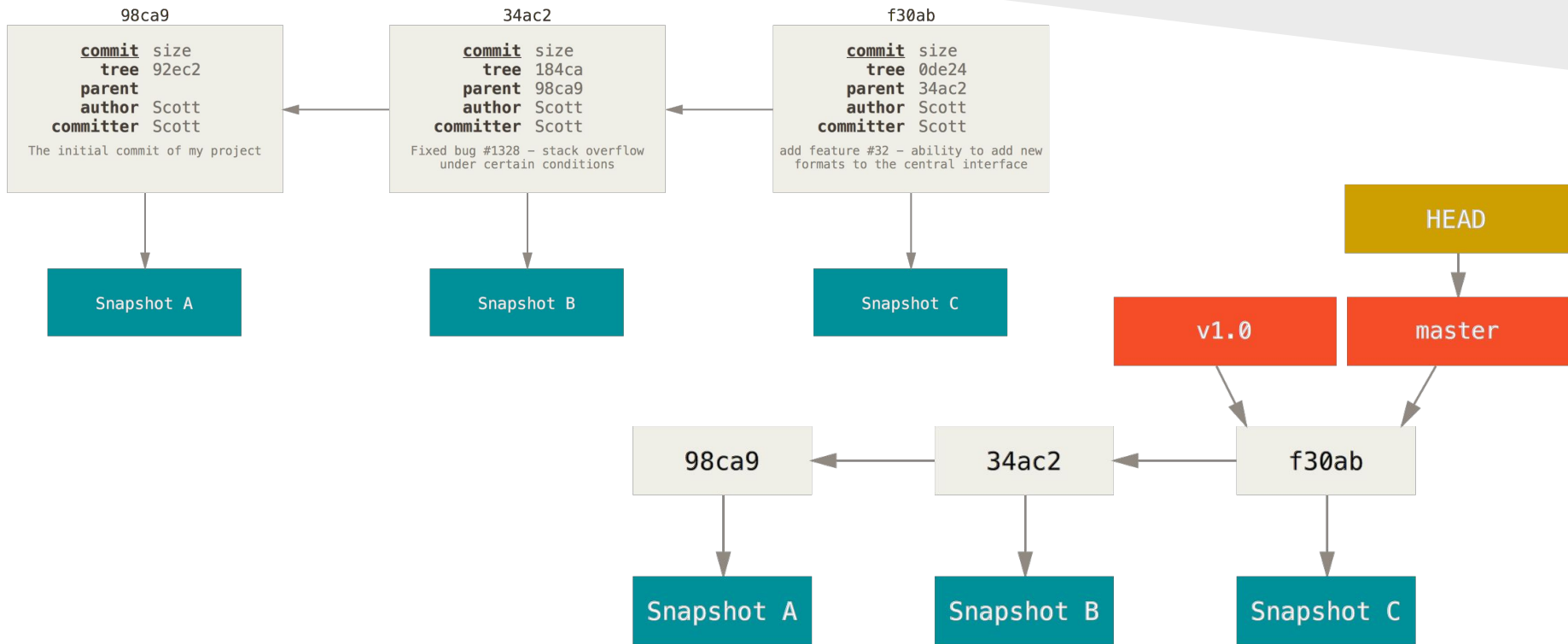
```
git commit --amend
```

```
git reset
```

```
git checkout -- file
```

Branching

Basics



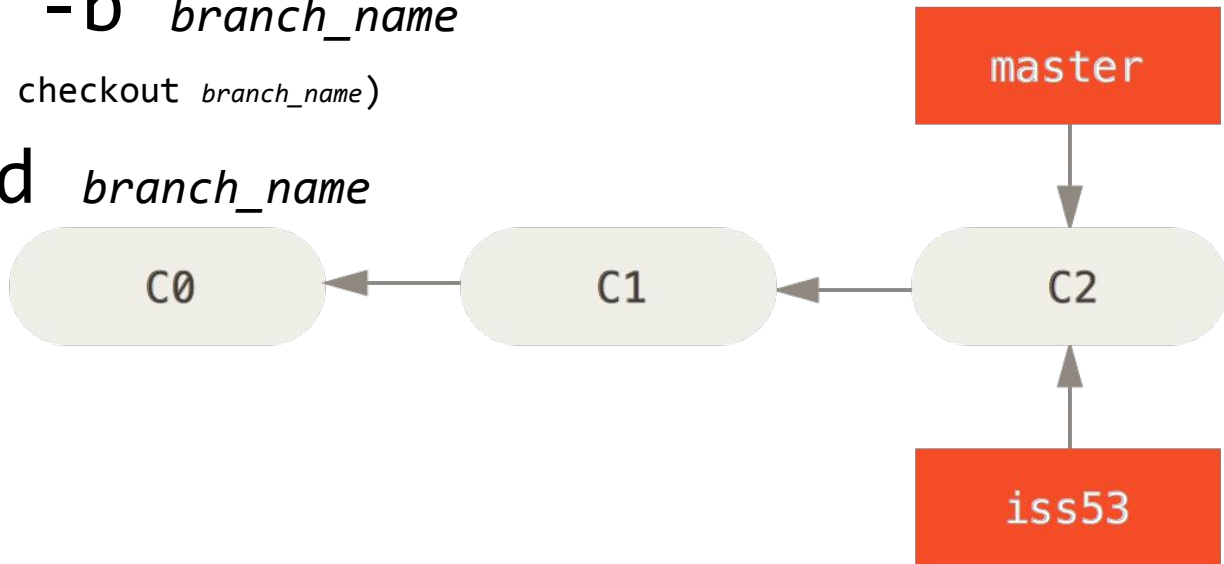
Branching

```
git branch [-v][--merged][--no-merged]
```

```
git checkout -b branch_name
```

(`git branch branch_name + git checkout branch_name`)

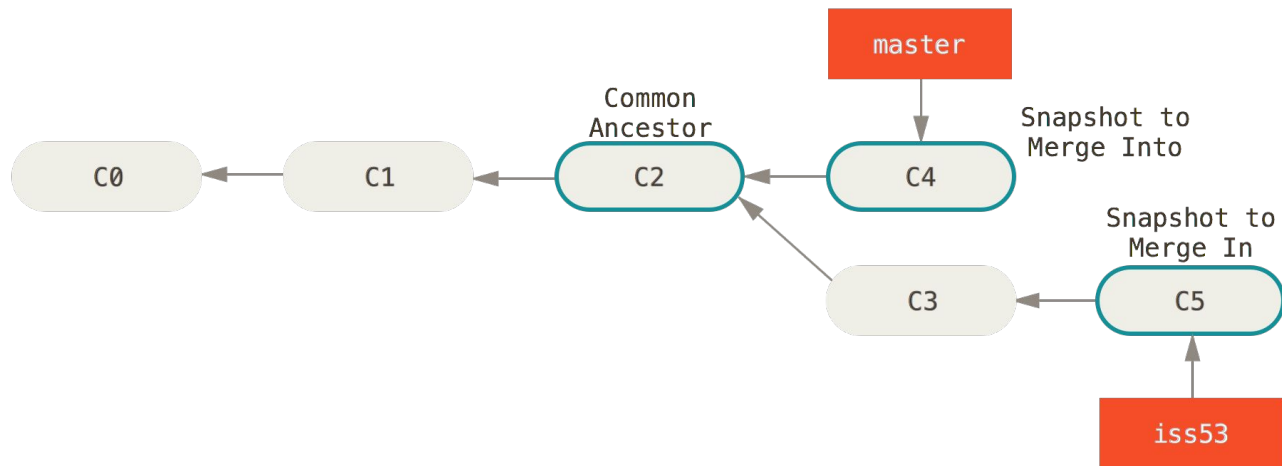
```
git branch -d branch_name
```



Merging

`git merge branch_name`

`git mergetool`



Remoting

Working with Remotes

```
git clone url
```

```
git remote [-v]
```

```
git remote add name url
```

```
git remote [rename name new_name] [show|rm name]
```

```
git fetch name
```

```
git pull name
```

```
git push name branch
```


Remote Branches

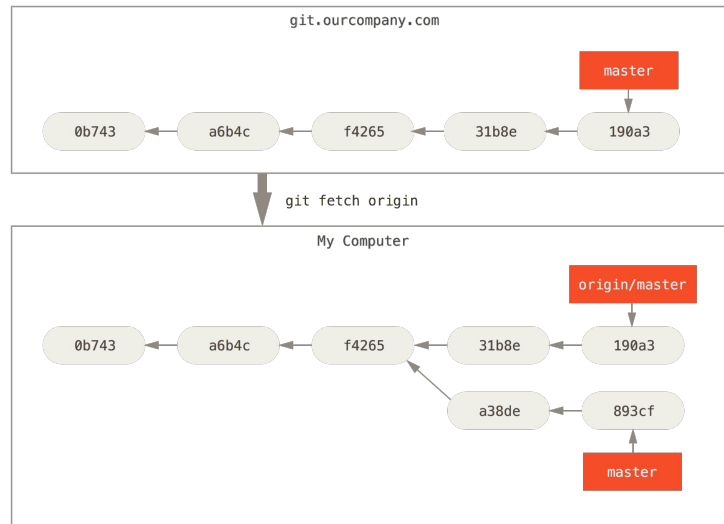
`git merge remote/branch`

`git checkout [-b branch][--track] remote/branch`

`git branch -u remote/branch`

`git branch -vv`

`git push remote --delete branch`



Links

Home Task

<http://git-scm.com/>

<https://bitbucket.org/>