

git basics

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May 26, 2018



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Getting git repository

Listing 1: Creating new repository

```
git init git-presentation-repo
```

Listing 2: Clone remote repository

```
git clone\  
https://github.com/stemberamichal/Perfect
```

Initialized repository

What we did:

- Folder git-presentation-repo
- Subfolder .git with basic content
- Branch master

What we did not do:

- Not created tracked files or commits
- Not added remote repository

Verify:

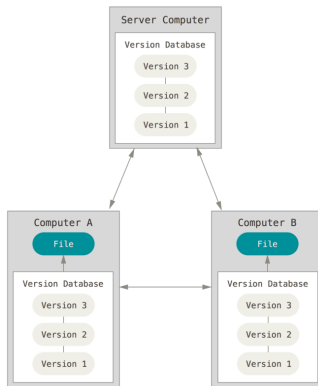
Listing 3: List all folders and files

```
find .
```

```
git-presentation-repo
├── .git
│   ├── HEAD
│   ├── config
│   ├── description
│   └── hooks
│       ├── applypatch-msg.sample
│       ├── commit-msg.sample
│       ├── post-update.sample
│       ├── pre-applypatch.sample
│       ├── pre-commit.sample
│       ├── pre-push.sample
│       ├── pre-rebase.sample
│       ├── pre-receive.sample
│       ├── prepare-commit-msg.sample
│       └── update.sample
├── info
│   └── exclude
├── objects
│   ├── info
│   └── pack
└── refs
    ├── heads
    └── tags
```

Version Control System (VCS)

- Distributed version control
- Each client has its copy of history
- Database can be altered offline



Adding remote

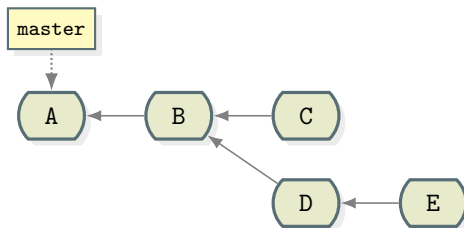
Listing 4: Add remote called origin

```
git remote add origin\  
https://github.com/stemberamichal/Perfect
```

Listing 5: Add another remote

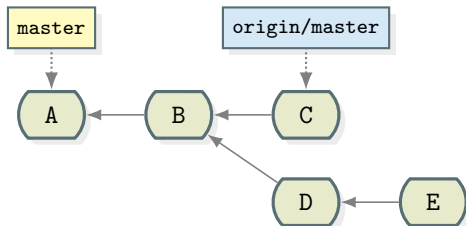
```
git remote add perfect\  
https://github.com/PerfectlySoft/Perfect
```

Fetch repositories



```
git fetch origin
```

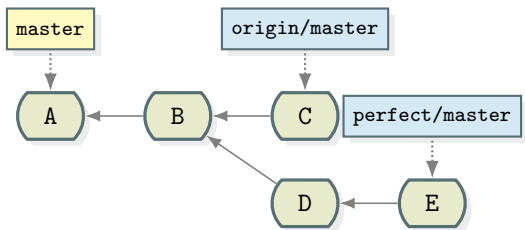
Fetch repositories



```
git fetch origin
```

```
git fetch perfect
```


Fetch repositories



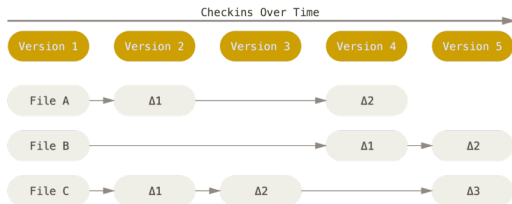
```
git fetch origin
```

```
git fetch perfect
```

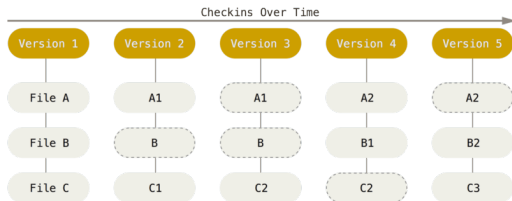
```
git fetch --all
```

Deltas or snapshot

- Exposed as deltas



- Internally stored as snapshots

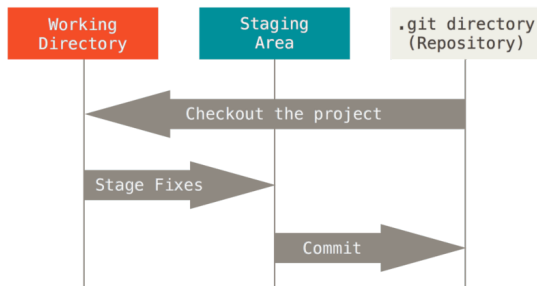


The Three States

Working directory Current changes to the filesystem

Staging area Changes marked for commit

Committed Internally stored as snapshots



```
diff --git a/git-basics.tex b/git-basics.tex
index 2969036..92232d6 100644
--- a/git-basics.tex
+++ b/git-basics.tex
@@ -7,6 +7,23 @@
 \usetheme{netvor}
 \usepackage{color}
 \usepackage{gitdags}
+\usepackage{listings}
+
+% Settings
+\lstset{basicstyle=\ttfamily,
+  showstringspaces=false,
+  commentstyle=\color{red},
+  keywordstyle=\color{blue}
+}
+
+\lstdefinelanguage{diff}{
```

