Version Control with Git
Getting Started

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Creating an Initial Repository

```
D:\OneCreditGit\initialRepo>git init
Initialized empty Git repository in D:/OneCreditGit/initialRepo/.git/
```

Git stores all of its repository data in the .git directory

Creating sample file in the repo

```
D:\OneCreditGit\initialRepo> echo 'Version Control with git' > initialFile.txt
```

Adding file to Repository

```
D:\OneCreditGit\initialRepo>git add initialFile.txt
warning: CRLF will be replaced by LF in initialFile.txt.
The file will have its original line endings in your working directory
```

To add multiple files, we can use "git add . " It will add all the files in the directory including subdirectories.

After the add command, git knows that the file has to remain in the repository. Git has merely staged the file, an interim step before commit.

Git status command

```
D:\OneCreditGit\initialRepo>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   initialFile.txt
```

Git Commit Command

Git know that's it's supposed to keep track of initialFile.txt, but it hasn't recorded these changes as a commit yet. To do that we have to use the git commit command

```
D:\OneCreditGit\initialRepo>git commit -m "Added First File to the Repository"
[master (root-commit) 75fae21] Added First File to the Repository
 1 file changed, 1 insertion(+)
 create mode 100644 initialFile.txt
```

When we run git commit, git takes everything we have told it to save by using git add and it stores a permanent copy inside the .git directory. This is called a commit or revision. And its short identifier is 75fae21.

Checking the changes

To check if the changes made are clear, we can again run the git status command

```
D:\OneCreditGit\initialRepo>git status
On branch master
nothing to commit, working tree clean
```
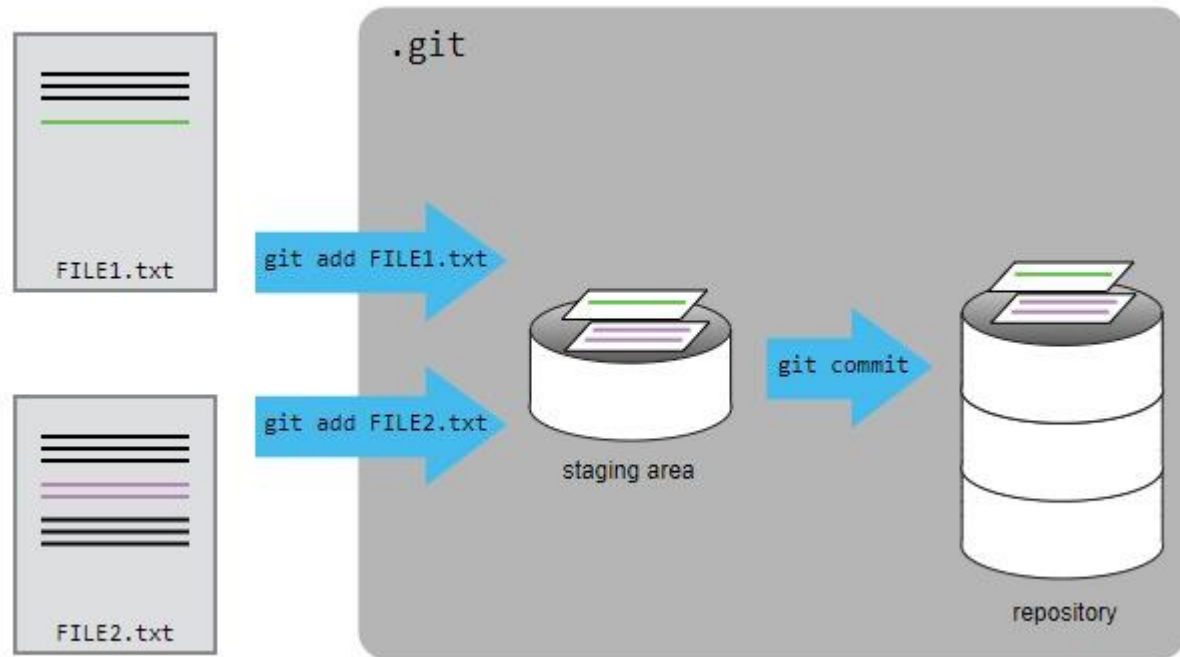
Git log command

If we want to know what we have done recently, we can ask git to show the history using git log command. It tells the changes made in a reverse chronological order

```
D:\OneCreditGit\initialRepo>git log
commit 75fae21402a63fd64d8f4d77a664c66b7278616c (HEAD -> master)
Author: Sathesh Rgs <satheshrgs@gmail.com>
Date:   Wed Feb 17 12:39:24 2021 +0530

    Added First File to the Repository
```

Quick Recap

Choosing a commit message

Always choose a good name for the commit message. It should be understandable the other people in the repo too.

Key Points

- **git init** initializes a repository
- Git stores all of its repository data in the .git directory
- **git status** shows the status of repository
- **git add** puts files in the statging area
- **git commit** saves the staged content as a new commit in the local repository