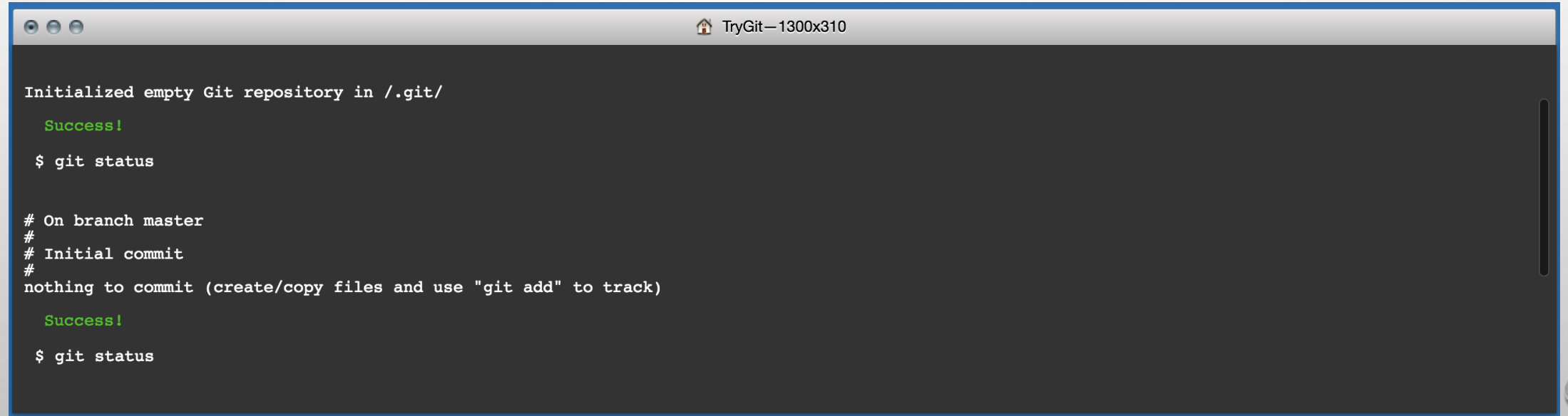# GIT, GITHUB

AND VERSION CONTROL

git VERSION CONTROL SYS

- *(THINK OF IT GIT AS AN FTP CLIENT E.G FILEZILLA AND GITHUB IS THE HOSTING SERVICE LIKE CLOOK)*

- SOFTWARE THAT HANDLES VERSION CONTROL(BRANCH, MERGE, ROLL BACKS, COMMIT)

- INSTALLED ON YOUR LOCAL MACHINE

- COORDINATES WORK BETWEEN MULTIPLE DEVS(ADVANTAGEOUS ON LARGE TEAMS)

- AVOIDANCE OF OVERRIDING EACH OTHERS WORK(CHANGE/UPDATE MGNT).

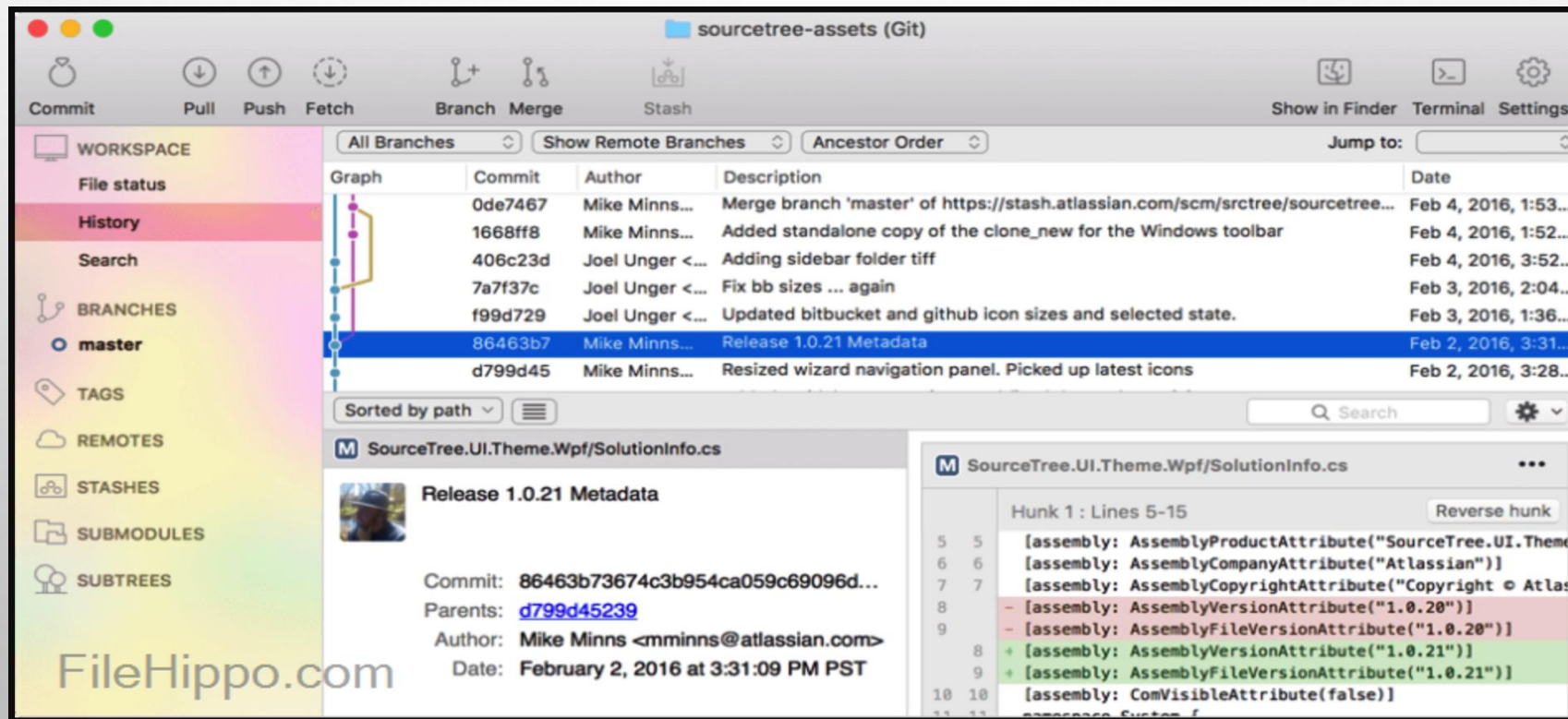- REVERT BACK AT ANYTIME.(SNAPSHOTS OF PREVIOUS ITERATIONS)

IT'S NOT PRETTY

```
● ● ●                    🏠 TryGit—1300x310

Initialized empty Git repository in /.git/

   Success!

 $ git status


# On branch master
#
# Initial commit
#
nothing to commit (create/copy files and use "git add" to track)

   Success!

 $ git status
```
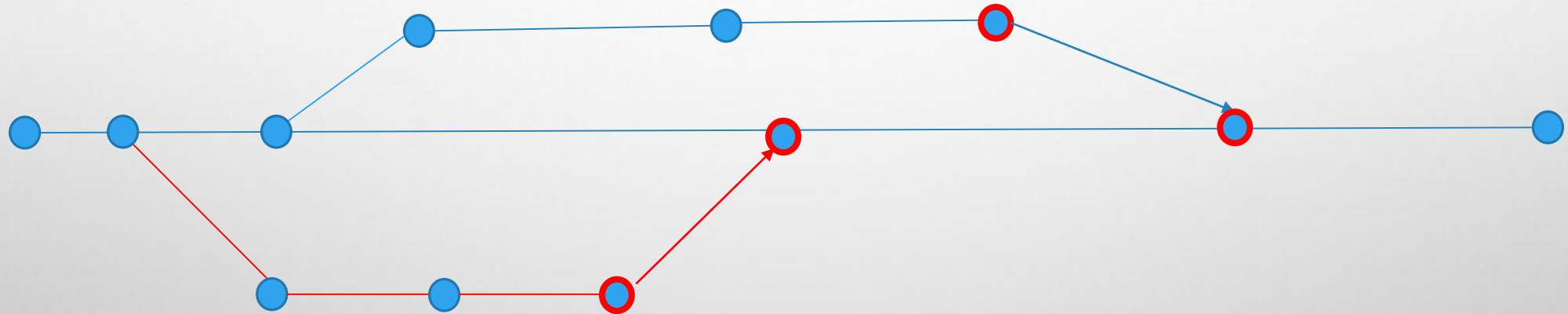
GIT GUI'S(GRAPHIC USER INTERFACE)

- **SOURCETREE, GITHUB DESKTOP(MANUAL V AUTO)**

MASTER TIMELINE BRANCHES, AND PULL REQUESTS.

- **BRANCHING**: A WAY TO WORK ON DIFFERENT VERSIONS OF A REPOSITORY AT ONE TIME. USED TO EXPERIMENT AND MAKE EDITS BEFORE **MERGING** THEM TO MASTER.

MASTER TIMELINE AND BRANCHES, PULL REQUESTS 2.

- THE BRANCHES SHOW 2 DIFFERENT FEATURES COMING OFF THE MASTER BRANCH AND THEN "**PULLED**" IN AFTER APPROVAL.

- SHOULD THE 2 DIFFERENT BRANCHES UPDATE THE SAME "**FEATURE**" AND THE UPDATES ARE DIFFERENT A CONFLICT IS RAISED TO BE RESOLVED.

- "**ROLL BACK**" TO PRECEDING VERSIONS IF THERE IS A PROBLEM.

- WHEN A CHANGE IS READY, IT IS **MERGED** BACK INTO THE MASTER.

- SAVED CHANGES ARE CALLED **COMMITS**.

COMMAND LINES

- $GIT INIT.   //INITIALISE LOCAL GIT REPOSITORY

- $GIT ADD <FILE>   //ADD FILES TO INDEX

- $GIT STATUS   //CHECK STATUS OF WORKING TREE

- $GIT COMMIT.   //COMMIT CHANGES IN INDEX

- $GIT PUSH.   //PUSH TO REMOTE REPOSITORY

- $GIT PULL   //PULL LATEST FROM REMOTE REPO

GIT SAMPLE/HOW IT WORKS

- DOWNLOAD FROM HTTPS://GIT-SCM.COM/DOWNLOADS

- MAC VERSIONS OPERATE FROM TERMINAL.

- WINDOWS VERSION LIKELY TO TAKE YOU STRAIGHT TO THE TERMINAL WINDOW.

GITHUB
AKA REPOSITORIES, OR REPO'S FOR SHORT

- COLLABORATION PLATFORM THAT HELPS DEVELOPERS BUILD TOGETHER(ENCOURAGES FEEDBACK)

- A PLACE WHERE YOU CAN STORE YOUR WORK AND CHANGES TO REPOSITORY

- CONTRIBUTE TO OTHER OPEN SOURCE PROJECTS

- SAVES TIME

- EVERY TIME YOU SAVE CHANGES HERE YOU REFER TO IT AS A "**COMMIT**"

FEATURES AND ADVANTAGES

- BIG BUSINESS HAVE THEIR OWN REPOSITORIES.

- IF YOU HAVE A FREE ACCOUNT, THEN IT WILL BE PUBLIC, A SUBSCRIPTION SERVICE WILL GET YOU PRIVATE ACCOUNT.

- BITBUCKET IS ANOTHER ALTERNATIVE TO GITHUB.

- **"PUSHING"** AND **"PULLING"** FOR CHANGE CAN BE DONE BY DIFFERENT PEOPLE IN DIFFERENT LOCATIONS AND GET THE LATEST UPDATE.(E.G WORK ON DIFFERENT FEATURES, TAKE A CLONE OR BRANCH AND THEN **MERGE BACK**.)

THANK YOU