



Now with 10%  
Fewer corny jokes  
With the word  
"git"!!!

# Intro To Git & Github

Jeff Ammons

# Distributed Source Control (for starters)

- Linus Torvalds, The Linux Guy
- File system based
- Hash, hash, hash
- All repos are equal, but some are more equal

# FASTER!!! SHOW ME COMMANDS!!!

- `git init`
- `git add .`
- `git commit -m "Initial commit"`
- `git push origin master`

# WHAT?!?! Command Line? Hellooo, 1989 Calling!!!

- Command line is the base
- POSHGit: super fancy command line for PowerShell
- GitHub For Windows
- SourceTree
- Team Foundation Server
  - NO! Really!

# Concepts

Working files/  
directories



Workspace

# Concepts

Working files/  
directories



Workspace

git init

# Concepts

Workspace

Staging

Commit

# Concepts

Working files

Workspace

Added To Meta Data "DB"

Staging

"Mostly" Permanent

Commit



# Concepts

Working files

Workspace

Added To Meta Data "DB"

Staging

`git add .`

"Mostly" Permanent

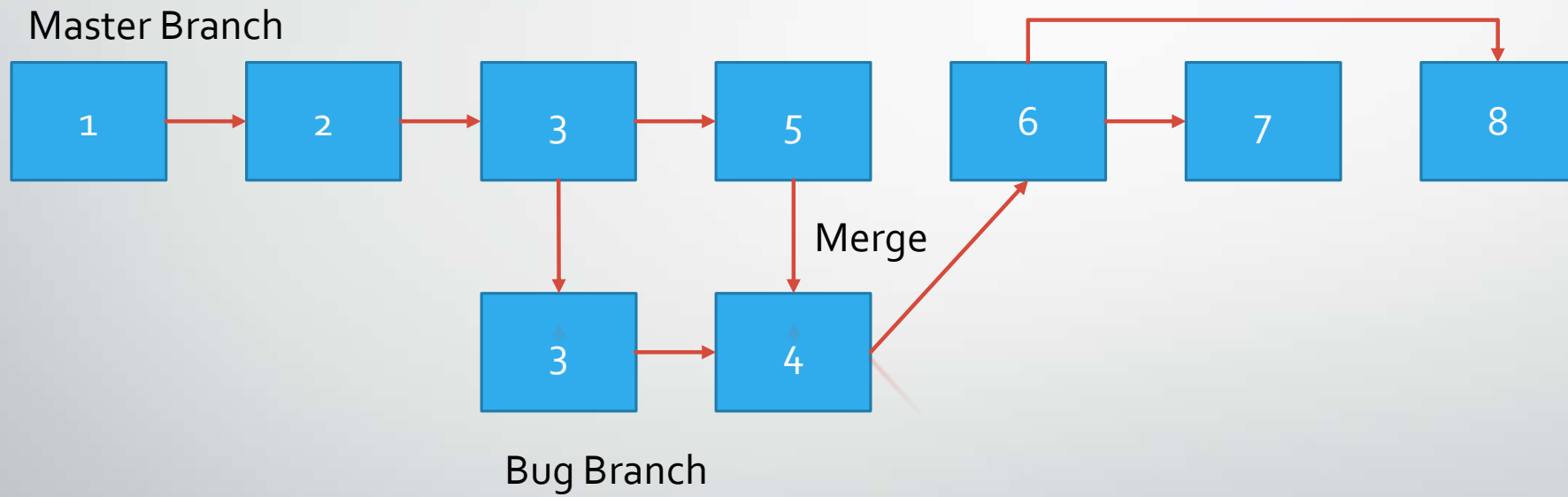
Commit

`git commit -m "Comment"`

# Real World

- C:\projects\myProj
- git init
- C:\projects\myProj\.git\
- EVERYTHING git does is in the hidden .git directory
- C:\projects\myProj is the Workspace
  - The currently checked out branch is in the Workspace

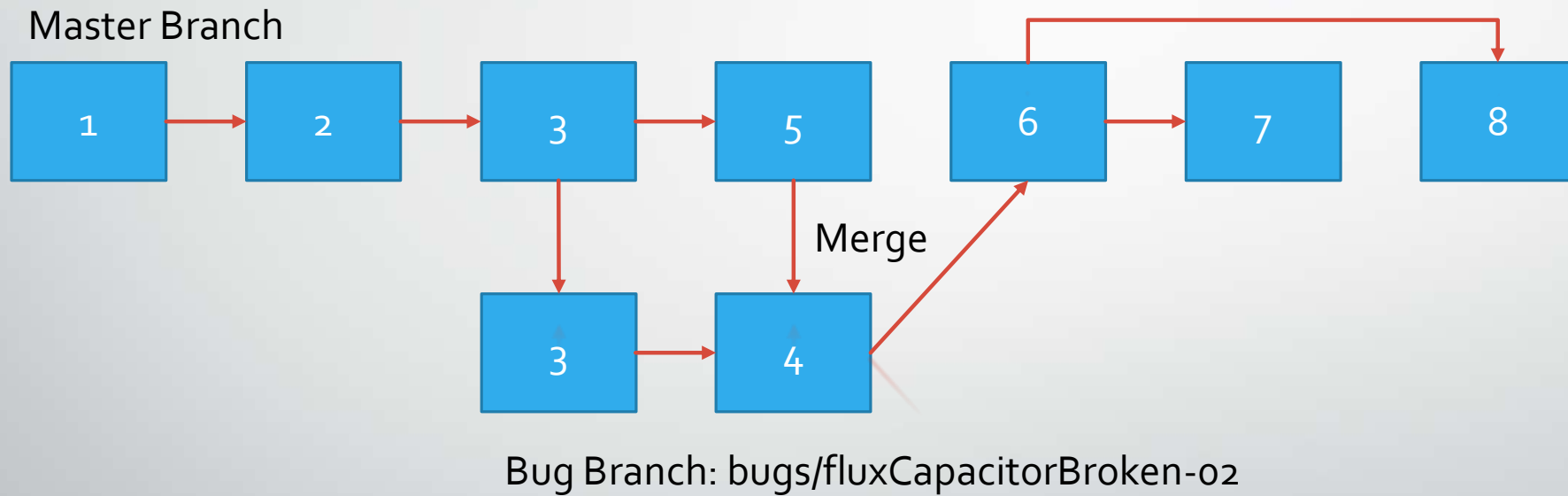
# Branching



# Branching

- Create branch off the current branch
  - `git branch bugs/fluxCapacitorBroken-02`
- Check Out new branch into Workspace
  - `git checkout bugs/fluxCapacitorBroken-02`
- Add to staging, then commit
  - `git add .`
  - `git commit -m "Changed flux capacitor"`
- Merge back into master branch
  - `git checkout master`
  - `git merge bugs/fluxCapacitorBroken-02`

# Branching



# Why Should I Use Git?

- Fast branching
- Distributed Code
- Free doesn't hurt
- Server not \*required\*
- Perfect for personal projects
  - Dropbox, SkyDrive(whatever it is called), etc.

# What Else Can It Do?

- Deploy software updates
  - Push versions you can roll back
- Store/share app settings
  - VIM settings
  - Git settings
- Version ALL THE THINGS!!
  - Word docs?
  - Excel files?

# Git Tools On Windows Demo

- Command line Git (possibly BASH)
- Cygwin
- PowerShell POSHGit
- Github For Windows
- Sourcetree
- TortoiseGit
- Team Explorer/Team Foundation Server



# Tasks To Demo

- Initialize repo
- Add files
- Commit
- Branch
- Merge
- Create remote
  - GitHub
  - Team Foundation Service
- Push to remote

# Hosting

- Github
  - Best known
- Bitbucket
  - Free private repos
- Team Foundation Service
  - Freeish, with MSDN

# References

- Git
  - <http://git-scm.com/>
- GitHub
  - <http://github.com>
- SourceTree & BitBucket (both Atlassian)
  - <http://www.sourcetreeapp.com/>
  - <https://bitbucket.org/>
- TortoiseGit
  - <https://code.google.com/p/tortoisegit/>
- Team Foundation Service (TFS)
  - <http://tfs.visualstudio.com/>
- SHA Hashes In .Net
  - <http://msdn.microsoft.com/en-us/library/system.security.cryptography.sha1cryptoserviceprovider.aspx>
- GittyApp
  - <http://gittyapp.com>

# How To Find Me

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