

# GIT

## AN INTRODUCTION



GitHub, Inc.

Daily ▾ Us ▾ Uni ▾ Kaldor ▾ Dev ▾ SO Bitbucket In Apple Dev Shopping ▾ 1&1 BMOC Kickstarter iCloud MyBT Groceries Clubcard Lloyds Santander Tesco Bank Facebook >>

jpsim/DeckRocket

This repository Search Explore Gist Blog Help kylejm + ▾

jpsim / DeckRocket Watch 5 Unstar 88 Fork 10

DeckRocket turns your iPhone into a remote for Deckset presentations

30 commits 1 branch 3 releases 1 contributor

branch: master DeckRocket / +

added MARK-style comments mostly everywhere

jpsim authored on Oct 26, 2014 latest commit 96e875f784

OSX added MARK-style comments mostly everywhere 3 months ago

design First Commit 8 months ago

iOS added MARK-style comments mostly everywhere 3 months ago

sample Long press shows slide notes 8 months ago

LICENSE First Commit 8 months ago

README.md updated README to reflect recent changes 3 months ago

demo.gif Send PDF to iPhone from menu bar (fixes #5) 8 months ago

dragdrop.gif Send PDF to iPhone from menu bar (fixes #5) 8 months ago

README.md

Code Issues Pull Requests Wiki Pulse Graphs

SSH clone URL git@github.com:jpsir

You can clone with HTTPS, SSH, or Subversion. ?

Clone in Desktop Download ZIP

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mattt (Matt Thompson)

pakr

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kylejm + Follow



**Matt Thompson**  
mattt

Portland, OR  
<http://nshipster.com>  
Joined on Apr 17, 2008

**7.5k** Followers   **395** Starred   **121** Following

**Organizations**

FormatterKit  
Xcode-Snippets  
Surge  
GroundControl  
CargoBay

AFNetworking  
NSHipster/nshipster.com  
NSHipster/articles  
Alamofire  
CocoaPods/Specs

Public contributions

Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan

M W F

Summary of Pull Requests, issues opened, and commits. [Learn more](#).

Less More

A screenshot of a web browser window showing the GitHub Education homepage. The address bar at the top displays "education.github.com". The page features a dark green chalkboard background with white chalk drawings of laboratory glassware (a round-bottom flask on a stand, a beaker, and a test tube rack) on the left. In the center, the text "TEACH AND LEARN BETTER, TOGETHER" is written in a large, stylized font. Below this, there is a green button labeled "Request a discount". To the right, a cartoon character of a student wearing a lab coat and safety goggles holds a test tube. At the bottom of the main section, there is a yellow backpack icon. The text "STUDENT DEVELOPER PACK" is centered above a blue button labeled "Get the pack". The top navigation bar includes links for "Stories", "Events", "Student pack", "Classroom guide", and "Contact us". The top menu bar of the browser has various items like "Daily", "Us", "Uni", "Kaldor", "Dev", "SO", "Bitbucket", "In", "Apple Dev", "Shopping", "1&1", "BMOC", "Kickstarter", "iCloud", "MyBT", "Groceries", "Clubcard", "Lloyds", "Santander", "Tesco Bank", and "Facebook".

**BY THE END OF THIS:**

**You should have a rough idea of what Git does**

**You should have the tools and foundation knowledge to learn Git**

# HOW ARE WE GOING TO DO THIS:

1. Who is Kyle, why does he know Git?
2. What's Version Control?
3. Why was Git created? - *Brief History*
4. The story of a dev team
5. Some basic Git commands
6. Q&A - but ask whenever a question pops in to your head

```
eroam-128-66:~ kylejm$ cd ~/Developer/  
eroam-128-66:Developer kylejm$ ls -la  
total 16  
drwxr-xr-x  6 kylejm  staff   204 21 Jan 11:36 .  
drwxr-xr-x+ 31 kylejm  staff  1054 28 Jan 12:20 ..  
-rw-r--r--@  1 kylejm  staff  6148 21 Jan 11:36 .DS_Store  
drwxr-xr-x  3 kylejm  staff   102 21 Jan 11:37 Uni  
drwxr-xr-x  4 kylejm  staff   136 16 Jan 20:48 Web Projects  
drwxr-xr-x  3 kylejm  staff   102 15 Jan 23:09 iOS Projects  
eroam-128-66:Developer kylejm$ cd Web\ Projects/kylejm.github.io/  
eroam-128-66:kylejm.github.io kylejm$ git status  
On branch master  
Your branch is up-to-date with 'GitHub/master'.  
nothing to commit, working directory clean  
eroam-128-66:kylejm.github.io kylejm$
```

# HOW ARE WE GOING TO DO THIS:

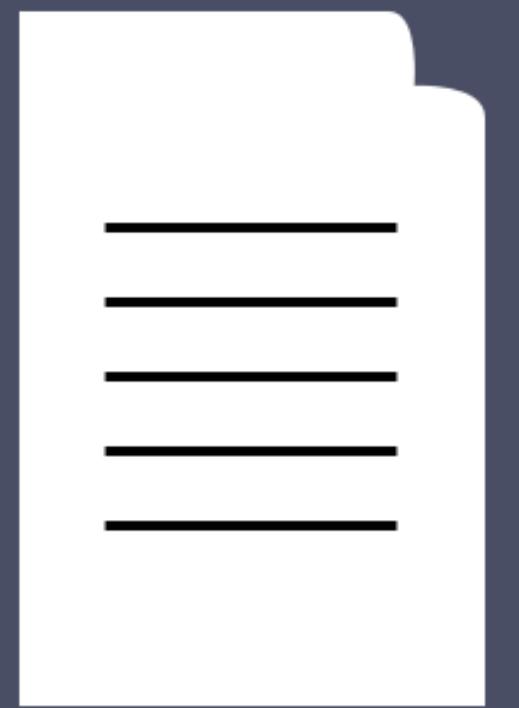
1. Who is Kyle, why does he know Git?
2. What's Version Control? What is Git?
3. Why was Git created? - *Brief History*
4. The story of a dev team
5. Some basic Git commands
6. Q&A - but ask whenever a question pops in to your head



**WHO'S Kyle? WHY IS HE UP THERE INSTEAD OF Bolotov?**

# WHAT IS VERSION CONTROL?





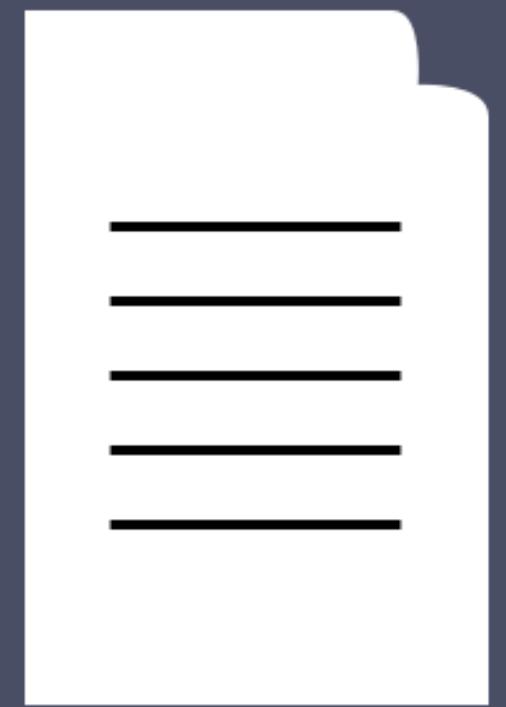
**essay.txt**



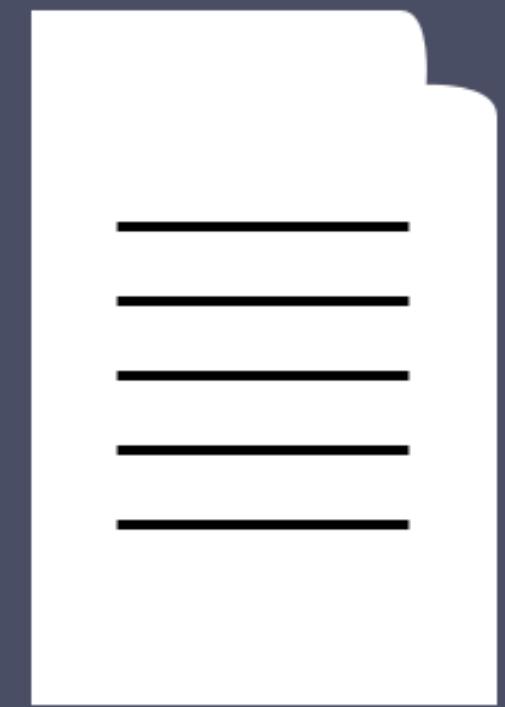
**essay-v2.txt**



essay.txt



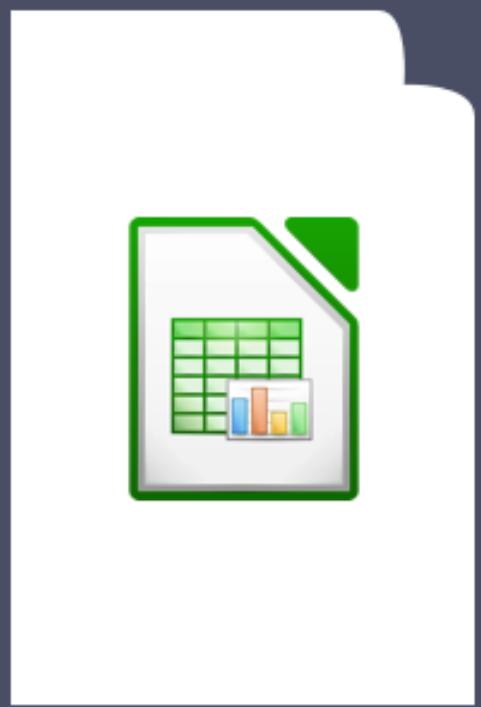
essay-v2.txt



essay-v3.txt



essay.txt



spreadsheet.xls



logo.png

# GIT

Keeps track of changes to files in your project

Mainly used for Source Code Management

*Especially good at tracking text file changes*

Allows you to quickly and easily move between versions

Allows you to see the differences between versions

Kaleidoscope

A Desktop > Hello-World.java    B Desktop > Hello-World-v2.java

Hello-World.java    Hello-World-v2.java

A Hello-World.java /Users/kylejm/Desktop    B Hello-World-v2.java /Users/kylejm/Desktop

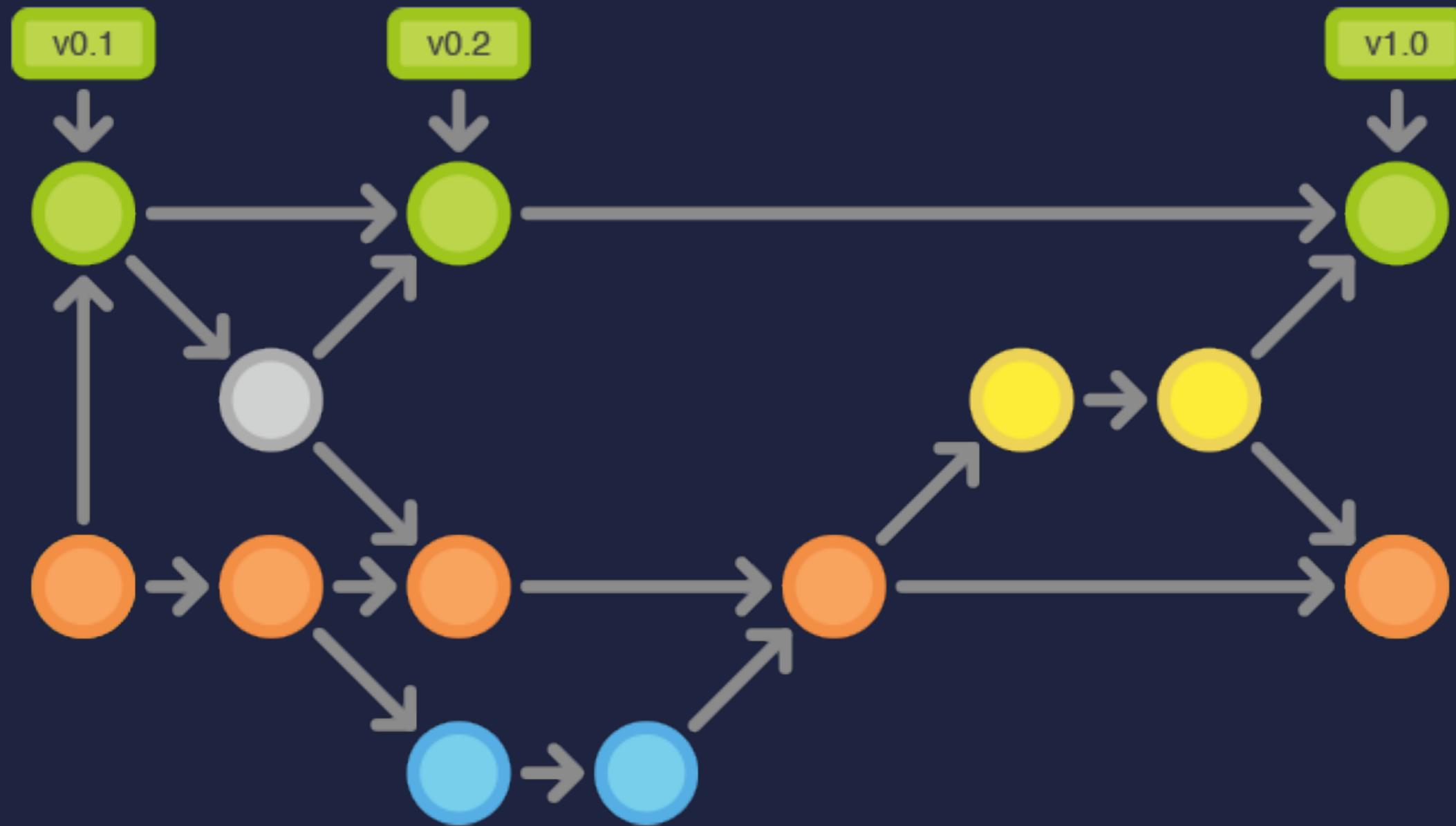
```
1 public class MainClass {  
2  
3     public static void main(String[] args) {  
4         sayHello();  
5     }  
6  
7     private static void sayHello() {  
8         System.out.println("Hello World!");  
9     }  
10  
11 }  
12
```

1 public class MainClass {  
2  
3 public static void main(String[] args) {  
4 sayHello();  
5 sayGoodbye();  
6 }  
7  
8 private static void sayHello() {  
9 System.out.println("Hello World!");  
10 }  
11  
12 private static void sayGoodbye() {  
13 System.out.println("Goodbye!");  
14 }  
15  
16 }  
17

Blocks Fluid Unified

Ignore whitespace Change 1 of 2 ↑ ↓

# BRANCHING





**VOC HISTORY**

# SCCS

1972 • UNIX • CLOSED SOURCE • FREE

SAVES FUTURE CHANGES ONLY

# RCS

1982 • UNIX AND OTHER PCS • OPEN SOURCE

SAVES PAST CHANGES ONLY

# CONCURRENT VERSION SYSTEM (CVS)

1986 • OPEN SOURCE

TRACKS MULTIPLE FILES • REPOSITORY

# REPOSITORY (REPO)

A place where things are stored and can be found  
– The Cambridge Dictionary

# SUBVERSION (SVN)

2000 • OPEN SOURCE

NON-TEXT FILES • DIRECTORY SNAPSHOTTING

# BITKEEPER

2000 • CLOSED SOURCE • FREE COMMUNITY VERSION

DISTRIBUTED VCS

**SCCS - 1970, closed source, smarter storage**

**RCS - 1972, open source, even smarter storage, multiple OS**

**CVS - 1986, open source, multiple files, repository**

**SVN - 2000, open source, dir snapshotting, non-text files**

**BitKeeper - 2000, closed source, Distributed VCS**



Linux Days 1998

# GIT

APRIL, 2005

Distributed VCS  
Multiple file types

Super fast  
Open source

Compatible with Unix like (Linux, Mac OS X, Solaris), Windows

# GITHUB

Launched 2008

By 2009 had 50,000 repos and 100,000 users

# GITHUB

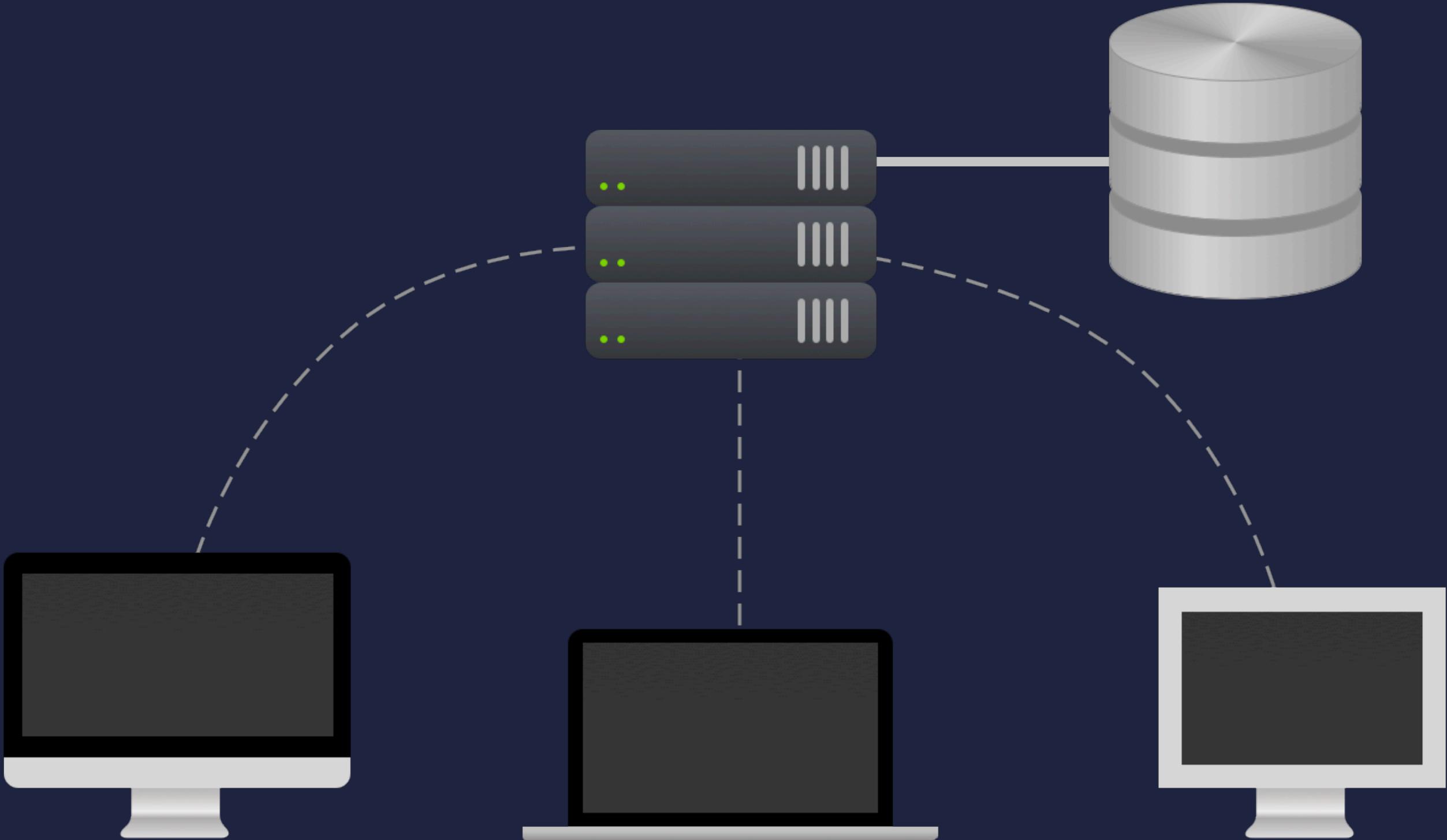
Launched 2008

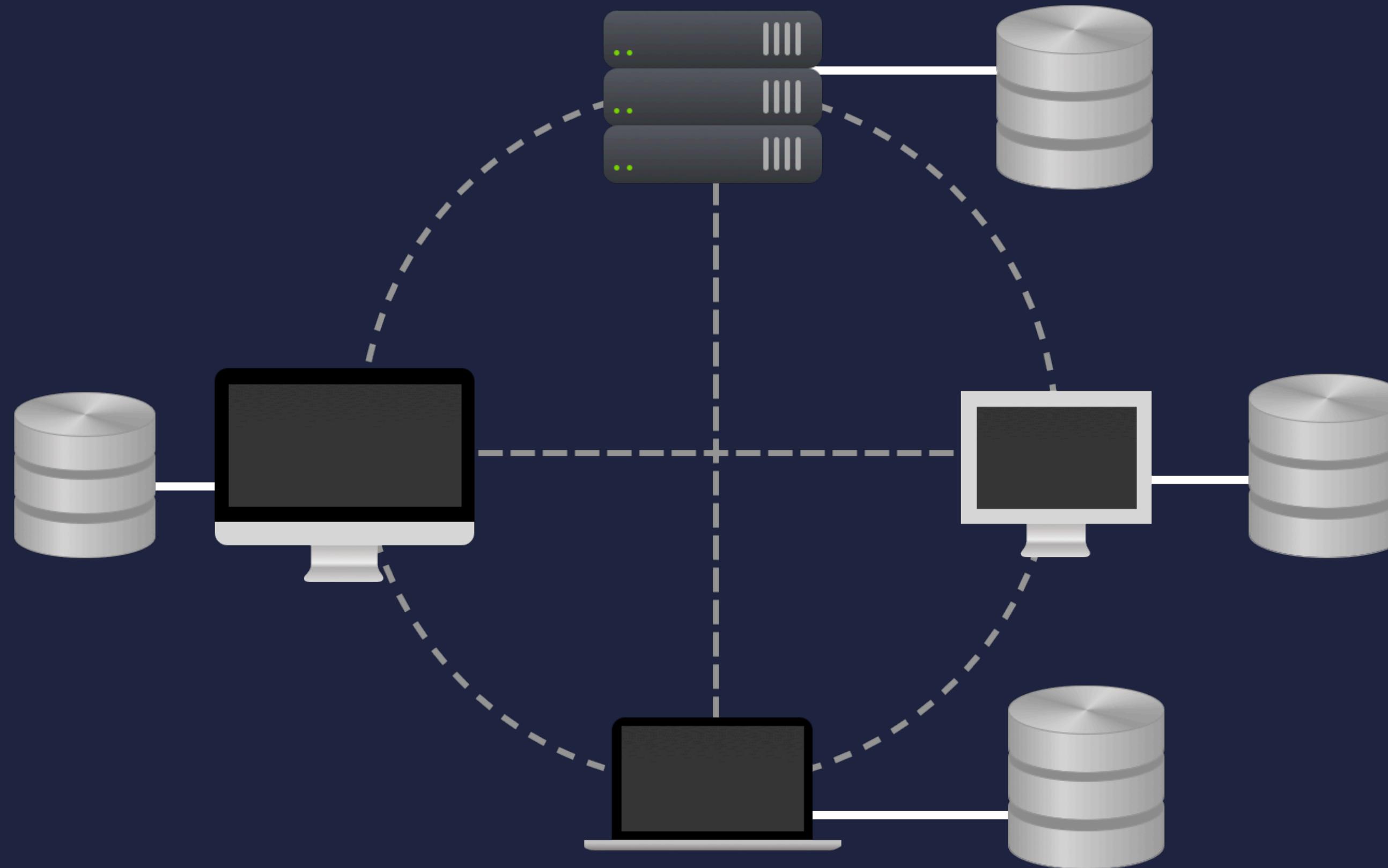
By 2009 had 50,000 repos and 100,000 users

**BY 2011 HAD OVER 2 MILLION REPOS AND 1 MILLION USERS**

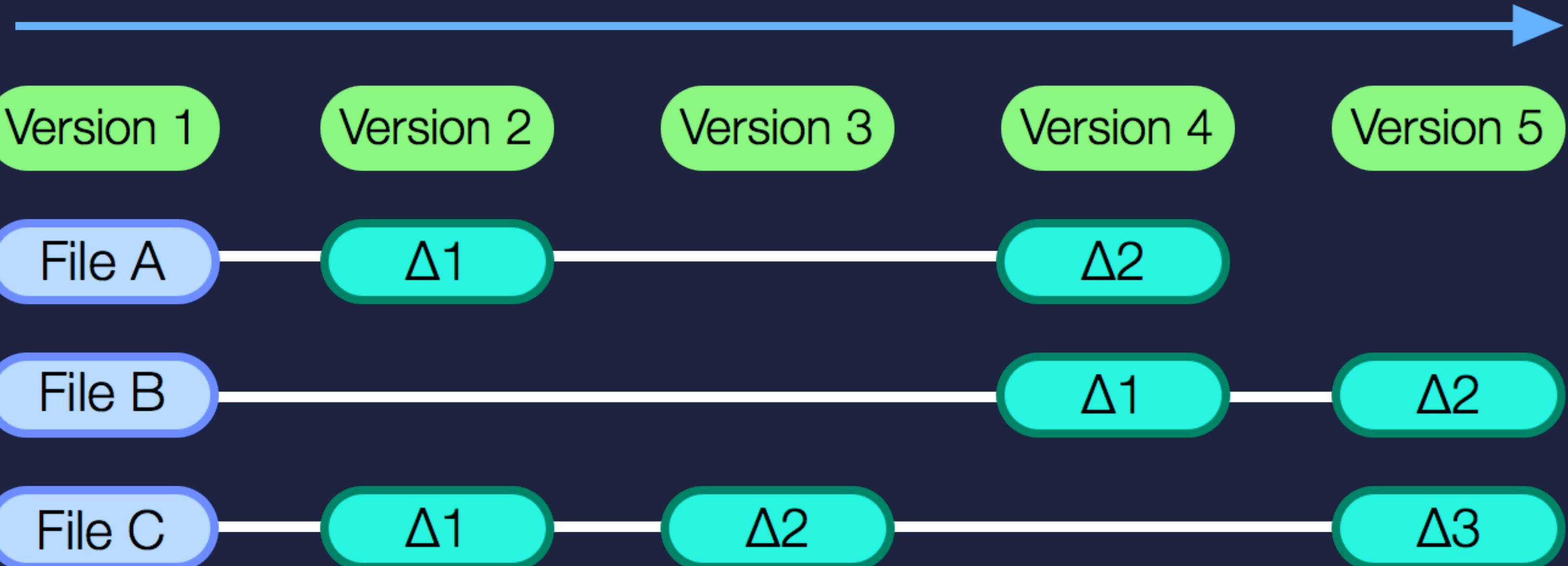
# DISTRIBUTED VERSION CONTROL

# Repo

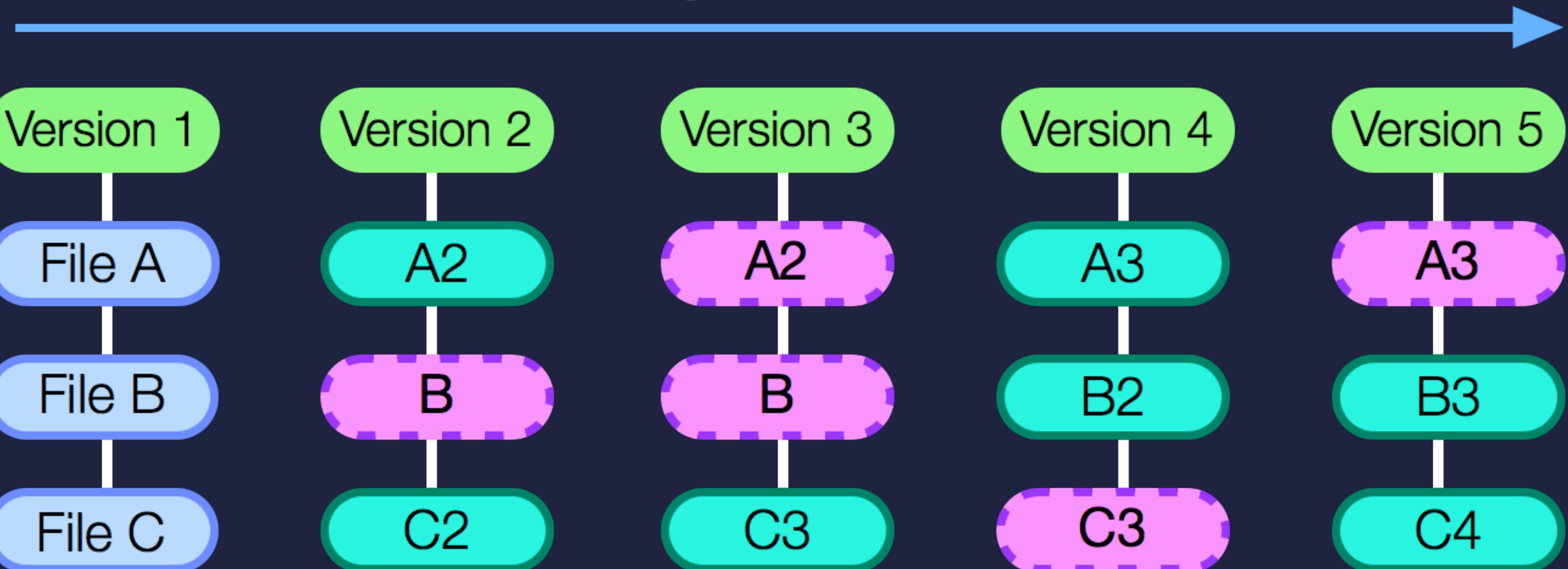




# Changes over time



# Changes over time



# BENEFITS OF DVCS

- ▶ Faster
- ▶ No network access required
- ▶ No single failure point
- ▶ Devs can work independantly

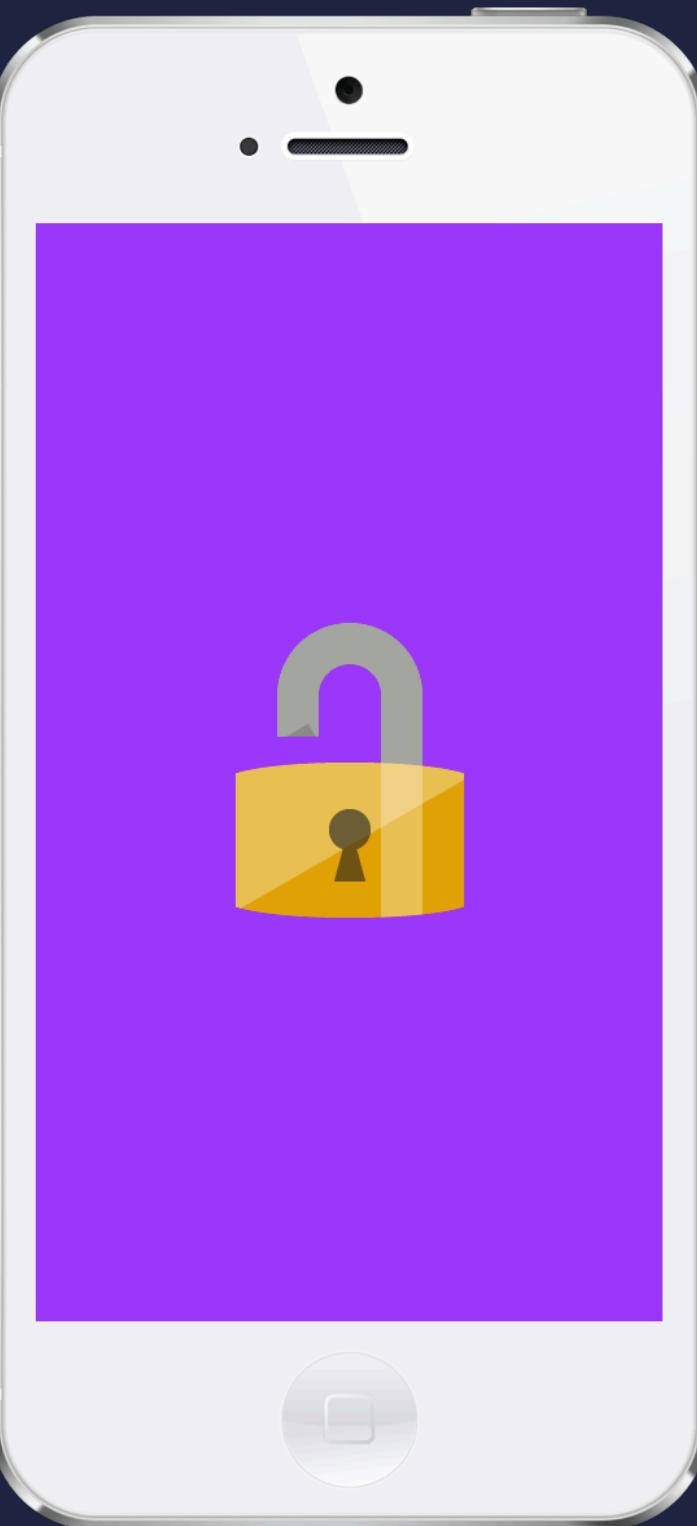
IT ALSO ENCOURAGES PEOPLE TO FORK OPEN SOURCE PROJECT

TOP 1000 FREE APPS





Alex



**Commit:** b99e197  
**Author name:** Alex Bolotov  
**Email:** a.bolotov@wmin.ac.uk

**Commit message:**

Fixed a bug which caused a crash when users tried to delete a password

**Commit:** 84d5931  
**Author name:** Alex Bolotov  
**Email:** a.bolotov@wmin.ac.uk

**Commit message:**

The app now encrypts passwords before they are stored! Whoop!

**Commit:** 2cd458c  
**Author name:** Alex Bolotov  
**Email:** a.bolotov@wmin.ac.uk

**Commit message:**

User now has to set a password that must be entered to open the app

**Commit:** b99e197  
**Author name:** Alex Bolotov  
**Email:** a.bolotov@wmin.ac.uk

**Commit message:**

Fixed a bug which caused a crash when users tried to delete a password

**Commit:** 0ffc12e  
**Author name:** Alex Bolotov  
**Email:** a.bolotov@wmin.ac.uk

**Commit message:**

Instead of entering a password, the user can now unlock with their finger print! ✨✨✨✨

**Commit:** 84d5931  
**Author name:** Alex Bolotov  
**Email:** a.bolotov@wmin.ac.uk

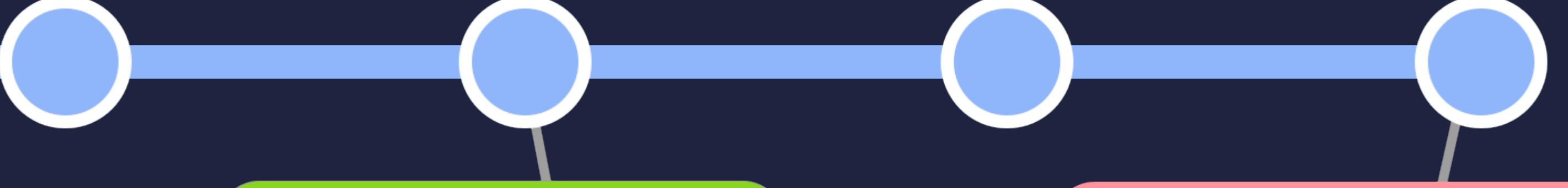
**Commit message:**

The app now encrypts passwords before they are stored! Whoop!

**Commit:** 2cd458c  
**Author name:** Alex Bolotov  
**Email:** a.bolotov@wmin.ac.uk

**Commit message:**

User now has to set a password that must be entered to open the app



**Commit:** Offc12e  
**Author name:** Alex Bolotov  
**Email:** a.bolotov@wmin.ac.uk

**Commit message:**

Instead of entering a password, the user can now unlock with their finger print! ✨✨✨✨

**Commit:** 2cd458c  
**Author name:** Alex Bolotov  
**Email:** a.bolotov@wmin.ac.uk

**Commit message:**

User now has to set a password that must be entered to open the app

**Commit:** 381db33  
**Author name:** Alex Bolotov  
**Email:** a.bolotov@wmin.ac.uk

**Commit message:**

Rolling back PasswordManager.java to commit 2cd458c. 😅



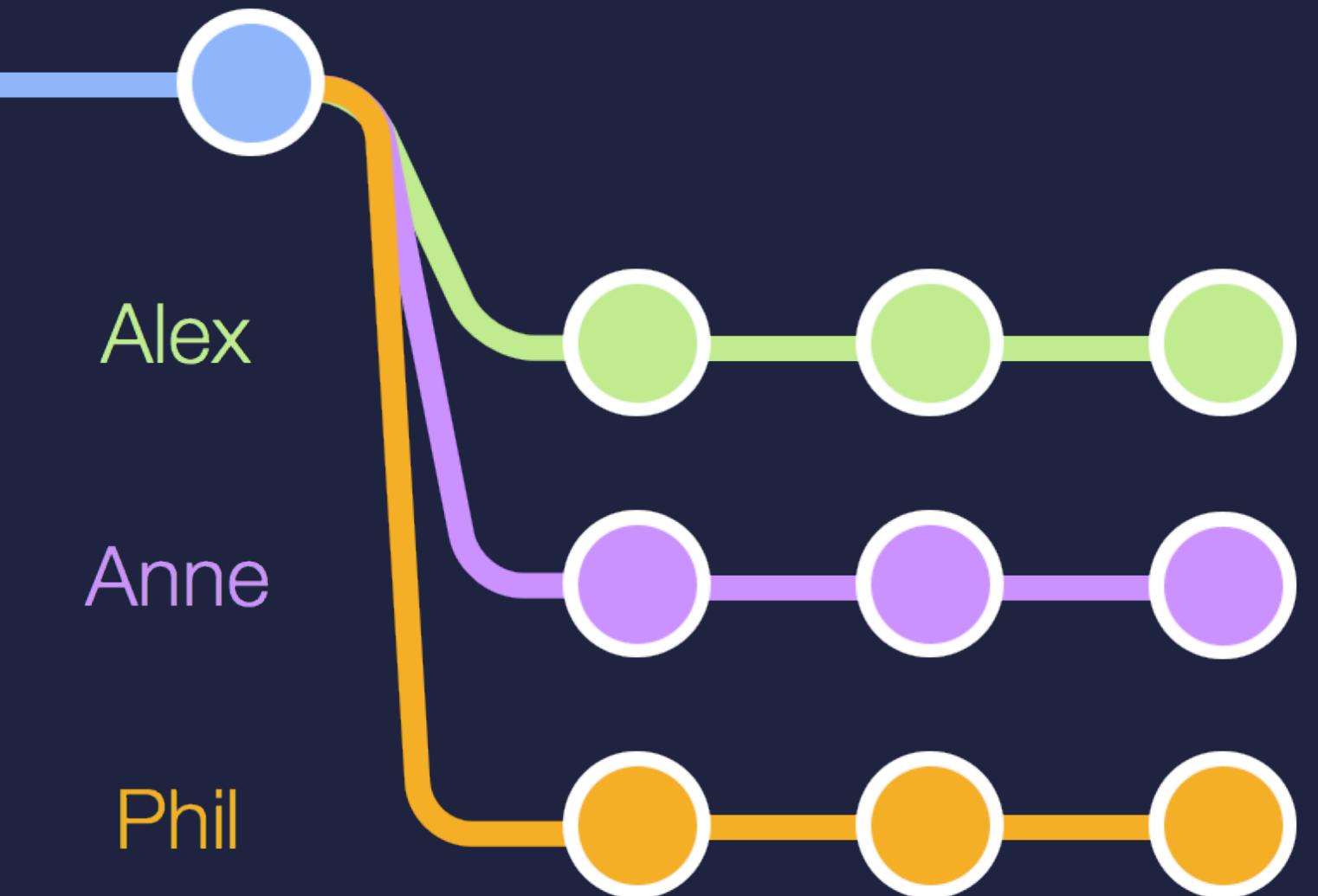
Alex

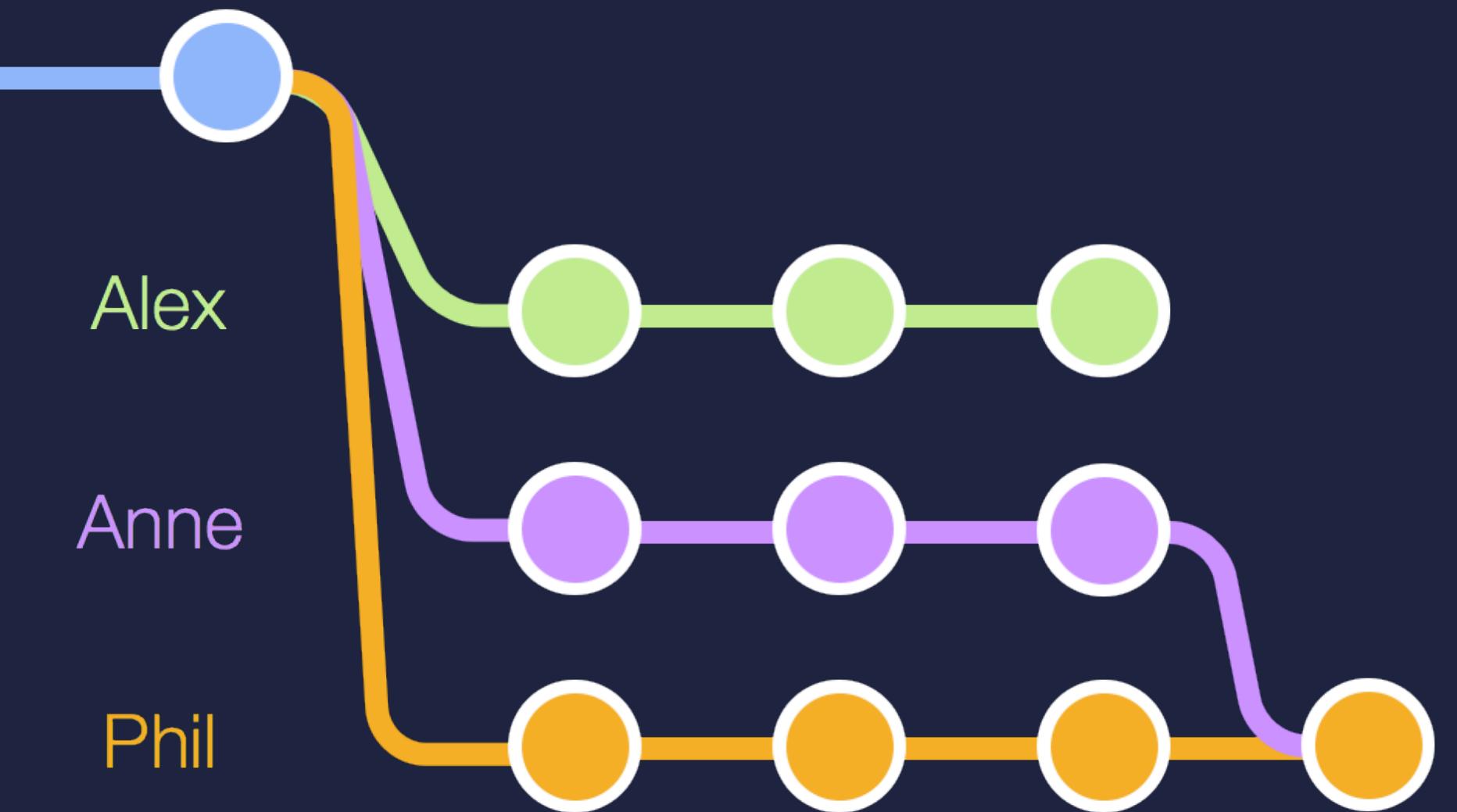


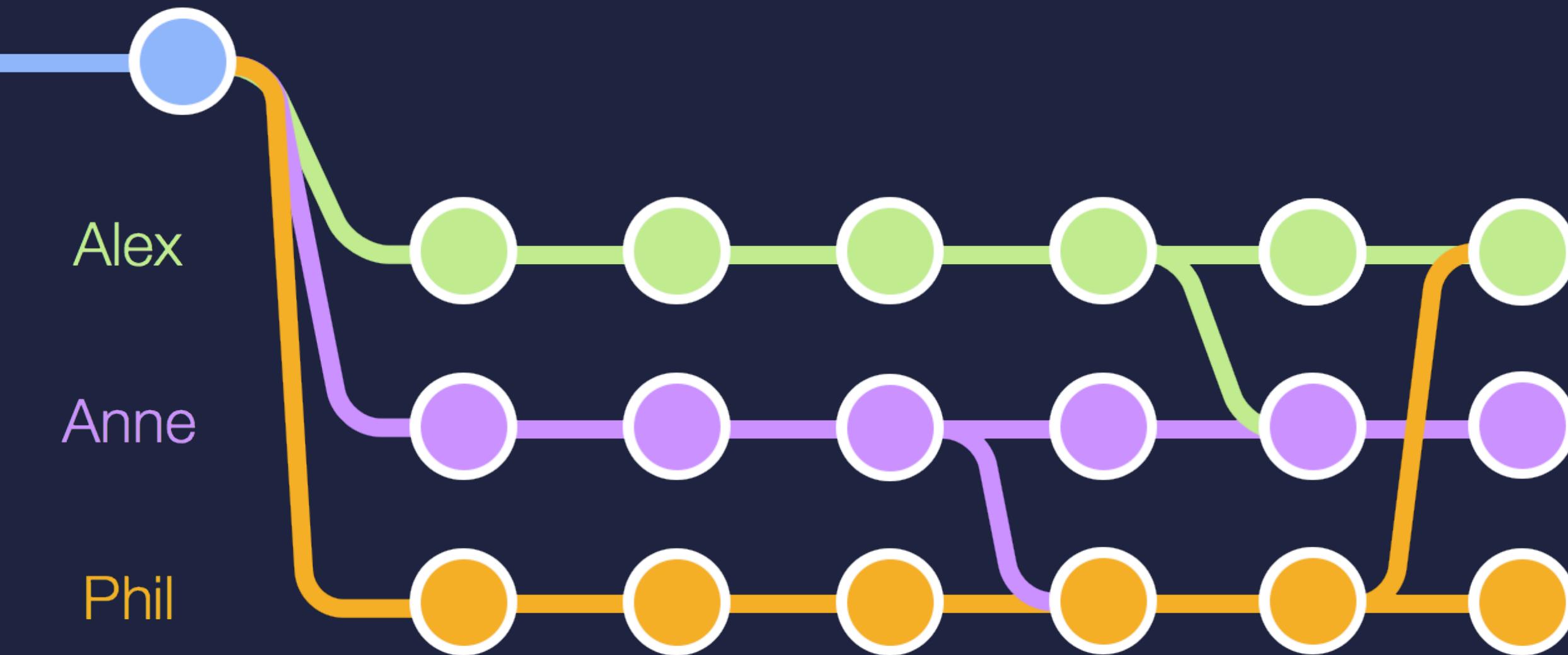
Anne



Phil









**LIVE DEMO!**

**WHAT COULD POSSIBLY GO  
WRONG?**

# Q&A



@KYLEJM

\_

FEEDBACK



K@KYLEJM.IO