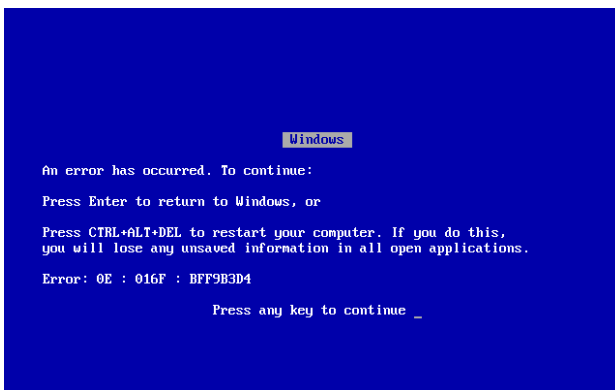# Workflow With Git

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ECRuby Meeting—April 8, 2010

## Summary

Regardless of what language you prefer, version-control is an essential tool for getting things done - especially when collaborating with others. Git, an open-source tool, has quickly become one of the most widely-used versioning systems, mainly thanks to the ability to branch and merge with relative ease. We'll take a look at how you can begin to integrate Git into your current workflow.

## Remember Windows 95?



```
                              Windows

An error has occurred. To continue:

Press Enter to return to Windows, or

Press CTRL+ALT+DEL to restart your computer. If you do this,
you will lose any unsaved information in all open applications.

Error: 0E : 016F : BFF9B3D4

                    Press any key to continue _
```

## Archives



## Diff

```
*** /path/to/original  ''timestamp''
--- /path/to/new       ''timestamp''
**************
*** 1,3 ****
--- 1,9 ----
+ This is an important
+ notice! It should
+ therefore be located at
+ the beginning of this
+ document!
...
```
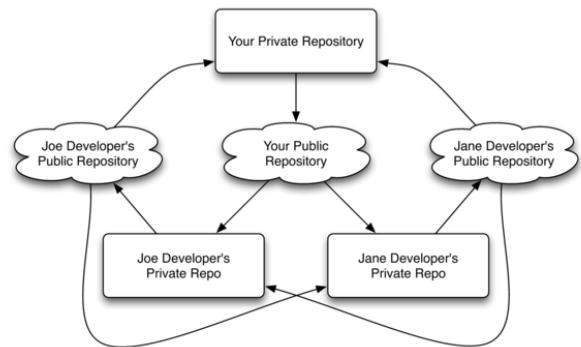
## Primitive Version Control

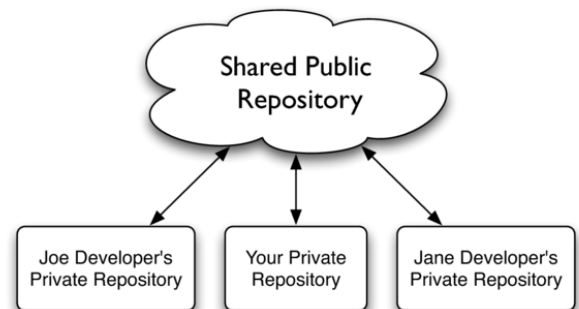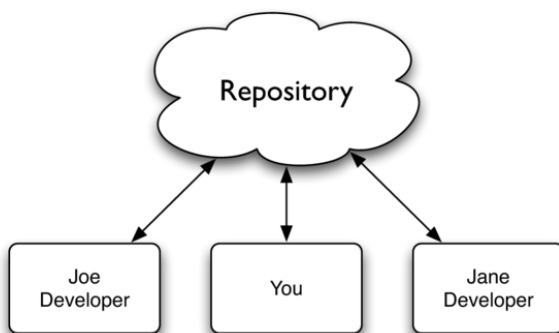- Bitkeeper
- CVS
- Subversion

# Beginnings of Git



# Centralized Versioning



# Decentralized Versioning



# Git in Practice



# Let's Create a Repository!

```
:$> ls
about.html  contact.html  index.html  st

:$> git init
Initialized empty Git repository in /hom
```

# Adding initial files

```
:$> git add .

:$> git commit -m "Initial Commit"
Created initial commit ed3ec5b: Initial Commit
 0 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 about.html
 create mode 100644 contact.html
 create mode 100644 index.html
 create mode 100644 style.css
```

# Git Add

Git add doesn't do what you think it does!

```
:$> echo "
Hello, world
" > index.html
:$> git commit -m "Added initial text to index page"
# On branch master
# Changed but not updated:
#   (use "git add ..." to update what will be committed)
#
#       modified:   index.html
#
no changes added to commit (use "git add" and/or "git commit -a")
```

# Git Add and Commit

Automatically add changes to files that are currently tracked:

```
$:> git commit -a -m "Added initial text to index page"
Created commit 94bc6d3: Added initial text to index page
 1 files changed, 1 insertions(+), 0 deletions(-)
```

# Ignoring files

```
:$> ls
about.html ~about.html contact.html inde
```

.gitignore

```
~*.html
test.html
```

# Git Revisions

Revision names:
- HEAD - the latest commit
- HEAD~ - the second-to-last-commit
- HEAD~2 - you get the idea

# Explicit Git Revisions

```
:$> git log
commit fa8db86872c83fa62efa420548d8afe36
Author: Kevin W. Gisi
Date:   Thu Apr 8 04:35:06 2010 -0500

        Adjusted index to display standards-
commit c4e43f114f9c441ae20d51bf5277044d3
Author: Kevin W. Gisi
Date:   Thu Apr 8 04:34:26 2010 -0500

        Added help.html file to display usag
```

# Reverting a Commit

```
:$> git revert HEAD
```

Create a new commit which undoes the changes most recently made.

# Tagging a Release

It's release time!

```
:$> git tag 1.0
```

Show current tags

```
:$> git tag
1.0
```

# Feature Branches

# Merging Branches

# Additional Resources

# Thanks!