Understanding Version Control

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This module is optional if you already use version control

Tracking a Project's History

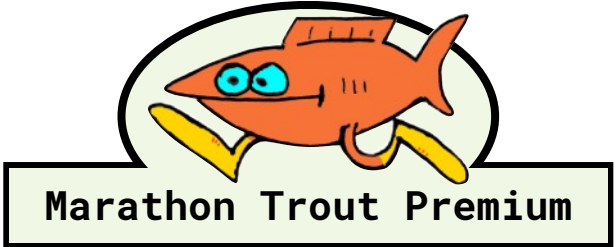# Disclaimer: version control isn't a backup

Version Control Is Useful To...
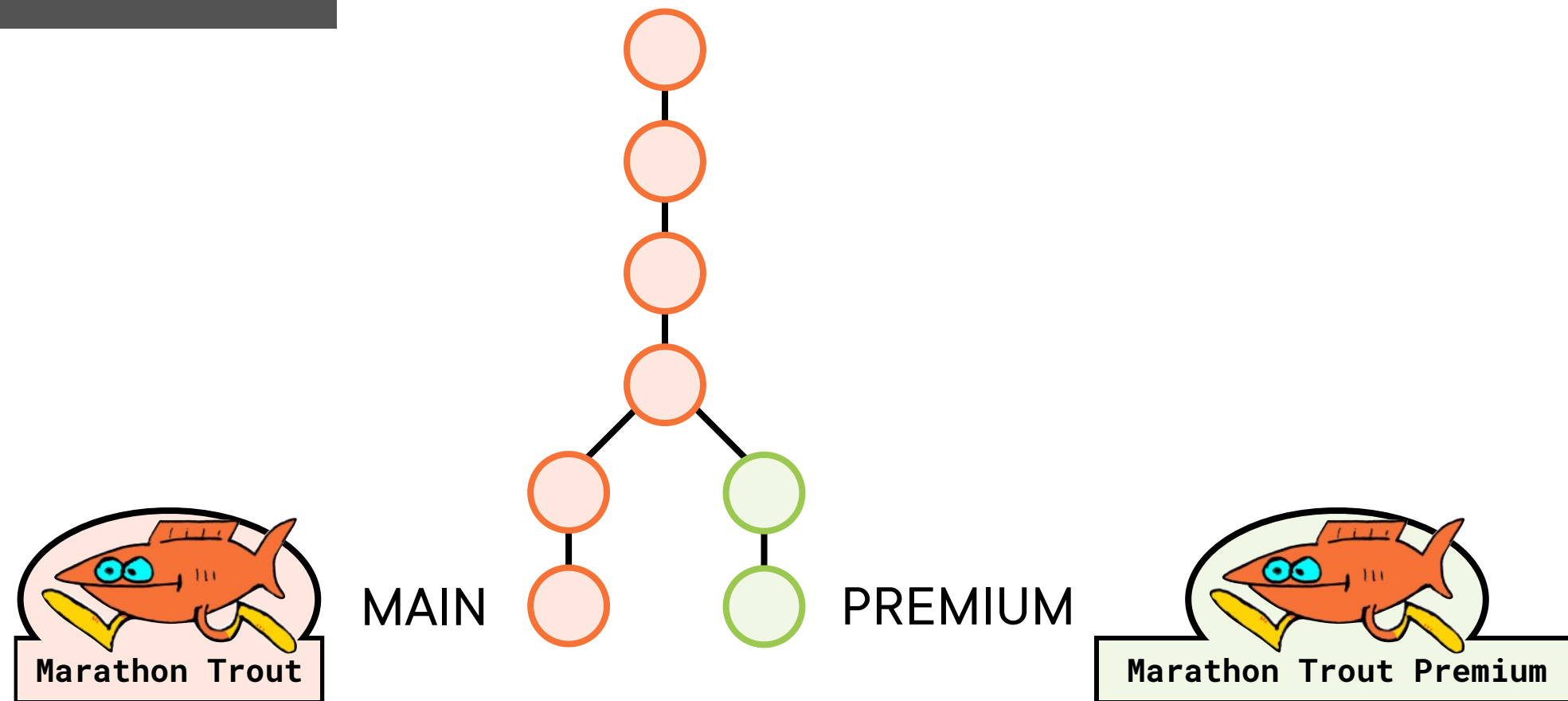
...track a project's history

Managing Multiple Versions of a Project

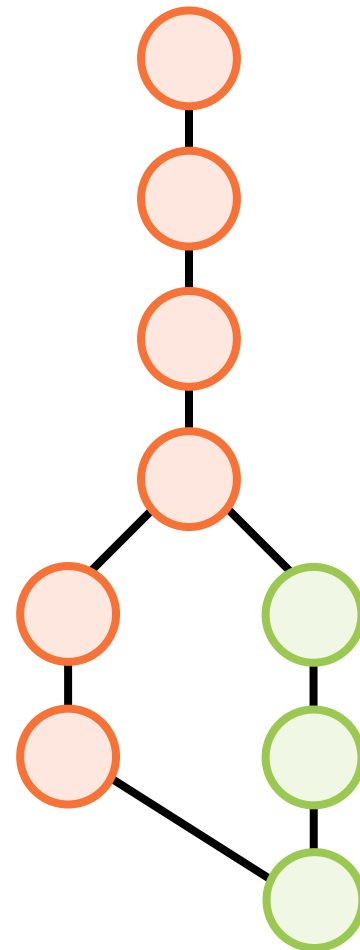# The Marathon Trout App

Branching

```
git branch premium
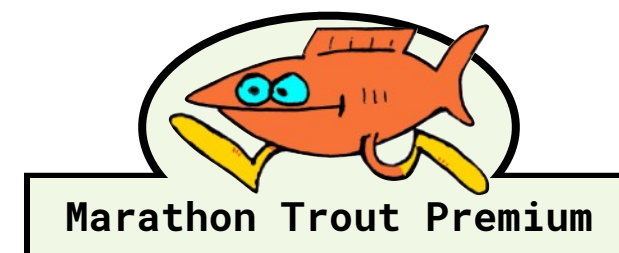```

# Merging

`git merge main`



MAIN

PREMIUM

Marathon Trout

Marathon Trout Premium
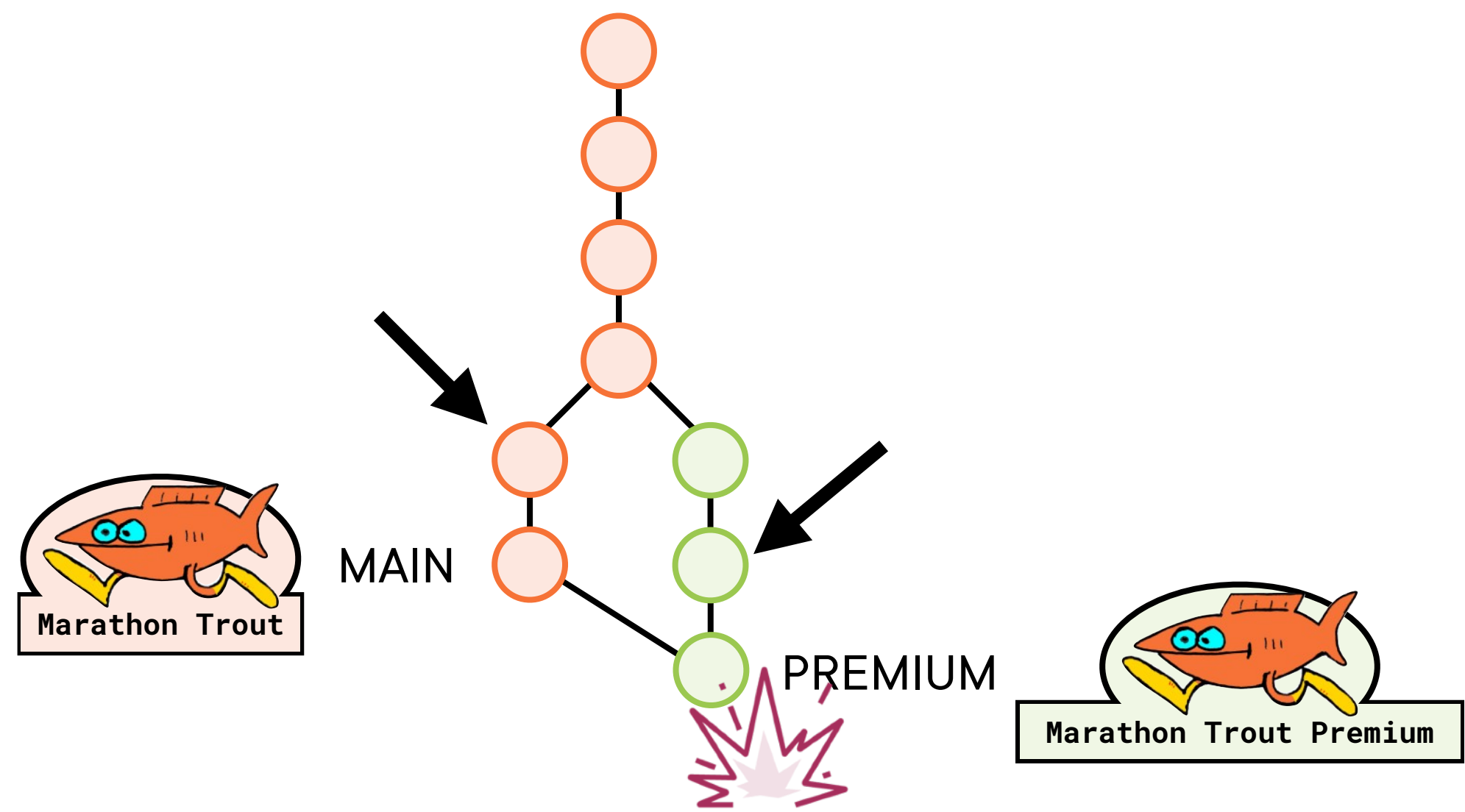
# Conflicts



MAIN

PREMIUM

Marathon Trout

Marathon Trout Premium

# Version Control Is Useful To...

...manage multiple versions of a project

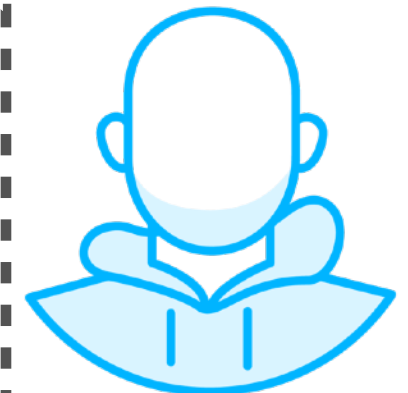# Sharing Code Amongst Developers

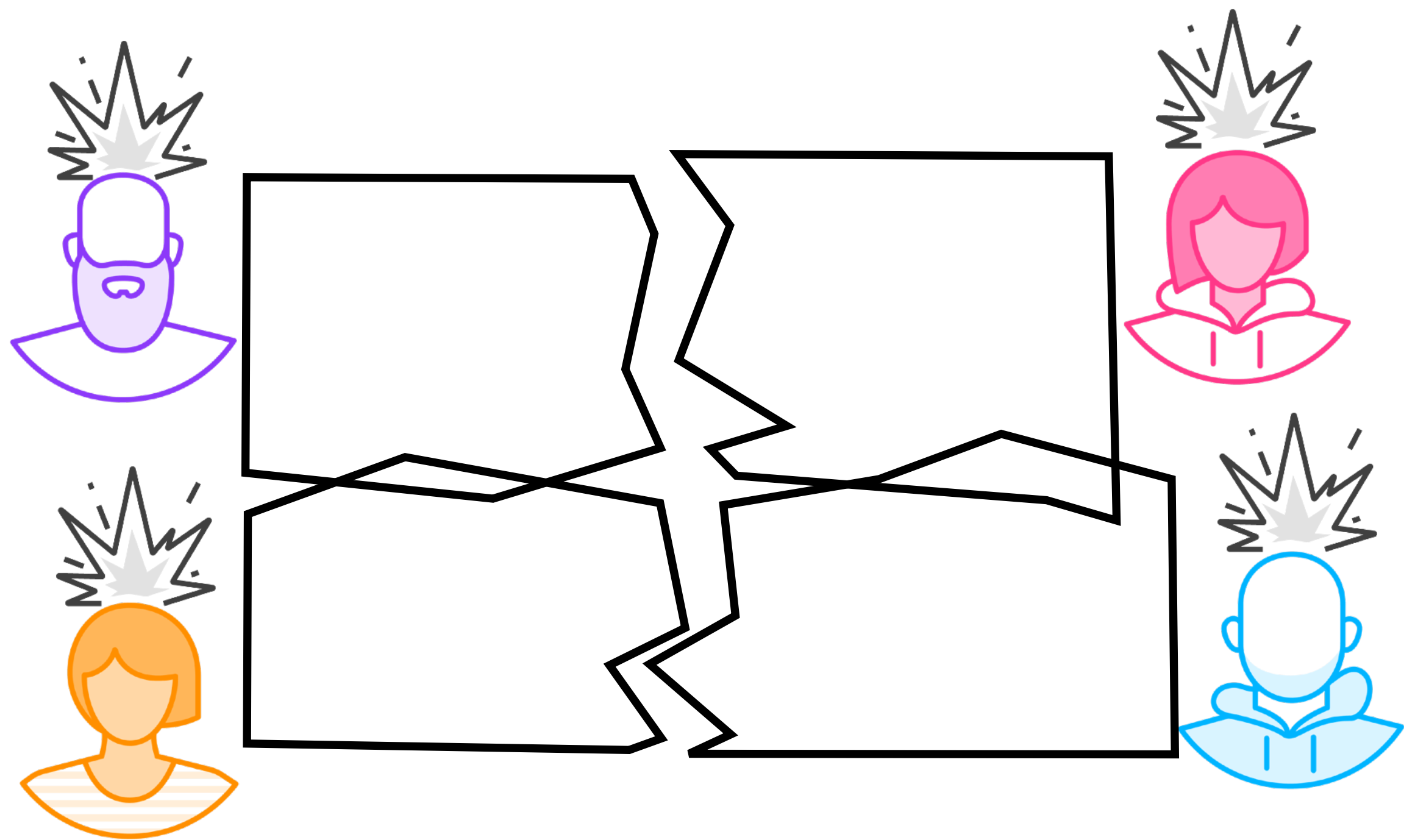# A Project without Version Control

Database module

User interface module

Administration interface module

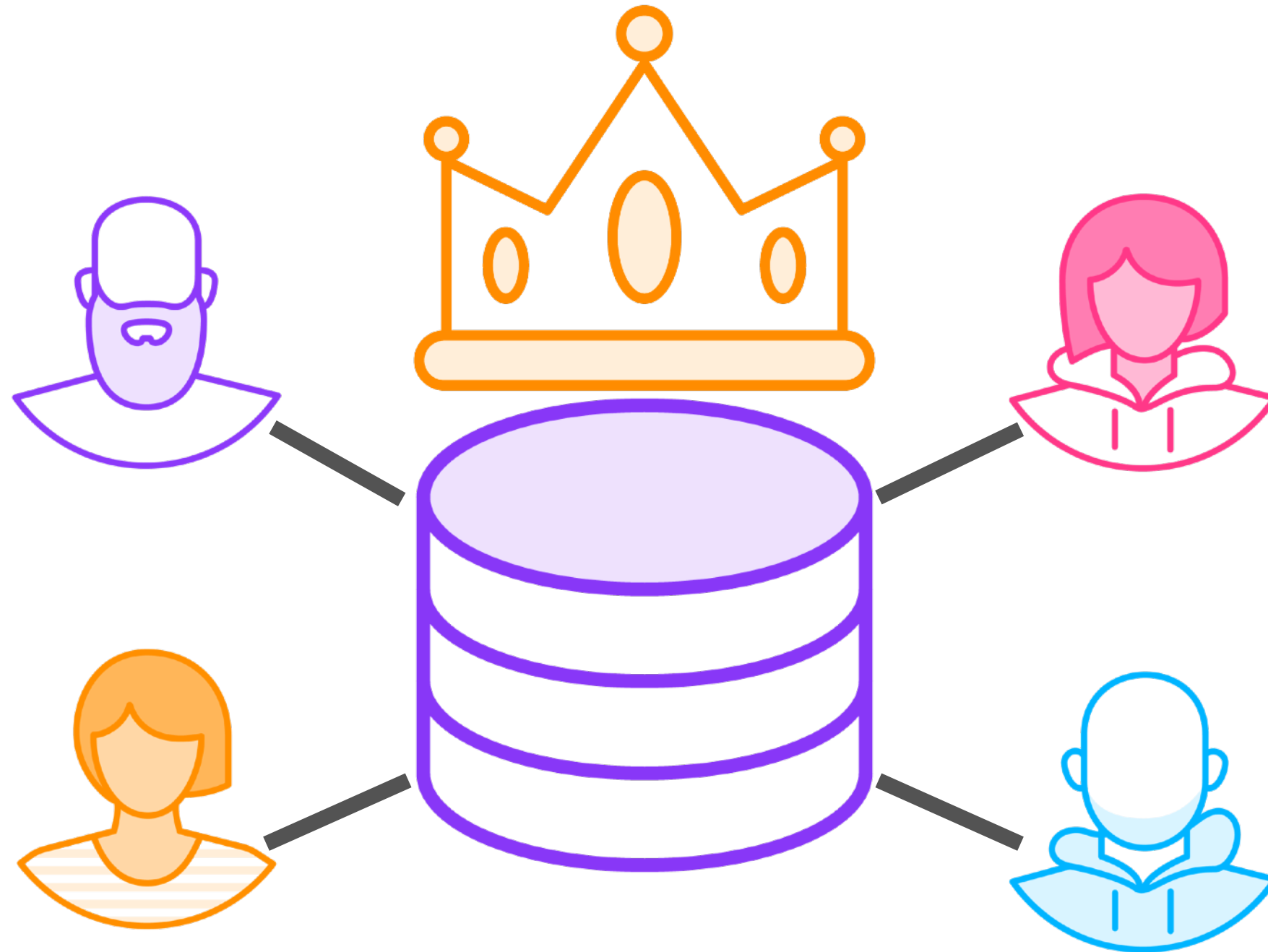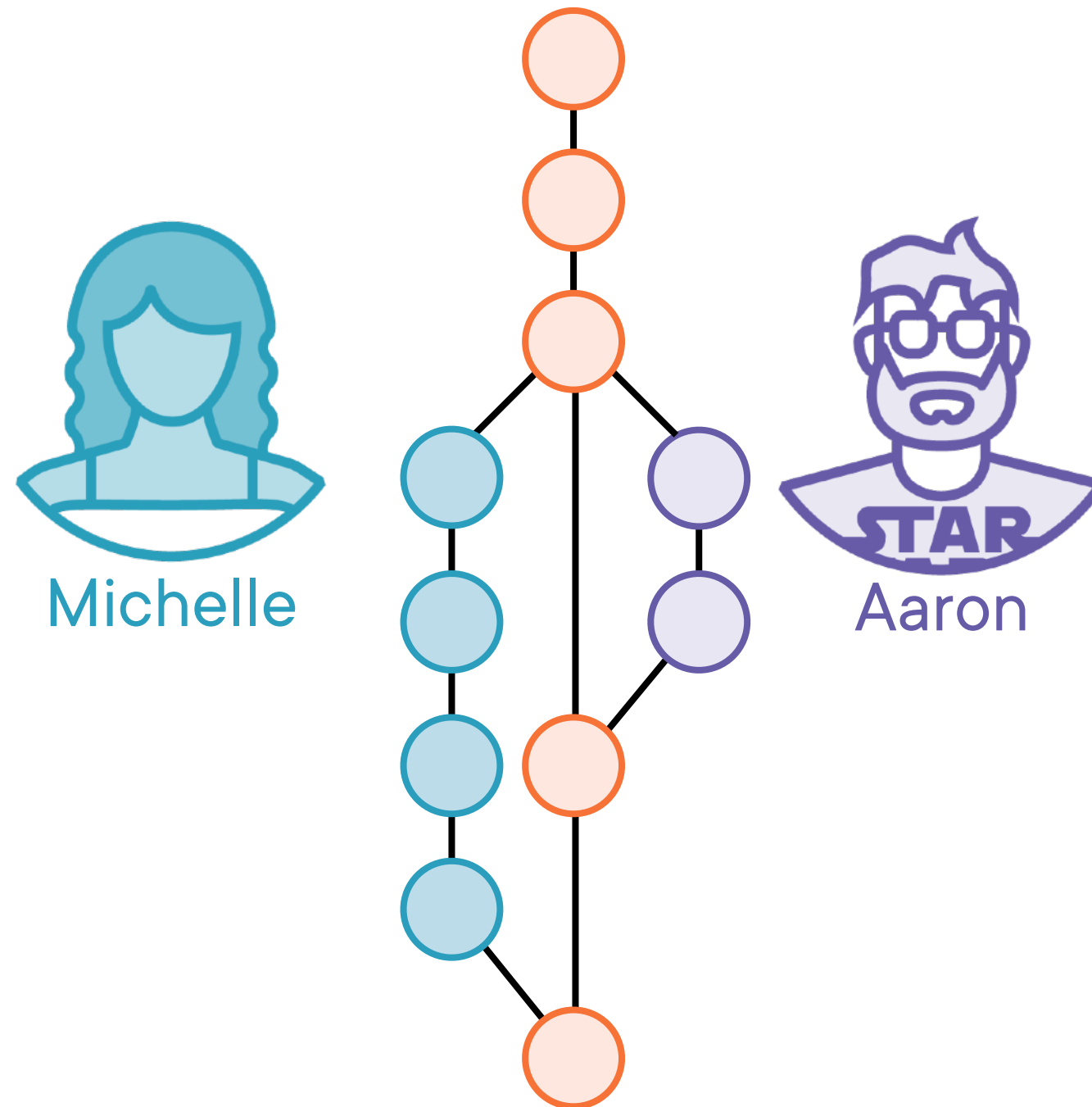...

# The Integration Phase

# A Project with Version Control

# A Project with Version Control



Michelle

Aaron

**Martin Fowler**
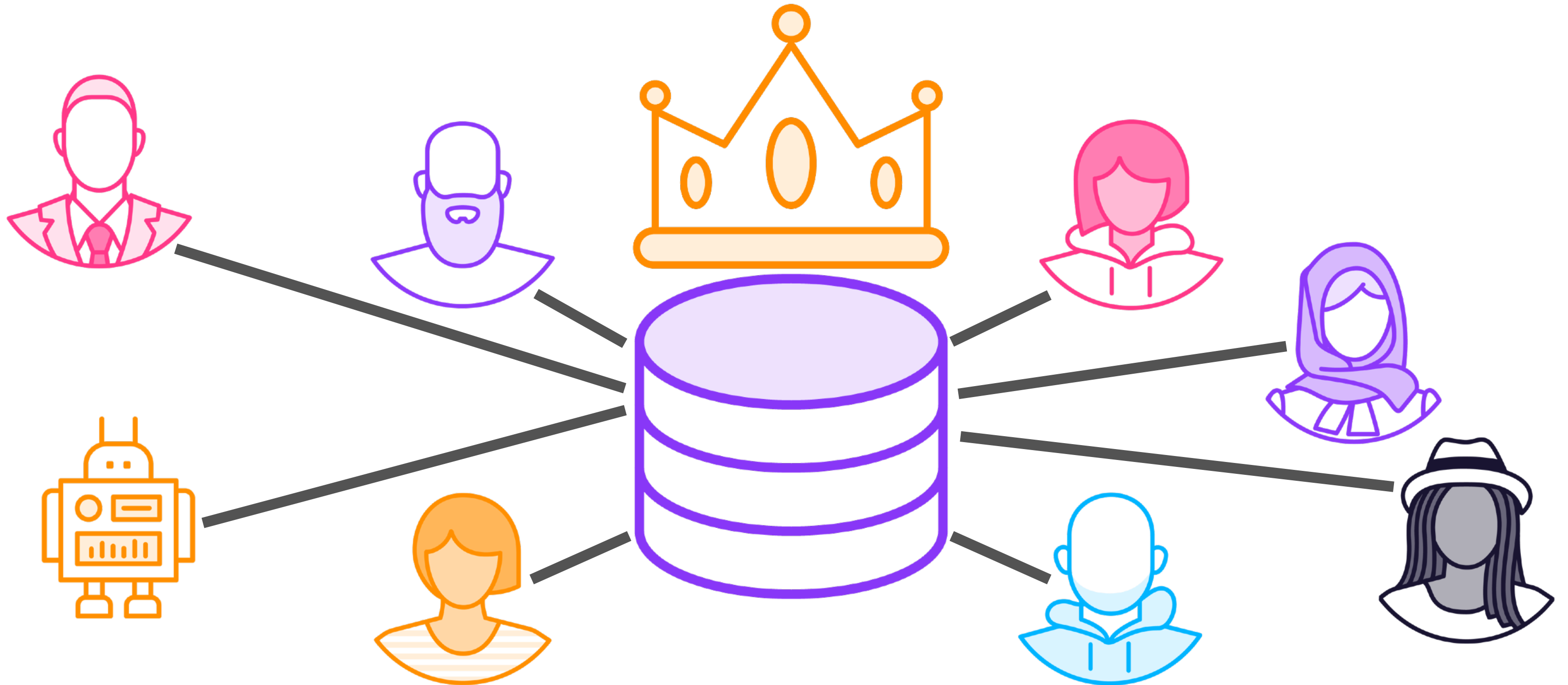
# "If it hurts, do it more often."

# Version Control Is Useful To...
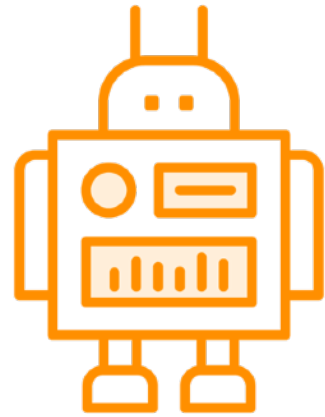
...share code amongst developers

# Coordinating Teamwork
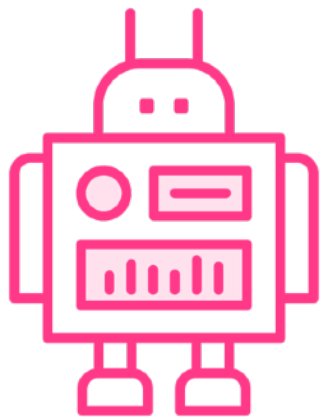
# The Source of Truth

# Bug Trackers
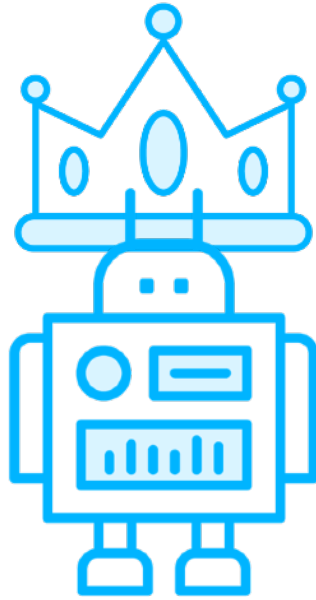
- Example: Bugzilla, Mantis
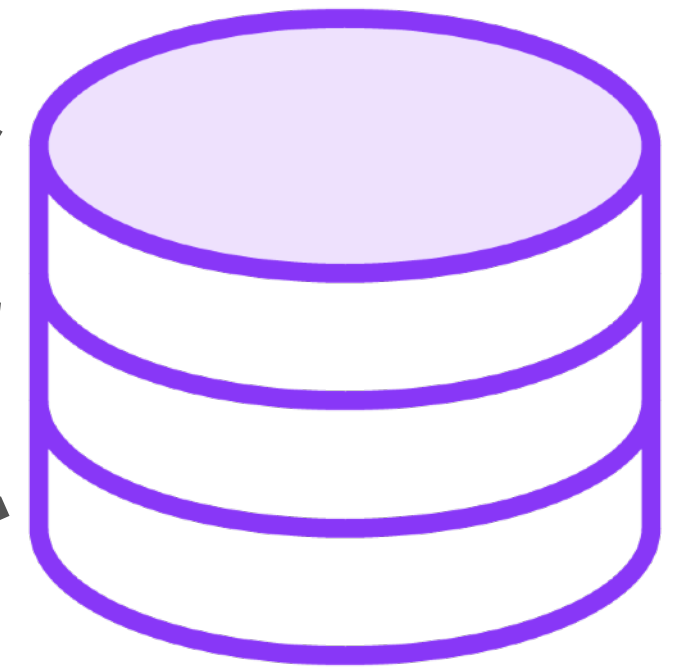- Stores bug reports

# Project Management Tools

- Example: Jira
- Tracks work
- Allocates tasks

# The Build Machine

- Example: Jenkins
- Builds and packages the system
- Deploys to testing
- Runs code metrics
- Runs automated tests
- Sometimes even deploys to production!

# Version Control Is Useful To...

...coordinate teamwork

# Summary

**Tracking a project's history**
- Plus time travel!

**Managing multiple versions of a project**
- Branching and merging

**Sharing code among developers**

**Coordinating teamwork**
- The center of the project for people and tools