Special Topics

Yaay!!

Administrivia

- HW9 will be out by tomorrow. Is due about 10 days from tomorrow
- HW8 is due on Wednesday, with 1 late day allowed that can be upto 120 hours
- **No staff support** from Thursday through Monday evening for HW8
- Lots of Extra OH this week, but get to it sooner because a lot of the staff will not be available on Wednesday, so no expectations for Piazza/Email replies
- Those who submit HW8 on Wednesday will get feedback by Monday. Others will get it by next Friday (after HW9 is due)
- Mike doesn't have OH this week. Avidant's OH are extended today. Look at the calendar for more details of who/when/where for the next 60 hours

Typical Development Lifecycle

1. Get the source code
2. Install dependencies
3. Compile the code
4. Run static analysis
5. Generate documentation
6. Run tests
7. Create artifacts for customer
8. Ship!

Which of these do we have to manually?

1. Get the source code
2. Install dependencies
3. Compile the code
4. Run static analysis
5. Generate documentation
6. Run tests
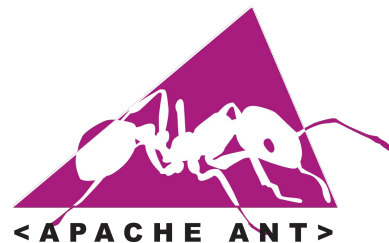7. Create artifacts for customer
8. Ship!

NILL!

NONE!

ZIPPITY NOO WOP!

NADA!

HECK NO!

ZIPPO!

Build Systems

What is a build system?

A tool that does all of these ~~things~~ tasks automatically:

1. Get the source code
2. Install dependencies
3. Compile the code
4. Run static analysis
5. Generate documentation
6. Run tests
7. Create artifacts for customer
8. Ship!

Tasks we've seen

- Build
- Test

Generally in every build system

- Reformat
- validateWorkingCopy
- validateLocalRepository
- validateRemoteRepository

Specific to this class

When you run "./gradlew build"

1. Some stuff prints to the console
2. ???
3. Everything breaks!

When you run "./gradlew build"

1. Some stuff prints to the console
2. ???
3. Everything ~~breaks~~ works!
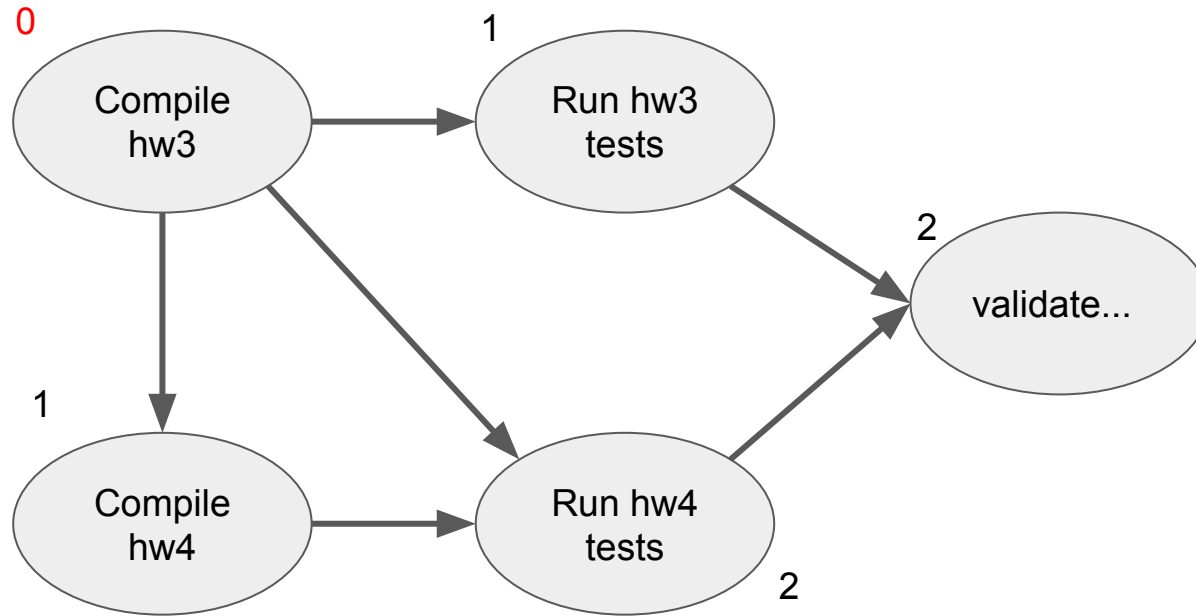
When you run "./gradlew build"

1. Installs all dependencies
2. Compiles all files
3. Ensures files are in correct location
4. Run tests
5. Runs static analysis tools
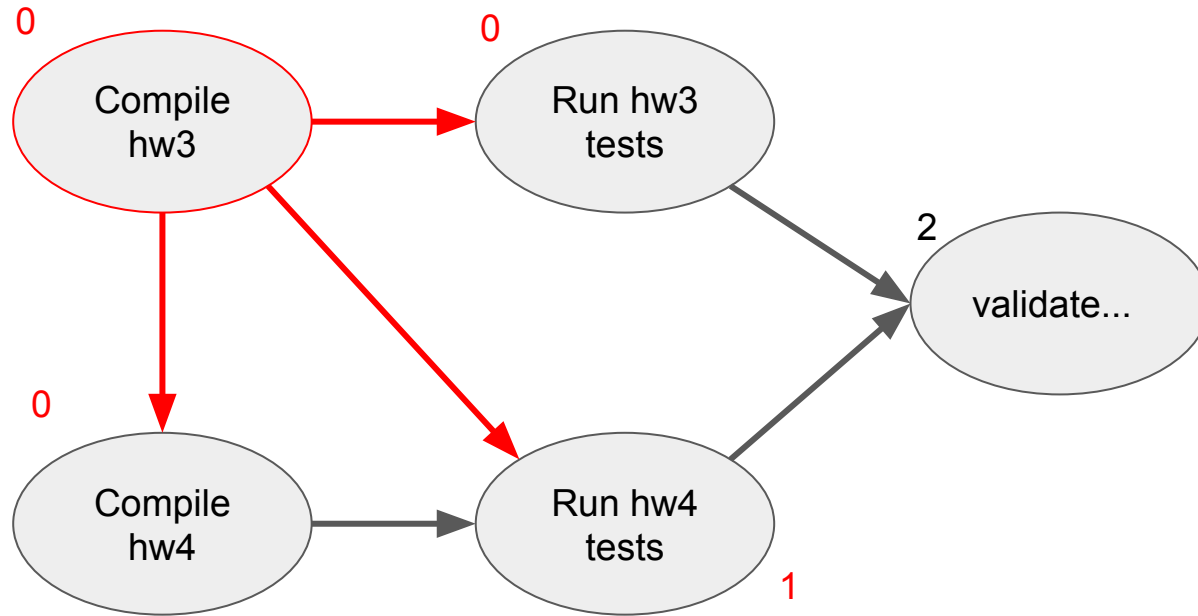6. Everything ~~breaks~~ works!

When you run "./gradlew validate..."

- Cleans the directory
- Runs everything "build" runs
- Checks whether required files in the correct location
- "validateLocalRepository" also checks all files are committed
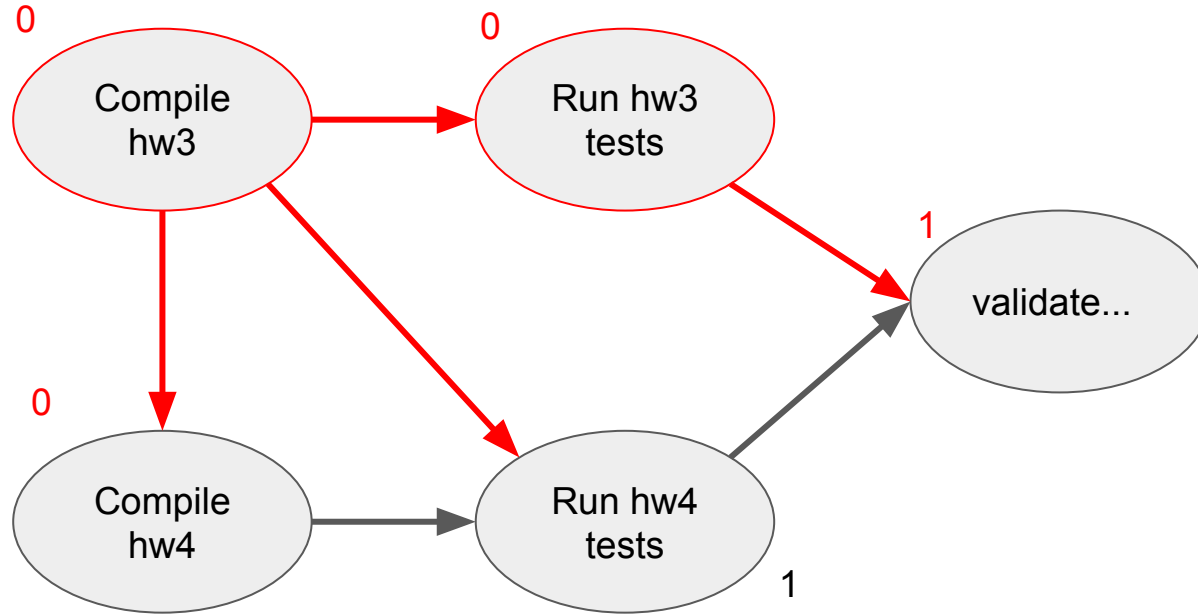- "validateRemoteRepository" also checks all commits are pushed
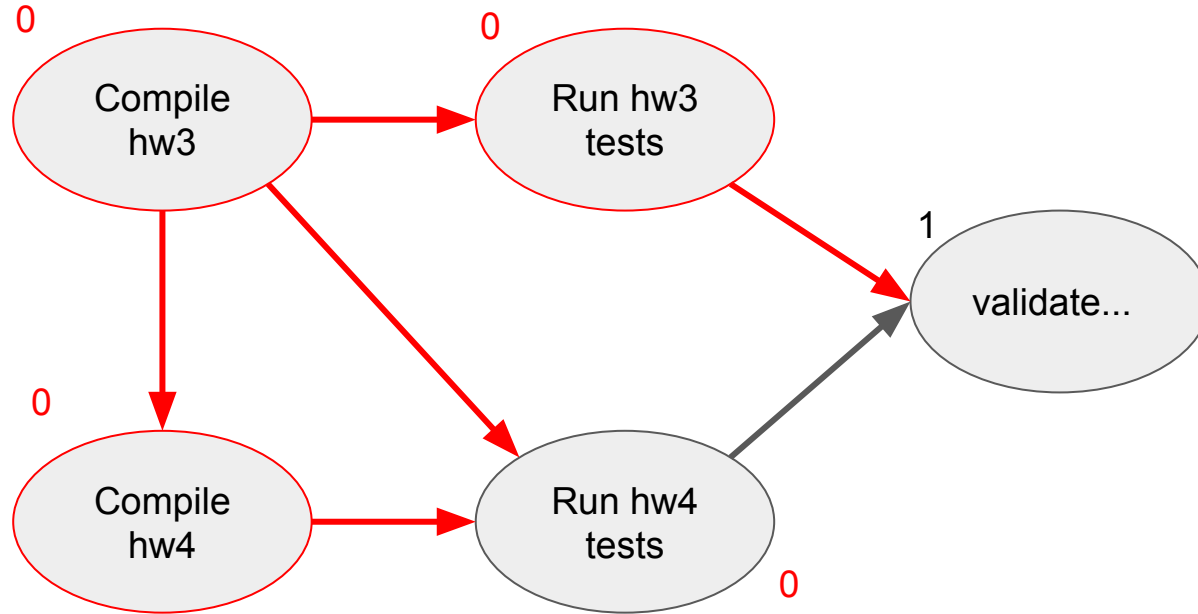
JUST CODE

Which task gets to go first?
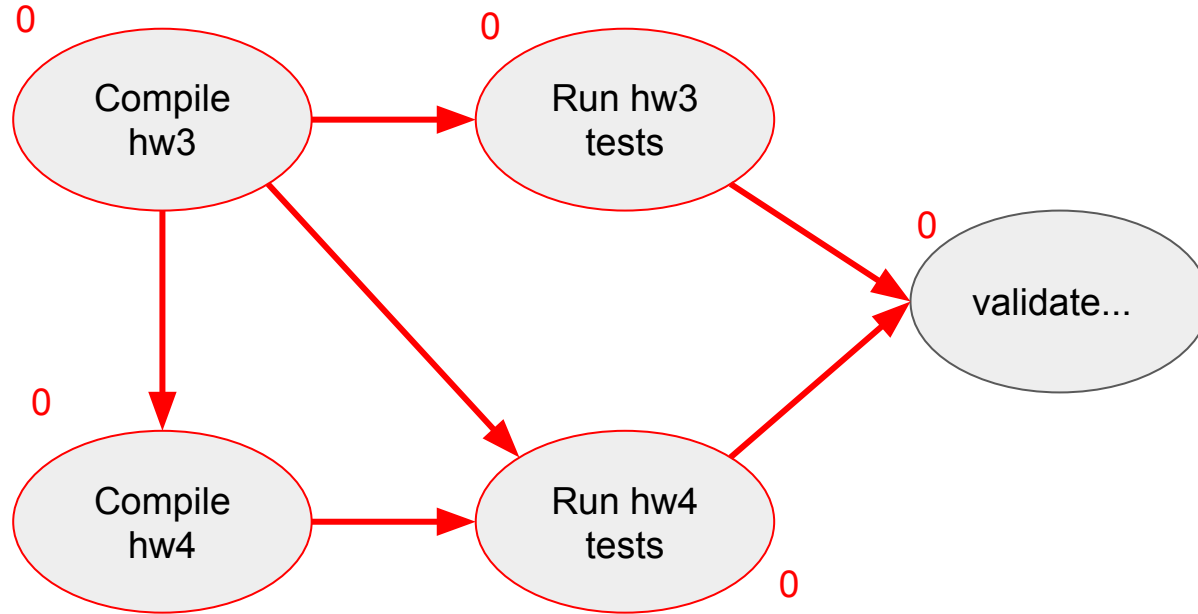
Which task gets to go first?
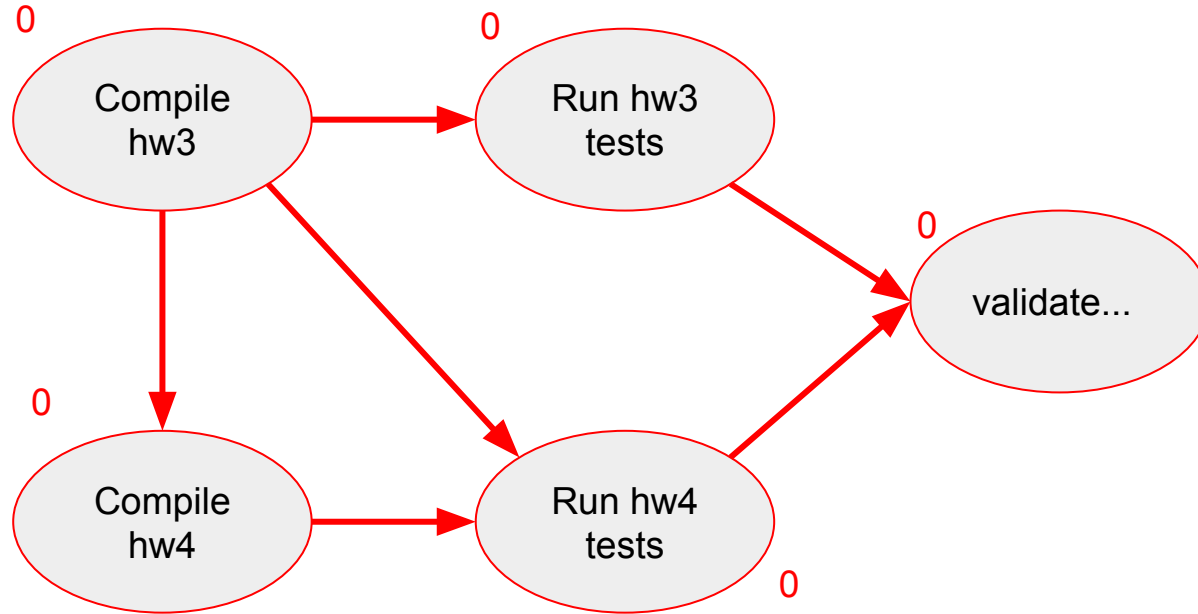
Which task gets to go first?

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Git

Basic Git Commands you all know (kinda)

- pull
- add
- commit
- push

What happens to the commits?

git log

git log --author=???

git log --oneline

git log --pretty=short/medium

git log --graph

What is the history?

Pick a random commit

git show <SHA>

git tag

Pick a random tag

git show <TAG-NAME>

But that's annoying

git blame .gitignore

git blame ci/pipeline.yml

git blame -e .gitignore

Navigating the history

git checkout <COMMIT-SHA>

git checkout <TAG-NAME>

Undoing mistakes

git revert <COMMIT-SHA>

git revert HEAD~3

Branches

git branch

git branch -a

git checkout -b <NEW BRANCH NAME>

git branch -D <BRANCH-NAME>

Stash

git stash

git stash show

git stash

git stash show

git stash list

git stash show stash@{0}

git stash pop

Javascript