THANKS TO ALL OUR SPONSORS!

CODE REVIEW: FOR ME & YOU

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stevegrunwell.com/slides/code-review

WHAT IS CODE REVIEW?

FORMAL CODE REVIEW

- An **official** part of your development workflow
- Development › Code Review › Merge
- Pair programming
- "Bug sweeps"

INFORMAL CODE REVIEW

- Not (just) workflow, but culture
- Ad-hoc check-ins
- "Hey, can you gut-check this?"

THE VALUE OF CODE REVIEW

SOFTWARE BUGS
GOTTA CATCH 'EM ALL!

CATCH BUGS

- A second set of eyes on the code
- Catches the most egregious errors
  - Easiest to automate away

CATCH LARGER ARCHITECTURAL ISSUES

- Requires more ramp-up
- The first line of defense against technical debt

REDUCE THE BUS FACTOR™

noun | bəs fak-tər

How royally screwed your team would be if the one person who understood this darn app were hit by a bus tomorrow.

DEVELOPER GROWTH

- Great way to help junior developers grow
- Great way to help **senior** developers grow

WHO SHOULD PERFORM CODE REVIEW?

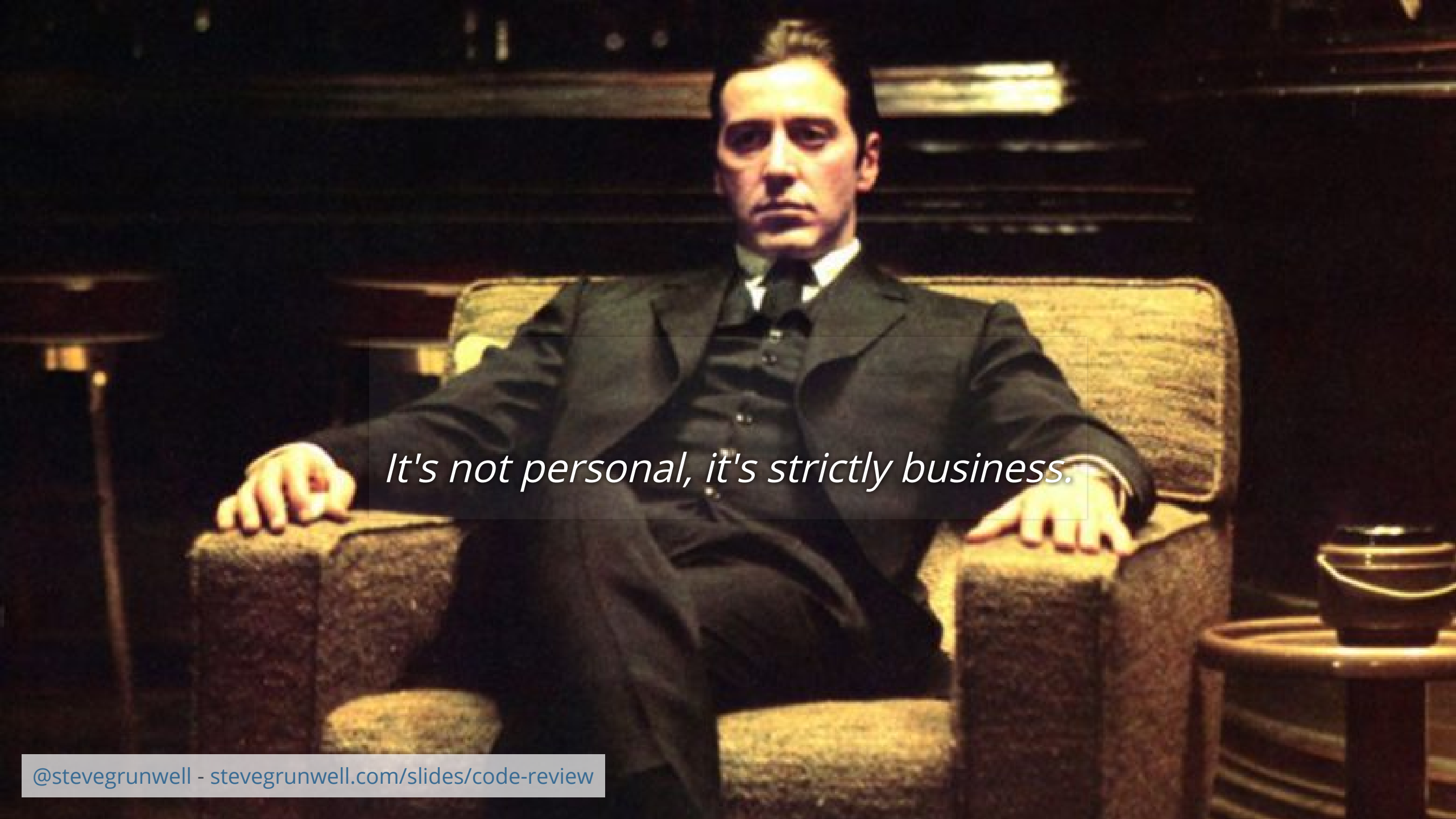
THE ARGUMENT AGAINST CODE REVIEW

- Ain't nobody got time for that!
- I reviewed it and can confirm that it is, in fact, code.
- Death by a thousand paper-cuts

The goal of code review is to — as a team — arrive at the best possible solution to a problem.

BUILDING A CULTURE OF CODE REVIEW

- Make code review an integral part of your team's workflow
- Empower every member of your team to request a review
- If it's not important enough to review, it's not important enough to ship


It's not personal, it's strictly business.

YOU DON'T OWN ME.
SNL

CODE REVIEW PRIORITIES

1. Does it work?
2. Does it work well?
3. Does it meet our standards?

FACILITATING

CODE REVIEWS

GITHUB PULL REQUESTS

1. Push new branch
2. Open a pull request (PR)
3. (Optional) CI pipeline
4. Reviewer(s) leave feedback
5. Merge!

PUSH YOUR BRANCH

```
$ git checkout -b fix/my-bugfix
Switched to a new branch 'fix/my-bugfix'

# Make your changes + commit

$ git push -u origin fix/my-bugfix
```

Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also compare across forks.

base: master ← compare: develop ✓ Able to merge. These branches can be automatically merged.

Create pull request Discuss and review the changes in this comparison with others.

5 commits | 1 file changed | 0 commit comments | 3 contributors

Commits on Nov 25, 2017

stevegrunwell	Merge branch 'master' into develop	275c95c

Commits on Apr 21, 2018

rowanbeentje	Remove initial `read -r path` in dependency_file_exists() to stop exc…	Verified	4e8489d
rowanbeentje	Output directory size the first time a directory is excluded for maxi…	Verified	16f40d6

Commits on May 03, 2018

stevegrunwell	Merge pull request #15 from rowanbeentje/remove-extra-read	Verified	a234908
stevegrunwell	Merge pull request #16 from rowanbeentje/output-match-sizes	Verified	1f873dd

Showing 1 changed file with 2 additions and 3 deletions. Unified | Split

This repository Search Pull requests Issues Marketplace Explore

stevegrunwell / asimov

Unwatch 7 Star 34 Fork 4

Code Issues 4 Pull requests 3 Insights Settings

This pull request is waiting on your review. Add your review

Switch to using find's -prune switch to exclude match subdirectories for speed, and exclude ~/Library folder from searches #17

Edit

Open rowanbeentje wants to merge 1 commit into `stevegrunwell:develop` from `rowanbeentje:improve-search-speed`

Conversation 0 Commits 1 Checks 0 Files changed 1 +1 −8

rowanbeentje commented 23 days ago Contributor

This is a ~4x speedup for my machine.

I think excluding ~/Library would be safe for pretty much everyone?

(Prompted by a discussion in Issue #6)

Switch to using find's -prune switch to exclude match subdirectories Verified c344bf2

rowanbeentje referenced this pull request 23 days ago

Reviewers

stevegrunwell

At least 1 approving review is required to merge this pull request.

Assignees

stevegrunwell

Labels

enhancement

3. (OPTIONAL) EXECUTE CI PIPELINE

- Run automated test suites
- Check coding standards
- Calculate code coverage

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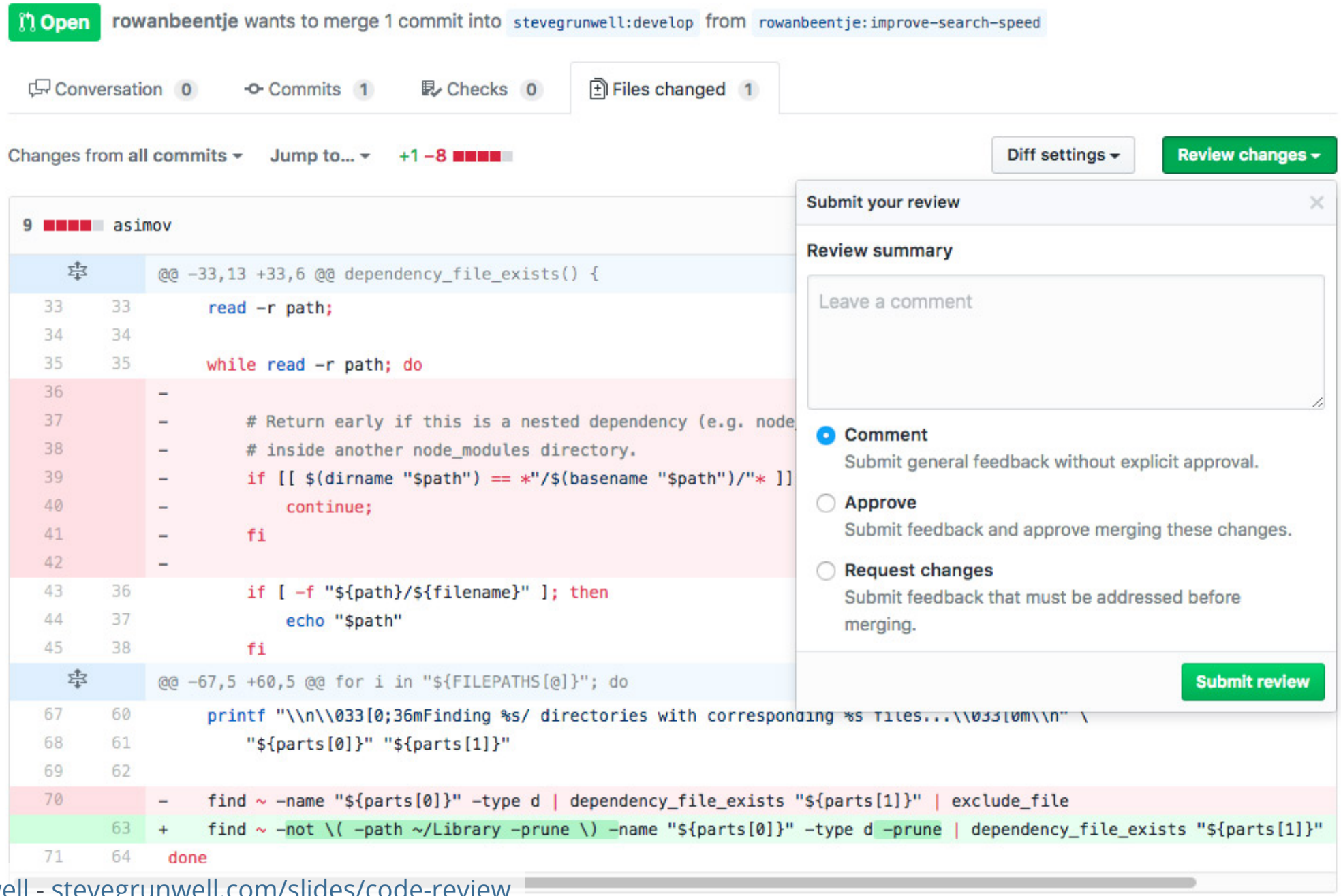
Open
rowanbeentje wants to merge 1 commit into stevegrunwell:develop from rowanbeentje:improve-search-speed
Conversation 0
Commits 1
Checks 0
Files changed 1
Changes from all commits
Jump to...
+1 −8
Diff settings
Review changes
9 asimov
@@ -33,13 +33,6 @@ dependency_file_exists() {
read -r path;
while read -r path; do
# Return early if this is a nested dependency (e.g. node
# inside another node_modules directory.
if [[$(dirname "$path") == */$(basename "$path")/*]]
continue;
fi
if [-f "${path}/${filename}"]; then
echo "$path"
fi
@@ -67,5 +60,5 @@ for i in "${FILEPATHS[@]}"; do
printf "\\n\\033[0;36mFinding %s/ directories with corresponding %s files...\\033[0m\\n" \
"${parts[0]}" "${parts[1]}"
- find ~ -name "${parts[0]}" -type d | dependency_file_exists "${parts[1]}" | exclude_file
+ find ~ -not \(-path ~/Library -prune \) -name "${parts[0]}" -type d -prune | dependency_file_exists "${parts[1]}"
done
Submit your review
Review summary
Leave a comment
Comment
Submit general feedback without explicit approval.
Approve
Submit feedback and approve merging these changes.
Request changes
Submit feedback that must be addressed before merging.
Submit review

Open **rowanbeentje** wants to merge 1 commit into `stevegrunwell:develop` from `rowanbeentje:improve-search-speed`

Conversation 0 | Commits 1 | Checks 0 | Files changed 1

Changes from **all commits** | Jump to... | +1 −8 | Diff settings | Review changes

9 asimov — Show comments | View

```
@@ -33,13 +33,6 @@ dependency_file_exists() {
33 33       read -r path;
34 34
35 35       while read -r path; do
36 -
37 -           # Return early if this is a nested dependency (e.g. node_modules
```

Write | Preview

Oh no, but without this comment the entire app will go 💥!!

Attach files by dragging & dropping, selecting them, or pasting from the clipboard.

Styling with Markdown is supported | Cancel | Add single comment | Start a review

```
38 -           # inside another node_modules directory.
39 -           if [[ $(dirname "$path") == */$(basename "$path")/* ]]; then
40 -               continue;
41 -           fi
42 -
```

OTHER POPULAR TOOLS

- Bitbucket
- GitLab
- Beanstalk
- Phabricator

PROVIDING FEEDBACK

BE OBJECTIVE, NOT SUBJECTIVE

- Put aside personal feelings and opinions, and try to provide objective feedback
- Provide resources (where appropriate)
- Ask questions!

Not so great:

If I were you, I'd move this function into the `Widget` class so it's not so hard to find.

Better:

It seems like this function is closely related to the `Widget` class and not used anywhere else — would it make sense to move it into the class, instead?

Not so great:

Output should be escaped

Better:

The output of this HTML attribute should be escaped via `esc_attr()`.

HIGHLIGHT SUCCESSES

Celebrate the small victories

Great catch, a lot of people would have missed that condition!

Where did you learn about this function? It's super useful!

You've really come a long way in your use of caching, well done!

This documentation is excellent, thank you!

ADVICE FROM THE TRENCHES

PRACTICE ATOMIC COMMITS

- Make each commit as small and focused as possible
- Commits are cheap, go wild!

ATOMIC COMMITS

```
$ git commit -m "Checking in today's work before happy hour! #YOLO"
```

ATOMIC PRS

- PRs should be as small + focused as possible
- Smaller PRs = shorter feedback loop

GITHUB TAGS: BLOCKED

This PR introduces X feature.

Fixes #17, blocked by #42.

WIP: WORK IN PROGRESS

- Convention for "this might not be fully-ready for review"
- Opportunity to have discussions and on-going reviews
- Keep notes related to a specific branch

CODING STANDARDS

- Determine coding standards at the beginning of the project
  - WordPress v PSR-2 v. PEAR v. ¯_(ツ)_/¯
- Determine *what* gets reviewed
- Above all else, **be consistent!**

.EDITORCONFIG

- Standard for file encoding, whitespace, line endings, and more
- Defaults available for most popular standards
- editorconfig.org

ESLINT

- Automatically check whitespace, formatting, naming schemes, etc.
- Also great for catching common security + performance issues
- eslint.org

PHP_CODESNIFFER

- Tokenizes and analyzes code against coding standards
- Standards are defined in `phpcs.xml` or `phpcs.xml.dist`

STATIC CODE ANALYSIS

- Examine the code without running it
- Detect areas that are overly-complex or missing tests
- Great addition, but not a replacement!

.GITIGNORE

A versioned file that excludes files from the repo

```
# Exclude these files from the repo:

node_modules/
vendor/
*.log
*.sql
```

GIT HOOKS

- Enable you to execute scripts throughout the Git lifecycle
- Not stored within the repo!
- Analyze code before committing, perform actions ahead of a `git push`

REVIEW DOCUMENTATION

- Treat inline documentation as code
- Reduces "Doc Rot"
- Out-of-date docs? No merge for you!

AUDIT THE WHITELIST

If an app isn't working right but all the tests pass, the first place you should look are the areas where test coverage has been ignored.

THANK YOU!

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