git commit --fixup

A brownbag workshop at

by Seth House

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The Golden Rule of Git Rebase

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...a PR under review counts as shared.

Problem?

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New changes since you last viewed

View changes

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+
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```
% git fetch
Fetching origin
remote: Enumerating objects: 56, done.
remote: Counting objects: 100% (56/56), done.
remote: Compressing objects: 100% (19/19), done.
remote: Total 34 (delta 25), reused 23 (delta 14), pack-reused 0
Unpacking objects: 100% (34/34), 12.73 KiB | 3.18 MiB/s, done.
From github.com:some-org/some-repo
   a0fa5d45..6a419b3f  cockatoo     -> origin/cockatoo
 * [new branch]        talks        -> origin/talks
 + 1dc7050b..3e399553  nunneries    -> origin/nunneries  (forced update)
   1f4cd98c..d6cf5f39  disoriented  -> origin/disoriented
 * [new tag]           v5.0         -> v5.0
 * [new tag]           v9.0         -> v9.0
```

Solution?

- Don't rebase while a PR is being reviewed.
- Add new commits instead.
- Rebase after approval.

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- Add new commits instead.
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- Git already supports this workflow with "fixup" commits.

Rebase use-cases

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```
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D---E---F---G master

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...or both.

Interactive rebase refresher

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```
# Rebase 39da67d..1c71051 onto 39da67d (2 commands)
#
# Commands:
# p, pick <commit> = use commit
# r, reword <commit> = use commit, but edit the commit message
# e, edit <commit> = use commit, but stop for amending
# s, squash <commit> = use commit, but meld into previous commit
# f, fixup [-C | -c] <commit> = like "squash" but keep only the previous
#                    commit's log message, unless -C is used, in which case
#                    keep only this commit's message; -c is same as -C but
#                    opens the editor
# x, exec <command> = run command (the rest of the line) using shell
# b, break = stop here (continue rebase later with 'git rebase --continue')
# d, drop <commit> = remove commit
# l, label <label> = label current HEAD with a name
# t, reset <label> = reset HEAD to a label
# m, merge [-C <commit> | -c <commit>] <label> [# <oneline>]
# .       create a merge commit using the original merge commit's
# .       message (or the oneline, if no original merge commit was
# .       specified); use -c <commit> to reword the commit message
#
# These lines can be re-ordered; they are executed from top to bottom.
#
# If you remove a line here THAT COMMIT WILL BE LOST.
#
# However, if you remove everything, the rebase will be aborted.
```

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    | xargs -I{} git --fixup={}
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- VS Code addition (open PR)

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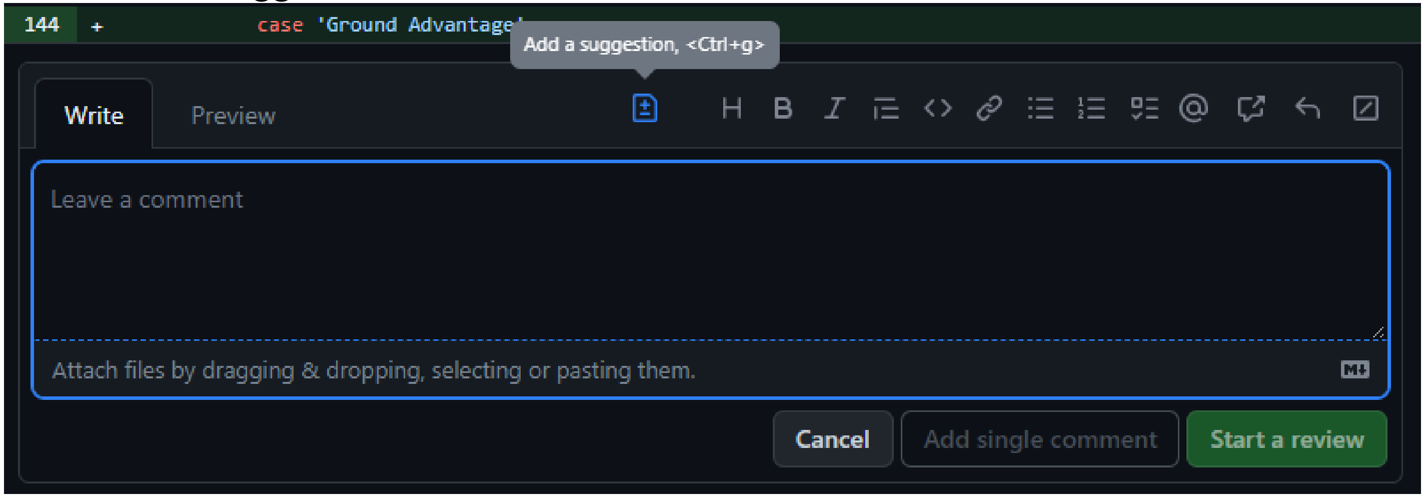
- Similar to a "suggestion" comment in GitHub PRs.



```
144 +             case 'Ground Advantage'
```

Add a suggestion, <Ctrl+g>
Write
Preview
Leave a comment
Attach files by dragging & dropping, selecting or pasting them.
Cancel
Add single comment
Start a review

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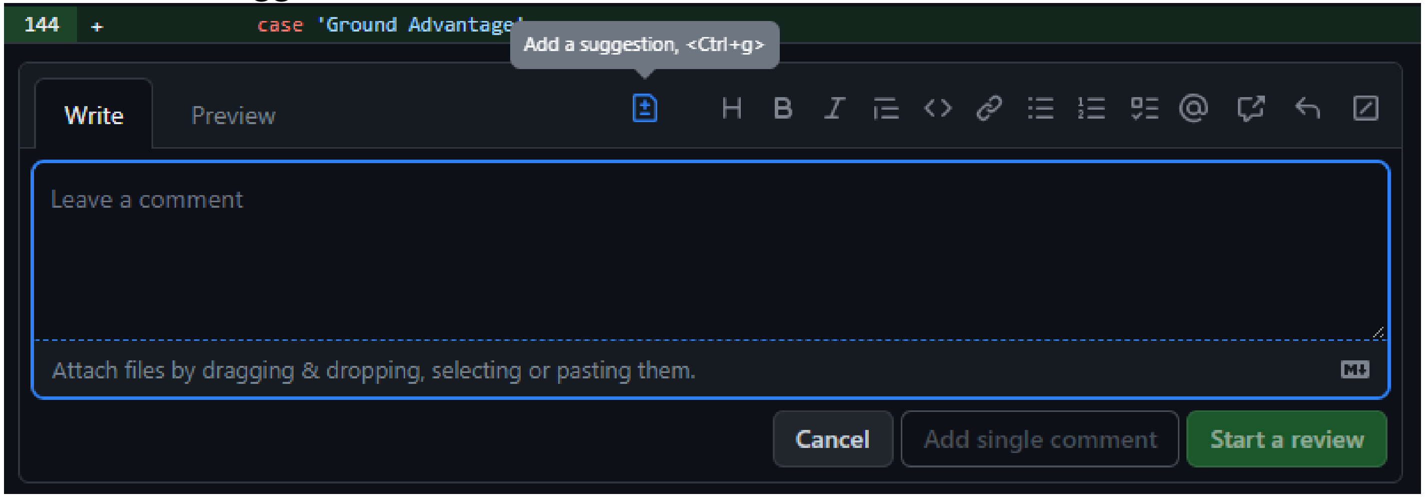

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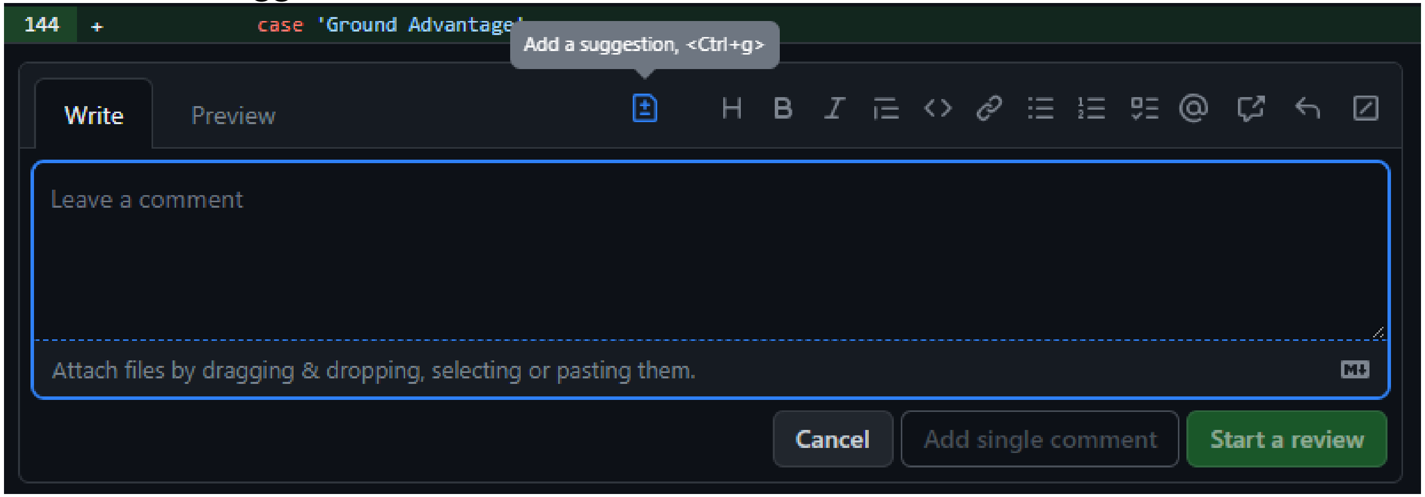

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- Push a `fixup!` commit directly another branch.
- Email a `fixup!` patch file (applied with `git am`).

```
git rebase -i --autosquash
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Automatically reorder commits:

```
pick becb6d4 Add-B
fixup 3f2cd38 fixup! Add-B
pick 6a7c1ef Add-C
fixup 8974cd7 fixup! Add-C
pick c394de8 Add-D

# Rebase 2074d52..8974cd7 onto 2074d52 (5 commands)
# [...]
```

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Aside: undoing a commit with reset

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git reset HEAD~1
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- Keeps the same merge-base.
- Allows you to recreate the commit from scratch.
- Useful! (And avoids Git machinery.)

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- Keeps the same merge-base.
- Allows you to recreate the commit from scratch.
- Useful! (And avoids Git machinery.)
- But if the commit is good:
  - Add to the commit:
    `git commit --amend`
  - Reword the commit message:
    `git commit --amend -o`
  - Move the commit elsewhere:
    `git cherry-pick <SHA>`
  - Move multiple commits to separate branches:

    ```
    git branch -c <new branch 1>
    git branch -c <new branch 2>
    git branch -c <new branch 3>
    git checkout <new branch 1>
    git rebase -i
    # ...repeat for the other branches
    ```
- (Stay after to talk details.)

Rebase flowchart

- Has the PR already been reviewed?
  - **No**
  - Are there merge conflicts with `master`?
    - **No**
      - An out-of-date branch is not a problem if there are no conflicts.
      - Rebase against merge-base or against `master` are both fine.
    - **Yes**
      - Rebase against `master` & resolve conflicts.
  - **Yes**
    - Are there merge conflicts with `master`?
    - **No**
      - Rebase fixup commits against merge-base after approval.
    - **Yes**
      - Has the PR been approved?
        - **No**
          - Discuss with your reviewer.
        - **Yes**
          1. Rebase fixup commits against merge-base.
          2. Merge `master` into your branch and resolve the conflicts.
          3. The conflict resolution will require re-approval:
             `git show -m -p`

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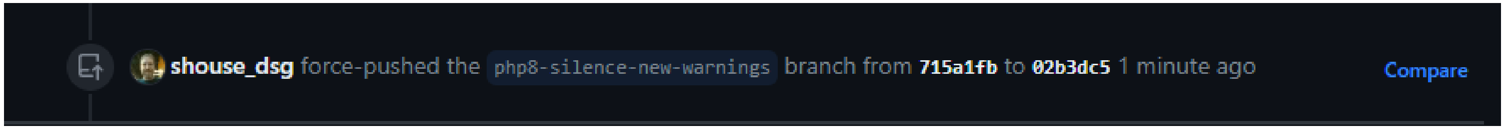

shouse_dsg force-pushed the `php8-silence-new-warnings` branch from **715a1fb** to **02b3dc5** 1 minute ago