

AGENDA

Today we will learn:

- What is interactive rebase
- `git rebase -i`
- How to change any commit message
- How to squash commits
- How to combine commits
- Best practices



How to change commit message (suppose commit message we want to change is from last 3 commits)

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ git rebase HEAD~3
```

'i' stands for interactive rebase

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ git rebase -i HEAD~3
hint: waiting for your editor to close the file... unix2dos: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src to DOS format
git-rebase-todo - Notepad
File Edit Format View Help
pick 297df6a carousel on the home page
pick 2e1008b css class for home carousel slider is added
pick dfeba17 one more css class for home carousel slider is added

# Rebase e50bada..dfeba17 onto e50bada (3 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 <commit> = like "squash", but discard this commit's log message
# 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.
#
```

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ git rebase -i HEAD~3
hint: waiting for your editor to close the file... unix2dos: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src to DOS format
git-rebase-todo - Notepad
File Edit Format View Help
pick 297df6a carousel on the home page
r 2e1088b css class for home carousel slider is added
pick dfeba17 one more css class for home carousel slider is added

# Rebase e50bada..dfeba17 onto e50bada (3 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 <commit> = like "squash", but discard this commit's log message
# 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.
#
```

save and exit

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ git rebase -i HEAD~3
hint: waiting for your editor to close the file... unix2dos: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/rebase-merge/git-rebase-todo to DOS format...
dos2unix: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/COMMIT_EDITMSG to Unix format...
hint: waiting for your editor to close the file...
ha/Desktop/Lern IT - Git
```

COMMIT_EDITMSG - Notepad

File Edit Format View Help

css class for scrolling carousel on the home page is added

* Please enter the commit message for your changes. Lines starting
with '#' will be ignored, and an empty message aborts the commit.

#

Date: Thu Oct 29 19:17:49 2020 +0200

#

interactive rebase in progress; onto e50bada

Last commands done (2 commands done):

pick 297df6a carousel on the home page

reword 2e1088b css class for home carousel slider is added

Next command to do (1 remaining command):

pick dfeba17 one more css class for home carousel slider is added

You are currently editing a commit while rebasing branch 'TA0005_home_carousel' on 'e50bada'.

#

Changes to be committed:

modified: src/styles/carousel.css

#

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ git rebase -i HEAD~3
hint: waiting for your editor to close the file... unix2dos: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/rebase-merge/git-rebase-todo to DOS format...
dos2unix: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/COMMIT_EDITMSG to Unix format...
hint: waiting for your editor to close the file... unix2dos: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/COMMIT_EDITMSG to DOS format...
dos2unix: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/COMMIT_EDITMSG to Unix format...
[detached HEAD 52b4c7b] css class for scrolling carousel on the home page is added
Date: Thu Oct 29 19:17:49 2020 +0200
1 file changed, 8 insertions(+)
successfully rebased and updated refs/heads/TA0005_home_carousel.

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ |
```

How to merge more commits in 1

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ git rebase -i HEAD~3
hint: Waiting for your editor to close the file... unix2dos: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src to DOS format.
git-rebase-todo - Notepad
File Edit Format View Help
pick 297df6a carousel on the home page
pick 52b4c7b css class for scrolling carousel on the home page is added
pick 0ad216b one more css class for home carousel slider is added

# Rebase e50bada..0ad216b onto e50bada (3 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 <commit> = like "squash", but discard this commit's log message
# 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.
#
```

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ git rebase -i HEAD~3
hint: Waiting for your editor to close the file... unix2dos: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src to DOS format.
git-rebase-todo - Notepad
File Edit Format View Help
pick 297df6a carousel on the home page
pick 52b4c7b css class for scrolling carousel on the home page is added
pick 0ad216b one more css class for home carousel slider is added

# Rebase e50bada..0ad216b onto e50bada (3 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 <commit> = like "squash", but discard this commit's log message
# 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.
#
```

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)

\$ git rebase -i HEAD~3

hint: waiting for your editor to close the file... unix2dos: converting file c:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src to unix format

```
git-rebase-todo - Notepad
File Edit Format View Help
pick 297df6a carousel on the home page
pick 52b4c7b css class for scrolling carousel on the home page is added
pick 0ad216b one more css class for home carousel slider is added

# Rebase e50bada..0ad216b onto e50bada (3 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 <commit> = like "squash", but discard this commit's log message
# 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.
#
```

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)

\$ git rebase -i HEAD~3

hint: waiting for your editor to close the file... unix2dos: converting file c:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src to unix format

```
git-rebase-todo - Notepad
File Edit Format View Help
pick 297df6a carousel on the home page
$ 52b4c7b css class for scrolling carousel on the home page is added
$ 0ad216b one more css class for home carousel slider is added

# Rebase e50bada..0ad216b onto e50bada (3 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 <commit> = like "squash", but discard this commit's log message
# 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.
#
```

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ git rebase -i HEAD~3
hint: waiting for your editor to close the file... unix2dos: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src/commit_EDITMSG to Unix format
dos2unix: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src/commit_EDITMSG to Unix format
hint: waiting for your editor to close the file...
# This is a combination of 3 commits.
# This is the 1st commit message:
carousel on the home page
# This is the commit message #2:
css class for scrolling carousel on the home page is added
# This is the commit message #3:
one more css class for home carousel slider is added
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
#
# Date:      Mon Oct 26 23:27:26 2020 +0200
#
# interactive rebase in progress; onto e50bada
# Last commands done (3 commands done):
#   squash 52bdc7b css class for scrolling carousel on the home page is added
#   squash 0ad216b one more css class for home carousel slider is added
# No commands remaining.
# You are currently rebasing branch 'TA0005_home_carousel' on 'e50bada'.
#
# Changes to be committed:
#   new file:   src/styles/carousel.css
#   modified:   src/webcontent/home.html
```

remove from above till commit message 3 and then write new commit message


```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ git rebase -i HEAD~3
hint: waiting for your editor to close the file... unix2dos: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/rebase-merge/git-rebase-todo to DOS format...
dos2unix: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/COMMIT_EDITMSG to DOS format...
hint: waiting for your editor to close the file... unix2dos: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/COMMIT_EDITMSG to DOS format...
dos2unix: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/COMMIT_EDITMSG to DOS format...
x format...
[detached HEAD b44e250] carousel on the home page is styled
Date: Mon Oct 26 23:27:26 2020 +0200
2 files changed, 18 insertions(+)
create mode 100644 src/styles/carousel.css
Successfully rebased and updated refs/heads/TA0005_home_carousel.
```

```
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ git rebase -i HEAD~3
hint: waiting for your editor to close the file... unix2dos: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/rebase-merge/git-rebase-todo to DOS format...
dos2unix: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/COMMIT_EDITMSG to DOS format...
dos2unix: converting file C:/Users/Andrii_Piatakha/Desktop/Lern IT - Git/.git/COMMIT_EDITMSG to DOS format...
x format...
[detached HEAD b44e250] carousel on the home page is styled
Date: Mon Oct 26 23:27:26 2020 +0200
2 files changed, 18 insertions(+)
create mode 100644 src/styles/carousel.css
Successfully rebased and updated refs/heads/TA0005_home_carousel.
```


How to push above changes

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ nano styles/carousel.css

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$ git push --force-with-lease
Enumerating objects: 12, done.
Counting objects: 100% (12/12), done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (7/7), 579 bytes | 579.00 KiB/s, done.
Total 7 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), completed with 3 local objects.
To github.com:AndriiPiatakha/learnit_git.git
+ 7c9ee0f...b44e250 TA0005_home_carousel -> TA0005_home_carousel (forced update)

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (TA0005_home_carousel)
$
```