

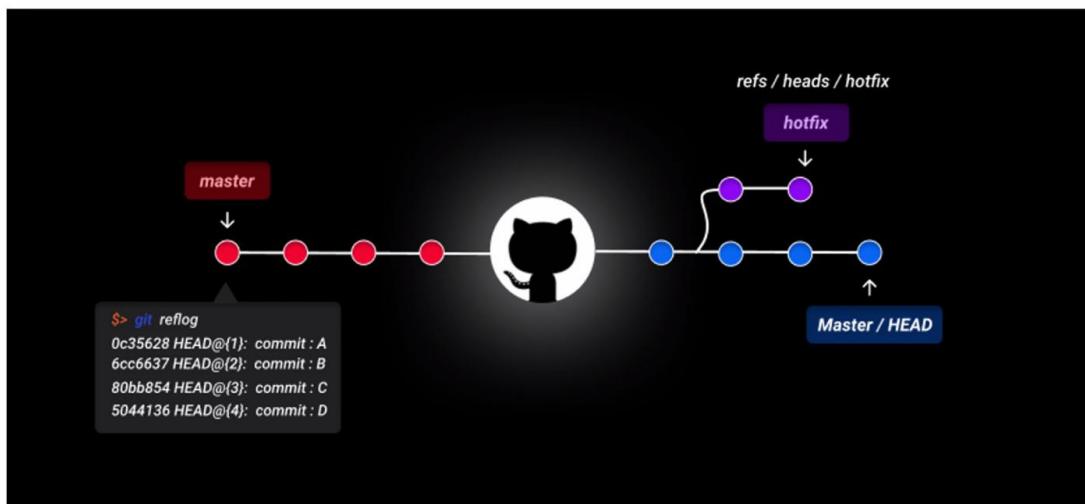
AGENDA

Today we will learn:

- What is git reflog
- When to use
- How to restore lost commits
- How to restore lost commits in the new branch
- How to restore commit on the same branch
- Filter reflog by time



When to use git reflog?



Git reflog is used when we have to restore data even it is hard reset.

```
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git log -3
commit e50bada77002b2c0a25fe1919a3c8c8ee54a4d3d (HEAD -> master, origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task)
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Mon Oct 26 23:23:32 2020 +0200

    login popup during login

commit 82db11923d82840adb0cbeec04ca4b59449ab3f0
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Sun Oct 25 22:58:03 2020 +0200

    html file was created for the sake of the demo during merge conflicts lesson

commit 7675198b865f6685fc1b20bb1b3c9324782d6cc4
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Sat Oct 24 20:52:31 2020 +0300

    Cart Management is implemented

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git reset --hard HEAD~2
HEAD is now at 7675198 cart Management is implemented

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

```
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git reflog
7675198 (HEAD -> master) HEAD@{0}: reset: moving to HEAD~2
e50bada (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task) HEAD@{1}: pull origin
aster: Fast-forward
26726f0 HEAD@{2}: reset: moving to HEAD~2
7675198 (HEAD -> master) HEAD@{3}: reset: moving to HEAD
7675198 (HEAD -> master) HEAD@{4}: checkout: moving from test to master
e50bada (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task) HEAD@{5}: checkout:
ing from master to test
7675198 (HEAD -> master) HEAD@{6}: reset: moving to HEAD~2
e50bada (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task) HEAD@{7}: reset: mov
_to origin/master
7675198 (HEAD -> master) HEAD@{8}: reset: moving to HEAD~2
e50bada (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task) HEAD@{9}: checkout:
ing from TA0007_new to master
204f4aa (TA0007_super_important_task, TA0007_new) HEAD@{10}: checkout: moving from TA0007_super_
ortant_task to TA0007_new
204f4aa (TA0007_super_important_task, TA0007_new) HEAD@{11}: reset: moving to HEAD
204f4aa (TA0007_super_important_task, TA0007_new) HEAD@{12}: reset: moving to HEAD
204f4aa (TA0007_super_important_task, TA0007_new) HEAD@{13}: reset: moving to HEAD
204f4aa (TA0007_super_important_task, TA0007_new) HEAD@{14}: reset: moving to HEAD
204f4aa (TA0007_super_important_task, TA0007_new) HEAD@{15}: commit: commit
e50bada (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task) HEAD@{16}: checkout:
ing from master to TA0007_super_important_task
e50bada (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task) HEAD@{17}: checkout:
ing from TA0006_important_task to master
e50bada (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task) HEAD@{18}: reset
```

git reflog tells each and every thing we have ever done to our files.

Git log -g works similar to that

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
$ git reflog
7675198 (HEAD -> master) HEAD@{0}: reset: moving to HEAD~2
e50bada (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task) HEAD@{1}: pull origin
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git log -g
commit 7675198b865f6685fc1b20bb1b3c9324782d6cc4 (HEAD -> master)
Reflog: HEAD@{0} (Andrii Piatakha <andrii.piatakha@example.com>)
Reflog message: reset: moving to HEAD~2
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Sat Oct 24 20:52:31 2020 +0300

    Cart Management is implemented

commit e50bada77002b2c0a25fe1919a3c8c8ee54a4d3d (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task)
Reflog: HEAD@{1} (Andrii Piatakha <andrii.piatakha@example.com>)
Reflog message: pull origin master: Fast-forward
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Mon Oct 26 23:23:32 2020 +0200

    login popup during login

commit 26726f01ded652ebd220b7568be85dbb7c0545ed
Reflog: HEAD@{2} (Andrii Piatakha <andrii.piatakha@example.com>)
Reflog message: reset: moving to HEAD~2
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Wed Oct 21 01:05:55 2020 +0300

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git log -g
Reflog message: reset: moving to HEAD~2
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Sat Oct 24 20:52:31 2020 +0300

    Cart Management is implemented

commit e50bada77002b2c0a25fe1919a3c8c8ee54a4d3d (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task)
Reflog: HEAD@{1} (Andrii Piatakha <andrii.piatakha@example.com>)
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Author: Andrii Piatakha <andrii.piatakha@example.com>
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Reflog: HEAD@{2} (Andrii Piatakha <andrii.piatakha@example.com>)
Reflog message: reset: moving to HEAD~2
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Wed Oct 21 01:05:55 2020 +0300

    spaces are added to the HelloWorld file

commit 7675198b865f6685fc1b20bb1b3c9324782d6cc4 (HEAD -> master)
Reflog: HEAD@{3} (Andrii Piatakha <andrii.piatakha@example.com>)
Reflog message: reset: moving to HEAD

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

'lost changes' - name of the new branch

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Reflog message: reset: moving to HEAD~2
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date: Sat Oct 24 20:52:31 2020 +0300

    Cart Management is implemented

commit e50bada77002b2c0a25fe1919a3c8c8ee54a4d3d (origin/master, origin/HEAD, test, TA0007_1, TAG _important_task)
Reflog: HEAD@{1} (Andrii Piatakha <andrii.piatakha@example.com>)
Reflog message: pull origin master: Fast-forward
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date: Mon Oct 26 23:23:32 2020 +0200

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Date: Wed Oct 21 01:05:55 2020 +0300

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Reflog: HEAD@{3} (Andrii Piatakha <andrii.piatakha@example.com>)
Reflog message: reset: moving to HEAD

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git branch lost_changes
```

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Cart Management is implemented

commit e50bada77002b2c0a25fe1919a3c8c8ee54a4d3d (origin/master, origin/HEAD, test, TA0007_1, TAG _important_task)
Reflog: HEAD@{1} (Andrii Piatakha <andrii.piatakha@example.com>)
Reflog message: pull origin master: Fast-forward
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date: Mon Oct 26 23:23:32 2020 +0200

    login popup during login

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Reflog: HEAD@{2} (Andrii Piatakha <andrii.piatakha@example.com>)
Reflog message: reset: moving to HEAD~2
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Date: Wed Oct 21 01:05:55 2020 +0300

    spaces are added to the HelloWorld file

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Reflog: HEAD@{3} (Andrii Piatakha <andrii.piatakha@example.com>)
Reflog message: reset: moving to HEAD

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git branch lost_changes e50bad

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

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src

Cart Management is implemented

commit e50bada77002b2c0a25fe1919a3c8c8ee54a4d3d (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task)
Reflog: HEAD@{1} (Andrii Piatakha <andrii.piatakha@example.com>)
Reflog message: pull origin master: Fast-forward
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date: Mon Oct 26 23:23:32 2020 +0200

    login popup during login

commit 26726f01ded652ebd220b7568be85dbb7c0545ed
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Reflog message: reset: moving to HEAD

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git branch lost_changes e50bad

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git log lost_changes
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
commit e50bada77002b2c0a25fe1919a3c8c8ee54a4d3d (origin/master, origin/HEAD, test, lost_changes, 0007_1, TA0006_important_task)
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date: Mon Oct 26 23:23:32 2020 +0200

    login popup during login

commit 82db11923d82840adb0cbeec04ca4b59449ab3f0
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date: Sun Oct 25 22:58:03 2020 +0200

    html file was created for the sake of the demo during merge conflicts lesson

commit 7675198b865f6685fc1b20bb1b3c9324782d6cc4 (HEAD -> master)
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date: Sat Oct 24 20:52:31 2020 +0300

    Cart Management is implemented

commit e71a5b032ab1d7399257908ace1f04483fbafc44
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date: Sat Oct 24 20:57:07 2020 +0300

    Stock Management is implemented

commit 26726f01ded652ebd220b7568be85dbb7c0545ed
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date: Wed Oct 21 01:05:55 2020 +0300
:
```

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git reset --hard HEAD~2
HEAD is now at 26726f0 Spaces are added to the HelloWorld file

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git log -3
commit 26726f01ded652ebd220b7568be85dbb7c0545ed (HEAD -> master)
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Wed Oct 21 01:05:55 2020 +0300

    spaces are added to the HelloWorld file

commit 8ab419ae9c98853b48b1df5aee120367b2ec9007
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Sun Oct 18 20:28:14 2020 +0300

    Personal discount for user can be calculated

commit 979f1caaa4a955127e17f5d52c1c4dc3961e6ac7 (new_branch)
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Wed Oct 14 22:45:46 2020 +0300

    test SSH connection

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



```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git reset --hard HEAD~2
HEAD is now at 26726f0 Spaces are added to the HelloWorld file

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git log -3
commit 26726f01ded652ebd220b7568be85dbb7c0545ed (HEAD -> master)
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Wed Oct 21 01:05:55 2020 +0300

    spaces are added to the HelloWorld file

commit 8ab419ae9c98853b48b1df5aee120367b2ec9007
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Sun Oct 18 20:28:14 2020 +0300

    Personal discount for user can be calculated

commit 979f1caaa4a955127e17f5d52c1c4dc3961e6ac7 (new_branch)
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Wed Oct 14 22:45:46 2020 +0300

    test SSH connection

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git reflog --since="1.hour"
```

```
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
commit 26726f01ded652ebd220b7568be85dbb7c0545ed (HEAD -> master)
Author: Andrii Piatakha <andrii.piatakha@example.com>
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Date:   Wed Oct 14 22:45:46 2020 +0300

    test SSH connection

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$ git reflog --since="1.hour"
26726f0 (HEAD -> master) HEAD@{0}: reset: moving to HEAD~2
7675198 HEAD@{1}: reset: moving to HEAD~2
e50bada (origin/master, origin/HEAD, test, lost_changes, TA0007_1, TA0006_important_task) HEAD@{2}
pull origin master: Fast-forward
26726f0 (HEAD -> master) HEAD@{3}: reset: moving to HEAD~2
7675198 HEAD@{4}: reset: moving to HEAD

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ 
MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
pull origin master: Fast-forward
26726f0 (HEAD -> master) HEAD@{3}: reset: moving to HEAD~2
7675198 HEAD@{4}: reset: moving to HEAD

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git reset --hard HEAD@{2}
HEAD is now at e50bada login popup during login

Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git log -3
commit e50bada77002b2c0a25fe1919a3c8c8ee54a4d3d (HEAD -> master, origin/master, origin/HEAD, test, lost_changes, TA0007_1, TA0006_important_task)
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Mon Oct 26 23:23:32 2020 +0200

    login popup during login

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Author: Andrii Piatakha <andrii.piatakha@example.com>
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Author: Andrii Piatakha <andrii.piatakha@example.com>
Date:   Sat Oct 24 20:52:31 2020 +0300

    Cart Management is implemented
```