

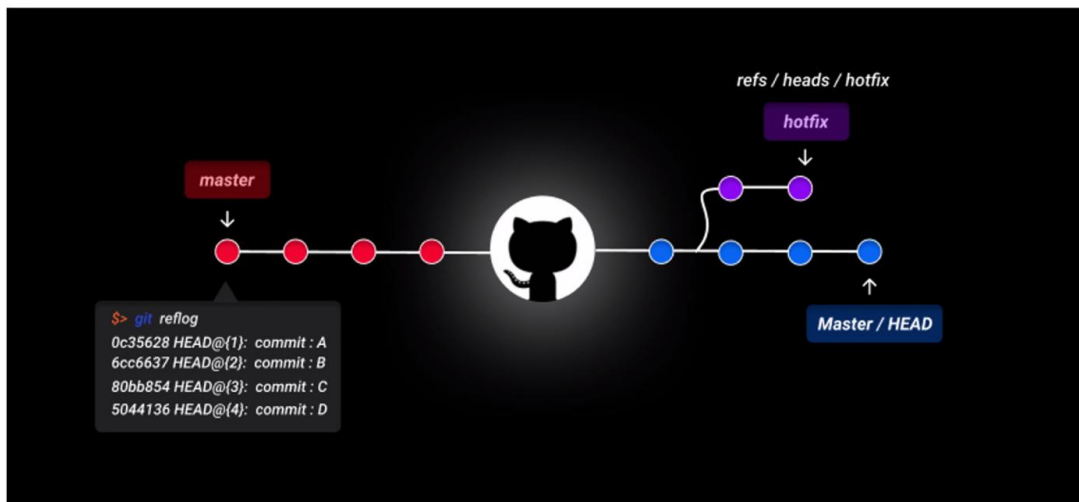
AGENDA

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.

```

MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
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 7675198b865f6685fc1b20bb1b3c9324782d6ccc4
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)
$ |

MINGW64/c/Users/Andrii_Piatakha/Desktop/Lern IT - Git/src
Andrii_Piatakha@EPUAKHAW1357 MINGW64 ~/Desktop/Lern IT - Git/src (master)
$ git relog
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/master: 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: moving 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: moving 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: moving from TA0007_new to master
204f4aa (TA0007_super_important_task, TA0007_new) HEAD@{10}: checkout: moving from TA0007_super_important_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: moving from master to TA0007_super_important_task
e50bada (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task) HEAD@{17}: checkout: moving from TA0006_important_task to master
e50bada (origin/master, origin/HEAD, test, TA0007_1, TA0006_important_task) HEAD@{18}: reset: moving to HEAD

```

git relog 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 rebase
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/master

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

    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, TA0008_1, TA0009_1, TA0010_1, TA0011_1, TA0012_1, TA0013_1, TA0014_1, TA0015_1, TA0016_1, TA0017_1, TA0018_1, TA0019_1, TA0020_1, TA0021_1, TA0022_1, TA0023_1, TA0024_1, TA0025_1, TA0026_1, TA0027_1, TA0028_1, TA0029_1, TA0030_1, TA0031_1, TA0032_1, TA0033_1, TA0034_1, TA0035_1, TA0036_1, TA0037_1, TA0038_1, TA0039_1, TA0040_1, TA0041_1, TA0042_1, TA0043_1, TA0044_1, TA0045_1, TA0046_1, TA0047_1, TA0048_1, TA0049_1, TA0050_1, TA0051_1, TA0052_1, TA0053_1, TA0054_1, TA0055_1, TA0056_1, TA0057_1, TA0058_1, TA0059_1, TA0060_1, TA0061_1, TA0062_1, TA0063_1, TA0064_1, TA0065_1, TA0066_1, TA0067_1, TA0068_1, TA0069_1, TA0070_1, TA0071_1, TA0072_1, TA0073_1, TA0074_1, TA0075_1, TA0076_1, TA0077_1, TA0078_1, TA0079_1, TA0080_1, TA0081_1, TA0082_1, TA0083_1, TA0084_1, TA0085_1, TA0086_1, TA0087_1, TA0088_1, TA0089_1, TA0090_1, TA0091_1, TA0092_1, TA0093_1, TA0094_1, TA0095_1, TA0096_1, TA0097_1, TA0098_1, TA0099_1, TA0100_1, TA0101_1, TA0102_1, TA0103_1, TA0104_1, TA0105_1, TA0106_1, TA0107_1, TA0108_1, TA0109_1, TA0110_1, TA0111_1, TA0112_1, TA0113_1, TA0114_1, TA0115_1, TA0116_1, TA0117_1, TA0118_1, TA0119_1, TA0120_1, TA0121_1, TA0122_1, TA0123_1, TA0124_1, TA0125_1, TA0126_1, TA0127_1, TA0128_1, TA0129_1, TA0130_1, TA0131_1, TA0132_1, TA0133_1, TA0134_1, TA0135_1, TA0136_1, TA0137_1, TA0138_1, TA0139_1, TA0140_1, TA0141_1, TA0142_1, TA0143_1, TA0144_1, TA0145_1, TA0146_1, TA0147_1, TA0148_1, TA0149_1, TA0150_1, TA0151_1, TA0152_1, TA0153_1, TA0154_1, TA0155_1, TA0156_1, TA0157_1, TA0158_1, TA0159_1, TA0160_1, TA0161_1, TA0162_1, TA0163_1, TA0164_1, TA0165_1, TA0166_1, TA0167_1, TA0168_1, TA0169_1, TA0170_1, TA0171_1, TA0172_1, TA0173_1, TA0174_1, TA0175_1, TA0176_1, TA0177_1, TA0178_1, TA0179_1, TA0180_1, TA0181_1, TA0182_1, TA0183_1, TA0184_1, TA0185_1, TA0186_1, TA0187_1, TA0188_1, TA0189_1, TA0190_1, TA0191_1, TA0192_1, TA0193_1, TA0194_1, TA0195_1, TA0196_1, TA0197_1, TA0198_1, TA0199_1, TA0200_1, TA0201_1, TA0202_1, TA0203_1, TA0204_1, TA0205_1, TA0206_1, TA0207_1, TA0208_1, TA0209_1, TA0210_1, TA0211_1, TA0212_1, TA0213_1, TA0214_1, TA0215_1, TA0216_1, TA0217_1, TA0218_1, TA0219_1, TA0220_1, TA0221_1, TA0222_1, TA0223_1, TA0224_1, TA0225_1, TA0226_1, TA0227_1, TA0228_1, TA0229_1, TA0230_1, TA0231_1, TA0232_1, TA0233_1, TA0234_1, TA0235_1, TA0236_1, TA0237_1, TA0238_1, TA0239_1, TA0240_1, TA0241_1, TA0242_1, TA0243_1, TA0244_1, TA0245_1, TA0246_1, TA0247_1, TA0248_1, TA0249_1, TA0250_1, TA0251_1, TA0252_1, TA0253_1, TA0254_1, TA0255_1, TA0256_1, TA0257_1, TA0258_1, TA0259_1, TA0260_1, TA0261_1, TA0262_1, TA0263_1, TA0264_1, TA0265_1, TA0266_1, TA0267_1, TA0268_1, TA0269_1, TA0270_1, TA0271_1, TA0272_1, TA0273_1, TA0274_1, TA0275_1, TA0276_1, TA0277_1, TA0278_1, TA0279_1, TA0280_1, TA0281_1, TA0282_1, TA0283_1, TA0284_1, TA0285_1, TA0286_1, TA0287_1, TA0288_1, TA0289_1, TA0290_1, TA0291_1, TA0292_1, TA0293_1, TA0294_1, TA0295_1, TA0296_1, TA0297_1, TA0298_1, TA0299_1, TA0300_1, TA0301_1, TA0302_1, TA0303_1, TA0304_1, TA0305_1, TA0306_1, TA0307_1, TA0308_1, TA0309_1, TA0310_1, TA0311_1, TA0312_1, TA0313_1, TA0314_1, TA0315_1, TA0316_1, TA0317_1, TA0318_1, TA0319_1, TA0320_1, TA0321_1, TA0322_1, TA0323_1, TA0324_1, TA0325_1, TA0326_1, TA0327_1, TA0328_1, TA0329_1, TA0330_1, TA0331_1, TA0332_1, TA0333_1, TA0334_1, TA0335_1, TA0336_1, TA0337_1, TA0338_1, TA0339_1, TA0340_1, TA0341_1, TA0342_1, TA0343_1, TA0344_1, TA0345_1, TA0346_1, TA0347_1, TA0348_1, TA0349_1, TA0350_1, TA0351_1, TA0352_1, TA0353_1, TA0354_1, TA0355_1, TA0356_1, TA0357_1, TA0358_1, TA0359_1, TA0360_1, TA0361_1, TA0362_1, TA0363_1, TA0364_1, TA0365_1, TA0366_1, TA0367_1, TA0368_1, TA0369_1, TA0370_1, TA0371_1, TA0372_1, TA0373_1, TA0374_1, TA0375_1, TA0376_1, TA0377_1, TA0378_1, TA0379_1, TA0380_1, TA0381_1, TA0382_1, TA0383_1, TA0384_1, TA0385_1, TA0386_1, TA0387_1, TA0388_1, TA0389_1, TA0390_1, TA0391_1, TA0392_1, TA0393_1, TA0394_1, TA0395_1, TA0396_1, TA0397_1, TA0398_1, TA0399_1, TA0400_1, TA0401_1, TA0402_1, TA0403_1, TA0404_1, TA0405_1, TA0406_1, TA0407_1, TA0408_1, TA0409_1, TA0410_1, TA0411_1, TA0412_1, TA0413_1, TA0414_1, TA0415_1, TA0416_1, TA0417_1, TA0418_1, TA0419_1, TA0420_1, TA0421_1, TA0422_1, TA0423_1, TA0424_1, TA0425_1, TA0426_1, TA0427_1, TA0428_1, TA0429_1, TA0430_1, TA0431_1, TA0432_1, TA0433_1, TA0434_1, TA0435_1, TA0436_1, TA0437_1, TA0438_1, TA0439_1, TA0440_1, TA0441_1, TA0442_1, TA0443_1, TA0444_1, TA0445_1, TA0446_1, TA0447_1, TA0448_1, TA0449_1, TA0450_1, TA0451_1, TA0452_1, TA0453_1, TA0454_1, TA0455_1, TA0456_1, TA0457_1, TA0458_1, TA0459_1, TA0460_1, TA0461_1, TA0462_1, TA0463_1, TA0464_1, TA0465_1, TA0466_1, TA0467_1, TA0468_1, TA0469_1, TA0470_1, TA0471_1, TA0472_1, TA0473_1, TA0474_1, TA0475_1, TA0476_1, TA0477_1, TA0478_1, TA0479_1, TA0480_1, TA0481_1, TA0482_1, TA0483_1, TA0484_1, TA0485_1, TA0486_1, TA0487_1, TA0488_1, TA0489_1, TA0490_1, TA0491_1, TA0492_1, TA0493_1, TA0494_1, TA0495_1, TA0496_1, TA0497_1, TA0498_1, TA0499_1, TA0500_1, TA0501
```

```

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
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 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
:

```

```
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)
$
```

```
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>
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 rebase --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

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 7675198b865f6685fc1b20bb1b3c9324782d6ccc4
Author: Andrii Piatakha <andrii.piatakha@example.com>
Date: Sat Oct 24 20:52:31 2020 +0300

    Cart Management is implemented

```