

МИНОБРНАУКИ РОССИИ
федеральное государственное бюджетное образовательное учреждение
высшего образования
«Московский государственный технологический университет «СТАНКИН»
(ФГБОУ ВО «МГТУ «СТАНКИН»)

Институт цифровых
интеллектуальных систем

Кафедра
компьютерных систем управления

Дисциплина «Основы системного программного обеспечения»

Отчет по лабораторной работе № 1

Выполнил
студент гр. АДБ-20-06:

(дата)

(подпись)

Колесников А.Д.

Проверил
к.т.н., доцент

(дата)

(подпись)

Ковалев И.А.

Москва 2023 г.

Цель: получение базовых навыков работы с системами контроля версий на примере Git Hub.

Задачи работы: создание учётной записи на github.com, создание облачного и локального репозитория, работа в git через командную строку.

Описание проделанной работы

Создаём папку в которой будем работать при помощи команды *cd* в консоли перемещаемся в нее и инициализируем git. Далее создаём файл с расширением .txt и вводим команду *status*, далее при помощи команды *add* добавляем файл.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git init
Initialized empty Git repository in C:/Users/alkol/OneDrive/Документы/Kolesnikov/.git/

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    test.txt

nothing added to commit but untracked files present (use "git add" to track)

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git add test.txt

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   test.txt

C:\Users\alkol\OneDrive\Документы\Kolesnikov>
```

Коммитим его при помощи команды *commit*, далее связываем наш локальный и облачный репозитории командой *remote*.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git commit -m "first commit"
[master (root-commit) a64eecf] first commit
1 file changed, 1 insertion(+)
create mode 100644 test.txt

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch master
nothing to commit, working tree clean

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch master
nothing to commit, working tree clean

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git remote add origin https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0.git

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git remote -v
origin https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0.git (fetch)
origin https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0.git (push)

C:\Users\alkol\OneDrive\Документы\Kolesnikov>
```

Командой *remote -v* смотрим к какому репозиторию мы подключены, командой *pull* запрашиваем изменения на сервере.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git pull origin master
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 746 bytes | 74.00 KiB/s, done.
From https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0
 * branch          master      -> FETCH_HEAD
 * [new branch]    master      -> origin/master
fatal: refusing to merge unrelated histories

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git pull origin master --allow-unrelated-histor
ies
From https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0
 * branch          master      -> FETCH_HEAD
Merge made by the 'ort' strategy.
 README.md | 2 ++
1 file changed, 2 insertions(+)
create mode 100644 README.md
```

Командой *pull* отправляем коммит на сервер.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git pull origin master
From https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0
 * branch          master      -> FETCH_HEAD
Already up to date.

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git push origin master
info: please complete authentication in your browser...
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (5/5), 572 bytes | 572.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0.git
 8b437b0..9a65994  master -> master
```

Просматриваем изменения при помощи команды *log*.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git log
commit 9a659943c797c3dbf929e576b81b986c13ce1a87 (HEAD -> master, origin/master)
Merge: a64eecf 8b437b0
Author: Alexandr <al.koleso20146@gmail.com>
Date: Thu Apr 27 09:27:35 2023 +0300

    Merge branch 'master' of https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0

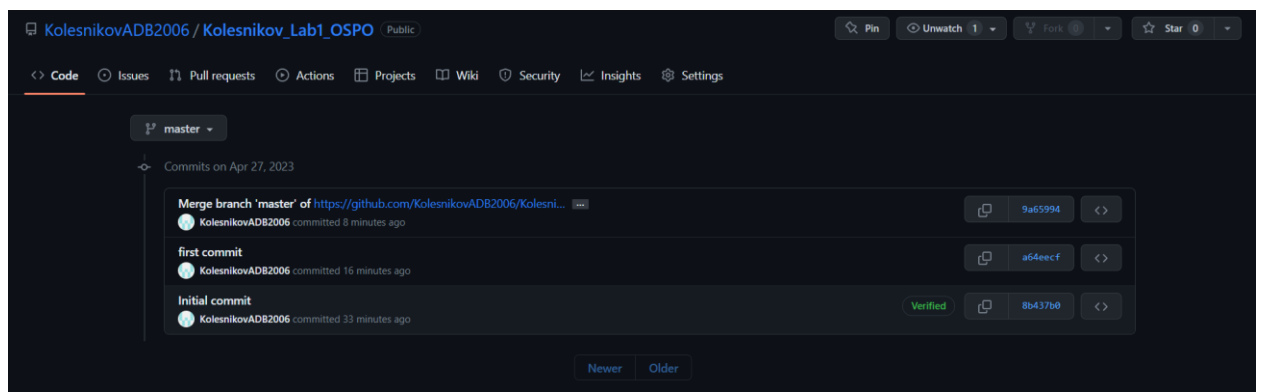
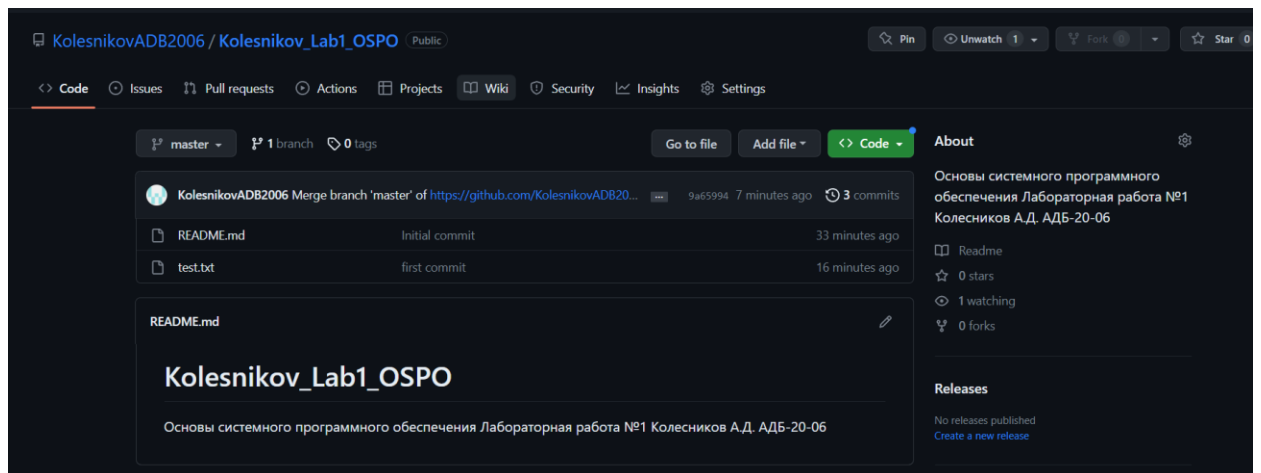
commit a64eecf0ee325d902e5a0c9afb1a71dbdc90862
Author: Alexandr <al.koleso20146@gmail.com>
Date: Thu Apr 27 09:19:10 2023 +0300

    first commit

commit 8b437b033d4a796bc99046e63b7144ea6736ee8f
Author: Alexandr Kolesnikov <85875408+KolesnikovADB2006@users.noreply.github.com>
Date: Thu Apr 27 09:02:16 2023 +0300

    Initial commit
```

Изменения на github.com



Командой `git branch second` создаём новую ветку, командой `branch` просматриваем в какой ветке мы сейчас находимся, командой `checkout` переключаемся между ветками. Создаём новый файл и отправляем его на сервер с ветки `second`.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git branch second

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git branch
* master
  second

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git checkout second
Switched to branch 'second'

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch second
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    test_second.txt

nothing added to commit but untracked files present (use "git add" to track)

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git add test_second.txt

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch second
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   test_second.txt
```

```

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git push origin second
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 338 bytes | 338.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'second' on GitHub by visiting:
remote:   https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0/pull/new/second
remote:
To https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0.git
 * [new branch]      second -> second

```

Изменения на github.com, как видим файл `text_second.txt` появился в ветке `second`.

Переключаемся на ветку `master` и командой `merge` объединяем ветки.

```

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git checkout master
Switched to branch 'master'

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git branch
* master
  second

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git merge second
Updating 9a65994..d60798f
Fast-forward
 test_second.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 test_second.txt

```

Удаляем ветку `second` командой `branch -d`, создаём новую ветку `newdew` и переключаемся на неё.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git branch -d second
Deleted branch second (was d60798f).

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git branch newdew

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git branch
* master
  newdew

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git checkout newdew
Switched to branch 'newdew'

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git branch
  master
* newdew
```

Создаём новый файл, добавляем его и коммитим.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch newdew
Untracked files:
  (use "git add <file>..." to include in what will be committed)
  otchestvo.txt

nothing added to commit but untracked files present (use "git add" to track)

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git add otchestvo.txt

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch newdew
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
  new file:   otchestvo.txt

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git commit -m "otchestvo"
[newdew 09a4eeb] otchestvo
1 file changed, 1 insertion(+)
create mode 100644 otchestvo.txt
```

Отправляем файл на сервер.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git commit -m "otchestvo"
[newdew 09a4eeb] otchestvo
1 file changed, 1 insertion(+)
create mode 100644 otchestvo.txt

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git push origin newdew
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 363 bytes | 363.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'newdew' on GitHub by visiting:
remote:   https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0/pull/new/newdew
remote:
To https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0.git
* [new branch]      newdew -> newdew
```

Переключаемся на ветку master, объединяем ветки master и newdew. Возникает конфликт так как есть изменения в обеих ветках.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git pull origin newdew
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 697 bytes | 21.00 KiB/s, done.
From https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0
 * branch          newdew      -> FETCH_HEAD
    09a4eeb..caa0d00  newdew    -> origin/newdew
Merge made by the 'ort' strategy.
 test.txt | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git push origin newdew
Enumerating objects: 9, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 12 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (5/5), 600 bytes | 600.00 KiB/s, done.
Total 5 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0.git
   caa0d00..570903e  newdew -> newdew

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git checkout master
Switched to branch 'master'

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git merge newdew
Auto-merging test.txt
CONFLICT (content): Merge conflict in test.txt
Automatic merge failed; fix conflicts and then commit the result.
```

Для просмотра изменений вводим команду *diff*. Далее заходим в файл и убираем разделители (HEAD, ==, <>>), выбираем одну из строчек или оставляем обе и сохраняем файл.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git diff
diff --cc test.txt
index 8637624,b0b26e0..0000000
--- a/test.txt
+++ b/test.txt
@@@ -1,1 -1,1 +1,5 @@@
- Колесников А.Дмитриевич АДБ-20-06
++<<<<<< HEAD
++Колесников А.Дмитриевич АДБ-20-06
++=====
+ Колесников Александр.Д. АДБ-20-06
++>>>>>> newdew
```

Далее добавляем сохранённый файл и коммитим его.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch master
You have unmerged paths.
  (fix conflicts and run "git commit")
  (use "git merge --abort" to abort the merge)

Changes to be committed:
  modified:   otchestvo.txt

Unmerged paths:
  (use "git add <file>..." to mark resolution)
  both modified:   test.txt

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git add .

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch master
All conflicts fixed but you are still merging.
  (use "git commit" to conclude merge)

Changes to be committed:
  modified:   otchestvo.txt
  modified:   test.txt

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git commit -m "update 2"
[master a825fcc] update 2
```

Отправляем изменения на сервер.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git push origin master
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 381 bytes | 381.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0.git
  6d9f13d..a825fcc  master -> master
```


Удаляем ветку newdew.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git checkout master
Already on 'master'

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git branch
* master
  newdew

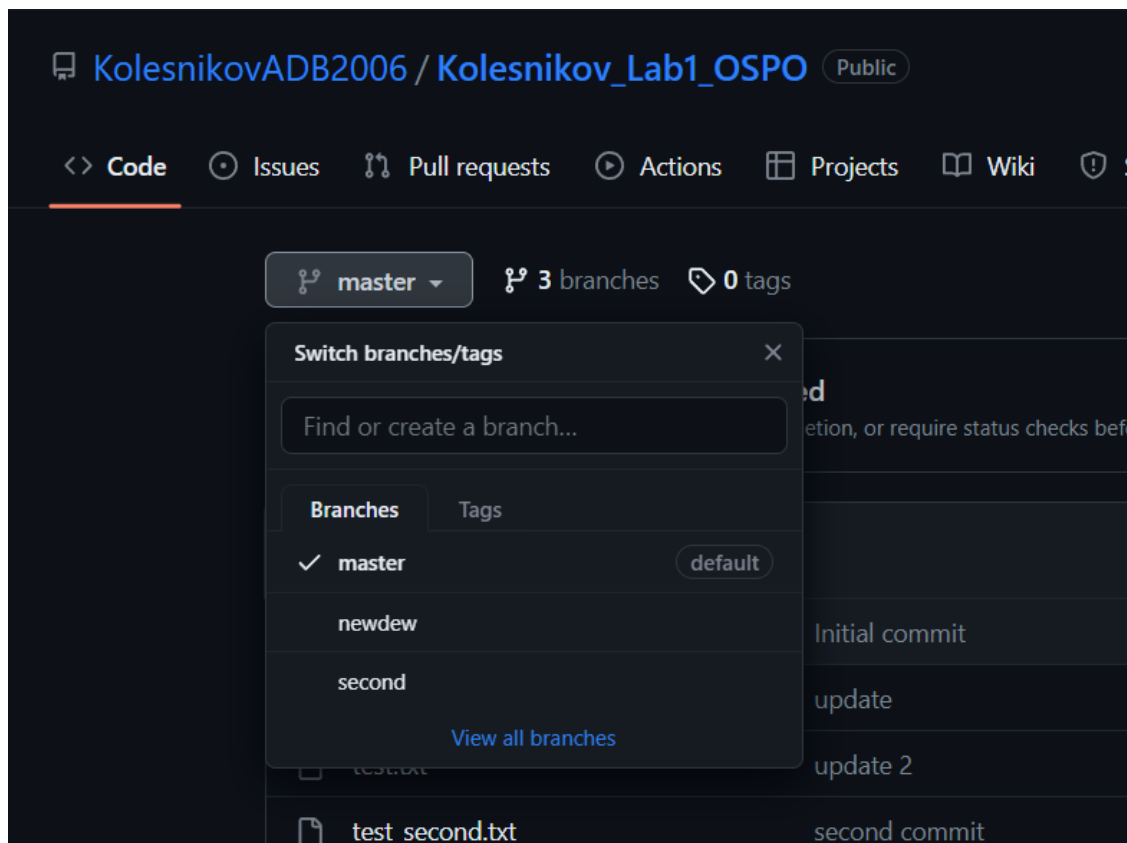
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git branch -d newdew
Deleted branch newdew (was 570903e).

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch master
nothing to commit, working tree clean

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git branch
* master

C:\Users\alkol\OneDrive\Документы\Kolesnikov>
```

Ветки удалены но они остались на сервере.

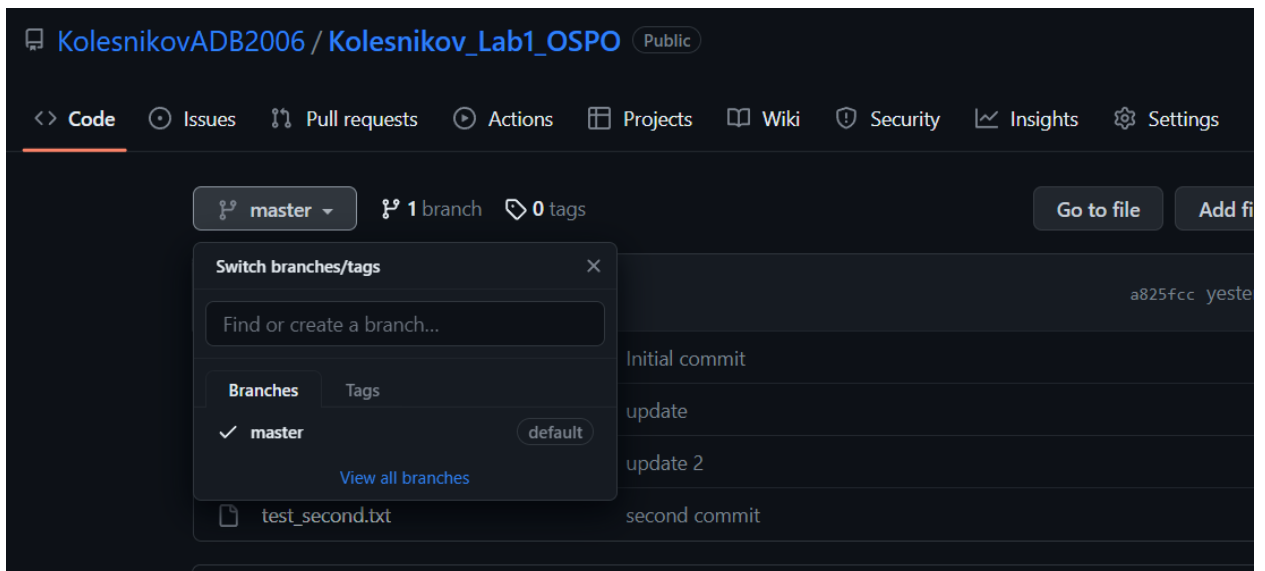


Командой *push origin --delete* удаляем ветки newdew и second с сервера.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git push origin --delete newdew
To https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSPO.git
- [deleted]          newdew

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git push origin --delete second
To https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSPO.git
- [deleted]          second
```

Ветки были успешно удалены с сервера.



Просматриваем все коммиты.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git log
commit a825fcc1f521a9513ebd373330ccfbee4b01d0d8 (HEAD -> master, origin/master)
Merge: 6d9f13d 570903e
Author: Alexandr <al.koleso20146@gmail.com>
Date: Thu Apr 27 11:40:17 2023 +0300

    update 2

commit 570903e2c1d77006fdcea87bc6adb376c2a40a88
Merge: a7754f6 caa0d00
Author: Alexandr <al.koleso20146@gmail.com>
Date: Thu Apr 27 11:28:28 2023 +0300

    Merge branch 'newdew' of https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSPO into newdew

commit a7754f690769d6d7a5a22b65594497ec217b598f
Author: Alexandr <al.koleso20146@gmail.com>
Date: Thu Apr 27 11:26:39 2023 +0300

    update

commit caa0d00fe58f237d36c5680e37e6da1ba35a8998
Author: Alexandr Kolesnikov <85875408+KolesnikovADB2006@users.noreply.github.com>
Date: Thu Apr 27 11:11:07 2023 +0300

    Update test.txt

commit 6d9f13d875f33b662a636d42a2b9f21576dda044
Merge: 170ca76 09a4eeb
Author: Alexandr <al.koleso20146@gmail.com>
Date: Thu Apr 27 11:04:05 2023 +0300

    Merge branch 'newdew'

commit 170ca76f991d2f94c324f32aeeb6309844763682
Author: Alexandr <al.koleso20146@gmail.com>
Date: Thu Apr 27 10:59:43 2023 +0300
```

При помощи команды *checkout* возвращаемся к последнему коммиту.

```
commit 8b437b033d4a796bc99046e63b7144ea6736ee8f
Author: Alexandr Kolesnikov <85875408+KolesnikovADB2006@users.noreply.github.com>
Date: Thu Apr 27 09:02:16 2023 +0300

Initial commit

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git checkout 8b437b033d
Note: switching to '8b437b033d'.

You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by switching back to a branch.

If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -c with the switch command. Example:

    git switch -c <new-branch-name>

Or undo this operation with:

    git switch -

Turn off this advice by setting config variable advice.detachedHead to false

HEAD is now at 8b437b0 Initial commit
```

Файлы откатились к последнему коммиту и у нас появилась псевдоветка.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git branch
* (HEAD detached at 8b437b0)
master

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git reset --hard HEAD
HEAD is now at 8b437b0 Initial commit
```

Добавляем файл, а затем убираем его командой *reset HEAD*.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
HEAD detached from 8b437b0
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   test.txt

no changes added to commit (use "git add" and/or "git commit -a")

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git add .

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
HEAD detached from 8b437b0
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   test.txt

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git reset HEAD
Unstaged changes after reset:
M       test.txt

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
HEAD detached from 8b437b0
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   test.txt

no changes added to commit (use "git add" and/or "git commit -a")

C:\Users\alkol\OneDrive\Документы\Kolesnikov>
```

Опять добавим файлы, закоммитим их и применим ту же команду. Всё что осталось незакоммиченым будет удалено. Командой *commit --amend* можно изменить комментарий.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git add .

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git commit -m "change commit"
[master c6cd4d6] change commit
 1 file changed, 1 insertion(+), 4 deletions(-)

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git reset HEAD

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch master
nothing to commit, working tree clean

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch master
nothing to commit, working tree clean

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git commit --amend
hint: Waiting for your editor to close the file...
sh: line 1: q: command not found

shell returned 127

Press ENTER or type command to continue
```

Я изменил комментарий с “change commit” на “commit changed”.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git commit --amend
hint: Waiting for your editor to close the file...
sh: line 1: q: command not found

shell returned 127

Press ENTER or type command to continue
sh: line 1: q: command not found

shell returned 127

Press ENTER or type command to continue
[master 6ed4d76] commit changed
Date: Fri Apr 28 16:39:36 2023 +0300
1 file changed, 1 insertion(+), 4 deletions(-)
```

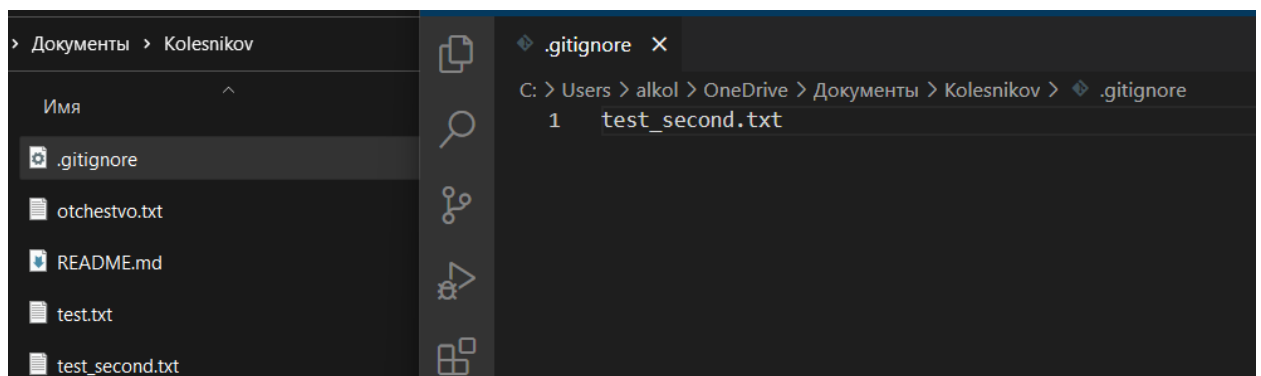
Посмотрим *log*

```
Press ENTER or type command to continue
[master 6ed4d76] commit changed
Date: Fri Apr 28 16:39:36 2023 +0300
1 file changed, 1 insertion(+), 4 deletions(-)

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git log
commit 6ed4d7651dff2f75e1baf75e6fe3e291b33d88b3 (HEAD -> master)
Author: Alexandr <al.koleso20146@gmail.com>
Date: Fri Apr 28 16:39:36 2023 +0300

    commit changed
```

Создание файла .gitignore



Добавляем файл, коммитим и отправляем на сервер.

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        .gitignore

nothing added to commit but untracked files present (use "git add" to track)

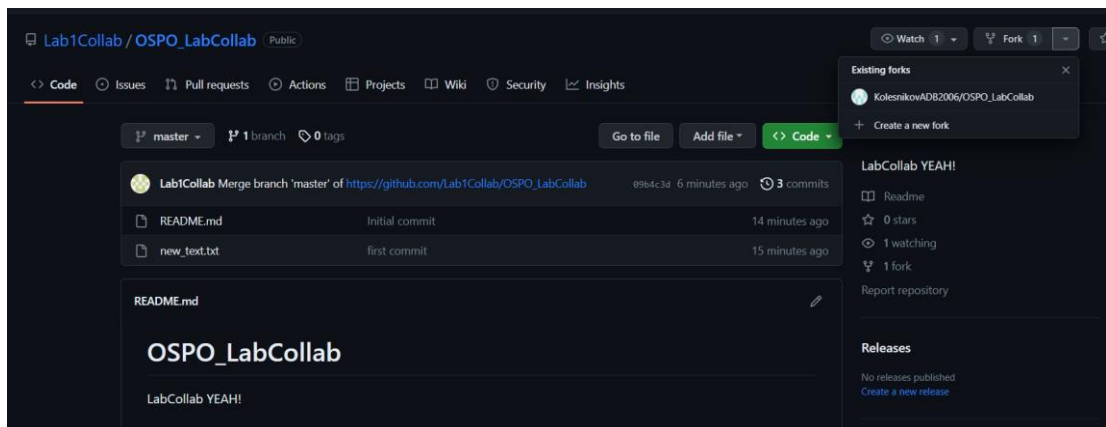
C:\Users\alkol\OneDrive\Документы\Kolesnikov>git add .

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   .gitignore

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git commit -m "add gitignore"
[master 6f4a03f] add gitignore
1 file changed, 1 insertion(+)
create mode 100644 .gitignore

C:\Users\alkol\OneDrive\Документы\Kolesnikov>git push origin master
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 12 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (6/6), 635 bytes | 317.00 KiB/s, done.
Total 6 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/KolesnikovADB2006/Kolesnikov_Lab1_OSP0.git
a825fcc..6f4a03f  master -> master
```

Для совместной работы в Git я создал ещё один аккаунт и сделал новый репозиторий к которому я подключился с основного аккаунта. На втором аккаунте я выдал права доступа к репозиторию для основного аккаунта.



Я создал новую папку куда клонировал репозиторий командой *clone*

```
C:\Users\alkol\OneDrive\Документы\Kolesnikov>cd C:\Users\alkol\OneDrive\Документы\LabCollab
C:\Users\alkol\OneDrive\Документы\LabCollab>git init
Initialized empty Git repository in C:/Users/alkol/OneDrive/Документы/LabCollab/.git/

C:\Users\alkol\OneDrive\Документы\LabCollab>git clone https://github.com/Lab1Collab/OSP0_LabCollab.git
Cloning into 'OSP0_LabCollab'...
remote: Enumerating objects: 8, done.
remote: Counting objects: 100% (8/8), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 8 (delta 0), reused 5 (delta 0), pack-reused 0
Receiving objects: 100% (8/8), done.

C:\Users\alkol\OneDrive\Документы\LabCollab>
```

Создал новый файл добавил закоммитил и отправил его на сервер. На втором аккаунте я запросил данные с сервера, изменил содержание полученного файла и опять отправил на сервер. На основном аккаунте изменил содержание созданного файла добавил закоммитил и тоже отправил файл на сервер, специально перед этим не запрашивая данные с сервера.

```
C:\Users\alkol\OneDrive\Документы\LabCollab>cd C:\Users\alkol\OneDrive\Документы\LabCollab\OSPO_LabCollab
C:\Users\alkol\OneDrive\Документы\LabCollab\OSPO_LabCollab>git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean
C:\Users\alkol\OneDrive\Документы\LabCollab\OSPO_LabCollab>
```

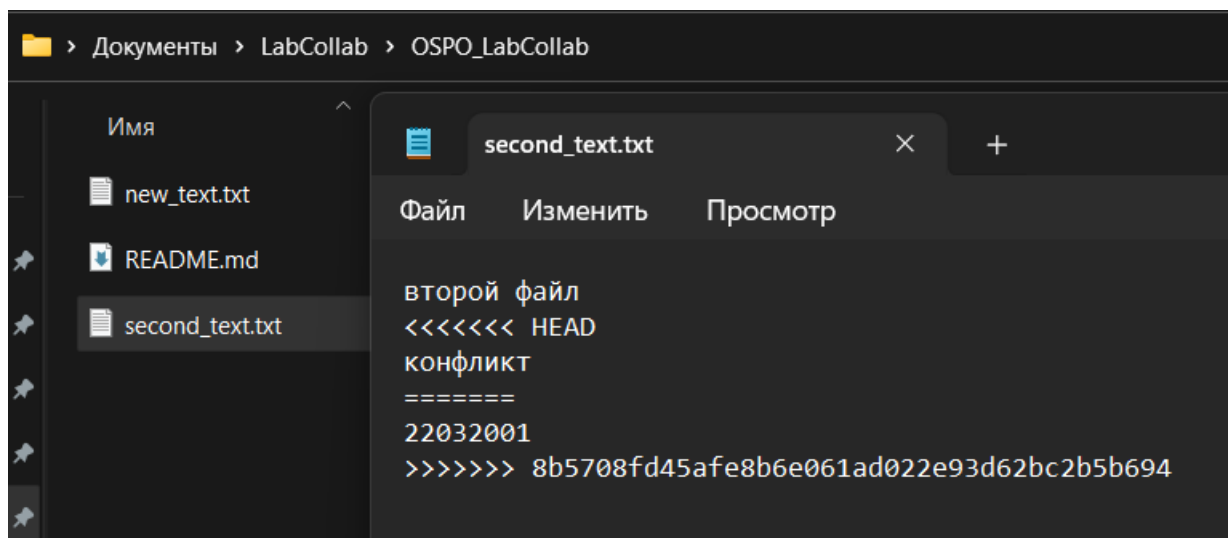
В результате произошёл конфликт.

```
C:\Users\alkol\OneDrive\Документы\LabCollab\OSPO_LabCollab>git status
On branch master
Your branch is up to date with 'origin/master'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   second_text.txt

no changes added to commit (use "git add" and/or "git commit -a")
C:\Users\alkol\OneDrive\Документы\LabCollab\OSPO_LabCollab>git add .
C:\Users\alkol\OneDrive\Документы\LabCollab\OSPO_LabCollab>git commit -m "conflict"
[master a8a7b71] conflict
1 file changed, 1 insertion(+)
C:\Users\alkol\OneDrive\Документы\LabCollab\OSPO_LabCollab>git push origin master
To https://github.com/Lab1Collab/OSPO_LabCollab.git
 ! [rejected]        master -> master (fetch first)
error: failed to push some refs to 'https://github.com/Lab1Collab/OSPO_LabCollab.git'
hint: Updates were rejected because the remote contains work that you do
hint: not have locally. This is usually caused by another repository pushing
hint: to the same ref. You may want to first integrate the remote changes
hint: (e.g., 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
```

Зашёл в конфликтующий файл удалил (HEAD, ==, <<>>).



После этого добавил, закоммитил и отправил файл на сервер.

```
C:\Users\alkol\OneDrive\Документы\LabCollab\OSPO_LabCollab>git add .

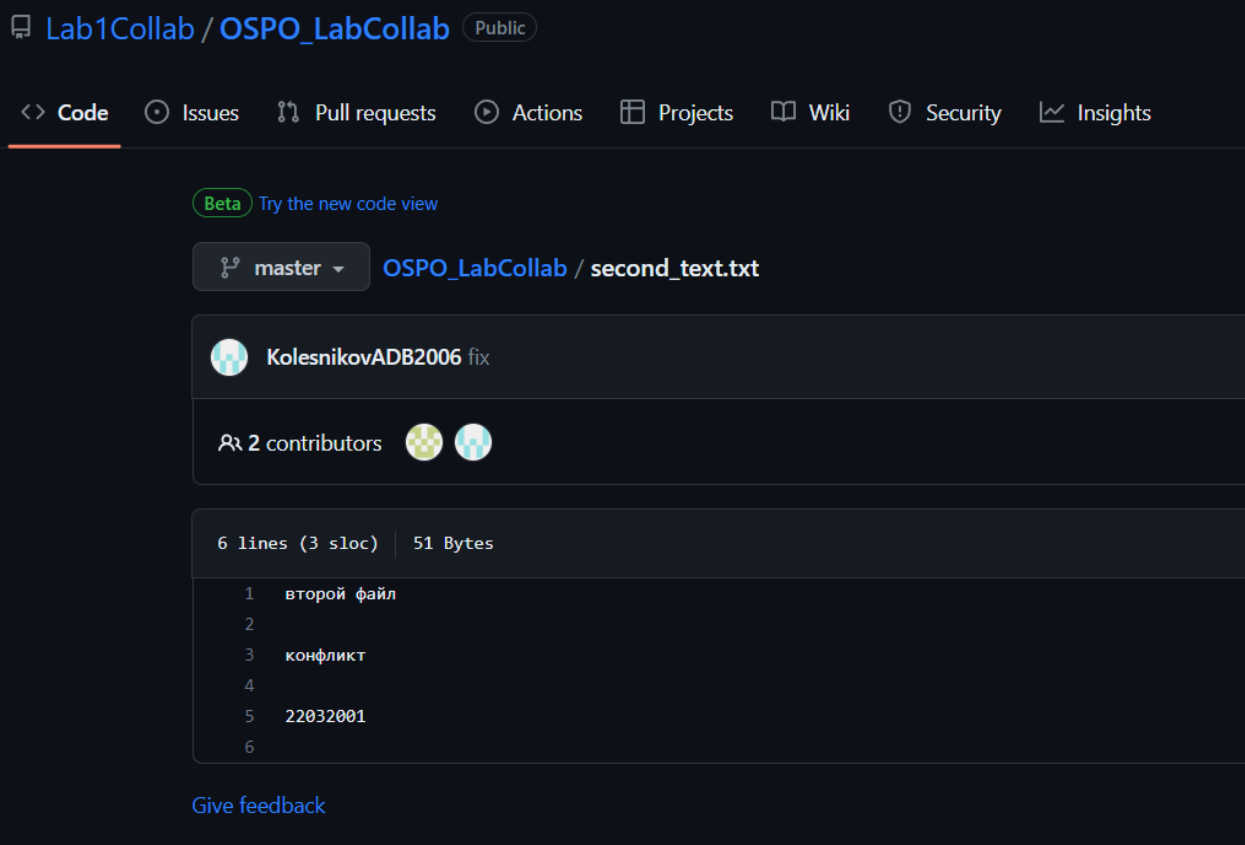
C:\Users\alkol\OneDrive\Документы\LabCollab\OSPO_LabCollab>git commit -m "fix"
[master b8edce6] fix

C:\Users\alkol\OneDrive\Документы\LabCollab\OSPO_LabCollab>git status
On branch master
Your branch is ahead of 'origin/master' by 2 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean

C:\Users\alkol\OneDrive\Документы\LabCollab\OSPO_LabCollab>git push origin master
Enumerating objects: 10, done.
Counting objects: 100% (10/10), done.
Delta compression using up to 12 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (6/6), 581 bytes | 581.00 KiB/s, done.
Total 6 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), completed with 1 local object.
To https://github.com/Lab1Collab/OSPO_LabCollab.git
 8b5708f..b8edce6  master -> master
```



Содержимое файла отправленного на сервер.




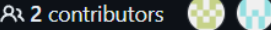
Lab1Collab / OSPO_LabCollab Public

[Code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#)

Beta Try the new code view

 master  OSPO_LabCollab / second_text.txt

 KolesnikovADB2006 fix

 2 contributors

6 lines (3 sloc) | 51 Bytes

```
1  второй файл
2
3  конфликт
4
5  22032001
6
```

[Give feedback](#)

Вывод: в ходе данной лабораторной работы я приобрёл базовые навыки работы с системой контроля версий GitHub.