

## *Лабораторная работа №1*

*Выполнила: Котова Ксения Алексеевна 253503. Вариант 12.*

*Тема: Система контроля версий Git.*

*Цель: Познакомиться с возможностями и получить практические навыки работы с системой контроля версий Git.*

*Задание:*

**1. Подготовьте рабочее окружение в соответствии с типом вашей операционной системы( <https://smartqa.ru/courses/git/lesson-1> ):**

**a. Установите Git**

**b. Выполните базовую настройку**

```
~  
└─ git config --list  
user.name=ksu_kotovaa  
user.email=ksu_kotovaa@mail.ru  
init.defaultbranch=main
```

**2. Создайте структуру папок (использовать командную строку) и поместите в репозиторий Git на своем локальном компьютере:**

```
~  
└─ cd 253503_KOTOVA_12  
  
~/253503_KOTOVA_12  
└─ mkdir -p IGI/LR1 && cd IGI && mkdir LR2 LR3 LR4 LR5  
  
~/253503_KOTOVA_12/IGI  
└─ ls  
LR1 LR2 LR3 LR4 LR5  
  
~/253503_KOTOVA_12/IGI  
└─ cd ..  
  
~/253503_KOTOVA_12  
└─ mkdir -p STRWEB/LR1 && cd STRWEB && mkdir LR2 LR3 LR4  
  
~/253503_KOTOVA_12/STRWEB  
└─ ls  
LR1 LR2 LR3 LR4  
  
~/253503_KOTOVA_12/STRWEB  
└─ cd ..  
  
~/253503_KOTOVA_12  
└─ ls  
IGI STRWEB
```

```
~/253503_KOTOVA_12
tree -d
.
├── IGI
│   ├── LR1
│   ├── LR2
│   ├── LR3
│   ├── LR4
│   └── LR5
└── STRWEB
    ├── LR1
    ├── LR2
    ├── LR3
    └── LR4
```

Индивидуальное задание:

```
~/253503_KOTOVA_12/IGI/LR1
mkdir -p bin/755 && mkdir -p foo/555 && cd bin && mkdir -p bar/777 && cd .. && cd foo && mkdir -p baz/444 && cd baz ✓

~/253503_KOTOVA_12/IGI/LR1/foo/baz
mkdir -p env/767 && mkdir -p example/277 && touch readme.txt && touch test.txt ✓

~/253503_KOTOVA_12/IGI/LR1/foo/baz
echo "426" >> readme.txt && echo "665" >> test.txt ✓
```

```
LR1
├── bin
│   ├── 755
│   └── bar
│       └── 777
├── foo
│   ├── 555
│   └── baz
│       ├── 444
│       ├── env
│       │   └── 767
│       ├── example
│       │   └── 277
│       ├── readme.txt
│       └── test.txt
```

```
~/253503_KOTOVA_12
cd IGI/LR1/foo/baz/

~/253503_KOTOVA_12/IGI/LR1/foo/baz
cat readme.txt
426

~/253503_KOTOVA_12/IGI/LR1/foo/baz
cat test.txt
665
```

```

~/253503_KOTOVA_12
└─ git init
Initialized empty Git repository in /home/ksu_kotovaa/253503_KOTOVA_12/.git/

~/253503_KOTOVA_12 main ?1
└─ git status
On branch main

No commits yet

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

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

```

**3. Создайте репозиторий внутри папки LR1 с помощью клонирования проекта с сайта [github.com](https://github.com/smartigaorg/geometric_lib) ([https://github.com/smartigaorg/geometric\\_lib](https://github.com/smartigaorg/geometric_lib))**

```

~/253503_KOTOVA_12 main ?1
└─ cd IGI/LR1

~/253503_KOTOVA_12/IGI/LR1 main ?1
└─ git clone git@github.com:smartigaorg/geometric_lib.git
Cloning into 'geometric_lib'...
remote: Enumerating objects: 35, done.
remote: Total 35 (delta 0), reused 0 (delta 0), pack-reused 35
Receiving objects: 100% (35/35), 4.60 KiB | 4.60 MiB/s, done.
Resolving deltas: 100% (6/6), done.

~/253503_KOTOVA_12/IGI/LR1 main ?1
└─ cd geometric_lib

~/253503_KOTOVA_12/IGI/LR1/geometric_lib main
└─ git remote -v
origin  git@github.com:smartigaorg/geometric_lib.git (fetch)
origin  git@github.com:smartigaorg/geometric_lib.git (push)

```

**4. Выполните следующие действия, каждый раз проверяя состояние файлов в локальном репозитории до и после выполнения операции:**

а. сделайте индексацию нескольких файлов в вашем Git-репозитории (`git add ...`),

```

~/253503_KOTOVA_12/IGI/LR1 main ?1
touch file1.txt file2.txt

~/253503_KOTOVA_12/IGI/LR1 main ?1
git add file1.txt file2.txt

~/253503_KOTOVA_12/IGI/LR1 main +2 ?2
git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   file1.txt
    new file:   file2.txt

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

```

b. внесите изменения в файлы,

```

~/253503_KOTOVA_12/IGI/LR1 main +2 ?2
echo "I am modifying this file" >> file1.txt

~/253503_KOTOVA_12/IGI/LR1 main +2 !1 ?2
echo "I am modifying this file" >> file2.txt

~/253503_KOTOVA_12/IGI/LR1 main +2 !2 ?2
git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   file1.txt
    new file:   file2.txt

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:   file1.txt
    modified:   file2.txt

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

```

с. выполните коммиты к проиндексированным файлам,

```
~/253503_KOTOVA_12/IGI/LR1 main +2 !2 ?2
└─ git commit -am "Modify file1.txt file2.txt"
[main (root-commit) 7acc149] Modify file1.txt file2.txt
2 files changed, 2 insertions(+)
create mode 100644 IGI/LR1/file1.txt
create mode 100644 IGI/LR1/file2.txt

~/253503_KOTOVA_12/IGI/LR1 main ?2
└─ git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    foo/
    geometric_lib/

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

d. добавьте и удалите файлы (один и группу файлов с определенным расширением)

```
~/253503_KOTOVA_12/IGI/LR1 main ?2
└─ touch test.css test1.html test2.html

~/253503_KOTOVA_12/IGI/LR1 main ?5
└─ git add test.css test1.html test2.html

~/253503_KOTOVA_12/IGI/LR1 main +3 ?2
└─ git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   test.css
    new file:   test1.html
    new file:   test2.html

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

~/253503_KOTOVA_12/IGI/LR1 main +3 ?2
└─ git rm -f test.css
rm 'IGI/LR1/test.css'
```

```

~/253503_KOTOVA_12/IGI/LR1 main +2 ?2
└─ git rm -f *.html
rm 'IGI/LR1/test1.html'
rm 'IGI/LR1/test2.html'

~/253503_KOTOVA_12/IGI/LR1 main ?2
└─ git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    foo/
    geometric_lib/

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

```

*е. переименуйте файлы*

```

~/253503_KOTOVA_12/IGI/LR1 main ?2
└─ git mv file1.txt NewFile1.txt

~/253503_KOTOVA_12/IGI/LR1 main +2 ?2
└─ git mv file2.txt NewFile2.txt

~/253503_KOTOVA_12/IGI/LR1 main +4 ?2
└─ git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    renamed:    file1.txt -> NewFile1.txt
    renamed:    file2.txt -> NewFile2.txt

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

```

*ф. создайте для IGI и STRWEB, а также для каждой ЛР, вложенной в них, отдельные ветки, переместите папки и файлы на соответствующие ветки*

```

~/253503_KOTOVA_12 main
└─ git branch LR1_IGI

~/253503_KOTOVA_12 main
└─ git branch LR2_IGI

~/253503_KOTOVA_12 main
└─ git branch LR3_IGI

~/253503_KOTOVA_12 main
└─ git branch LR4_IGI

~/253503_KOTOVA_12 main
└─ git branch LR5_IGI

```

```
~/253503_KOTOVA_12 IGI
git checkout -b STRWEB
Switched to a new branch 'STRWEB'

~/253503_KOTOVA_12 STRWEB
git branch LR1_STRWEB

~/253503_KOTOVA_12 STRWEB
git branch LR2_STRWEB

~/253503_KOTOVA_12 STRWEB
git branch LR3_STRWEB

~/253503_KOTOVA_12 STRWEB
git branch LR4_STRWEB

~/253503_KOTOVA_12 main
git branch
IGI
LR1_IGI
LR1_STRWEB
LR2_IGI
LR2_STRWEB
LR3_IGI
LR3_STRWEB
LR4_IGI
LR4_STRWEB
LR5_IGI
STRWEB
* main
```

г. выведите историю коммитов: полностью и с ограничением вывода – отобразить только последние, до и после указанной даты, по автору файлов, коммитов (флаги *n*, *since*, *after*, *until*, *before*, *author*, *committer*, *grep*)

<https://code.mu/ru/tool/git/basis/limit-output-commit-history-flags/>,

История коммитов полностью

```
~/253503_KOTOVA_12/IGI/LR1 main
git log --oneline
6410fa5 (HEAD -> main) Add some test files
a584024 Delete HTML files
6a87078 Delete test.css
d26a298 Create test files
c2c12f0 Rename file2.txt
582caaf Rename file1.txt
3d4adcd (STRWEB, LR5_IGI, LR4_STRWEB, LR4_IGI,
b4b0d31 Add .gitignore
7acc149 Modify file1.txt file2.txt
```

### Последние 3

```
~/253503_KOTOVA_12/IGI/LR1 main
git log -3
commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sun Feb 18 16:50:31 2024 +0300

    Add some test files

commit a58402460bcbeb7bb3e6b1e6f885b2be3433ac4a
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete HTML files

commit 6a87078a57e83c14d887ec2e70a2359c6aa8b991
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete test.css
```

### После указанной даты:

```
~/253503_KOTOVA_12 main
git log --since="2024-02-18"

~/253503_KOTOVA_12 main
```

### До указанной даты (сегодня 18.02.2024):

```
~/253503_KOTOVA_12/IGI/LR1 main
git log --until="2024-02-18"
commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sun Feb 18 16:50:31 2024 +0300

    Add some test files

commit a58402460bcbeb7bb3e6b1e6f885b2be3433ac4a
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete HTML files

commit 6a87078a57e83c14d887ec2e70a2359c6aa8b991
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete test.css

commit d26a2983f7ec95e56c7c5bbe378808d9268080e2
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:56:09 2024 -0500

    Create test files
```



От указанного автора:

```
~/253503_KOTOVA_12/IGI/LR1 main
git log --author="ksu_kotovaa"
commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sun Feb 18 16:50:31 2024 +0300

    Add some test files

commit a58402460bcbeb7bb3e6b1e6f885b2be3433ac4a
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete HTML files

commit 6a87078a57e83c14d887ec2e70a2359c6aa8b991
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete test.css

commit d26a2983f7ec95e56c7c5bbe378808d9268080e2
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:56:09 2024 -0500

    Create test files
```

(все коммиты)

От указанного коммиттера:

```
~/253503_KOTOVA_12/IGI/LR1 main
git log --committer=ksu_kotovaa
commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sun Feb 18 16:50:31 2024 +0300

    Add some test files

commit a58402460bcbeb7bb3e6b1e6f885b2be3433ac4a
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete HTML files

commit 6a87078a57e83c14d887ec2e70a2359c6aa8b991
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete test.css

commit d26a2983f7ec95e56c7c5bbe378808d9268080e2
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:56:09 2024 -0500

    Create test files
```

(все коммиты)

Все коммиты, в которых есть строка 'files':

```
~/253503_KOTOVA_12/IGI/LR1 main
git log --grep 'files'
commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sun Feb 18 16:50:31 2024 +0300

    Add some test files

commit a58402460bcbeb7bb3e6b1e6f885b2be3433ac4a
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete HTML files

commit d26a2983f7ec95e56c7c5bbe378808d9268080e2
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:56:09 2024 -0500

    Create test files
```

h. исследуйте флаги для git log: p, stat, shortstat, name-only, name-status, relative-date, pretty, graph,

Разница в изменениях для каждого коммита:

```
~/253503_KOTOVA_12/IGI/LR1 main
git log -p
commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sun Feb 18 16:50:31 2024 +0300

    Add some test files

diff --git a/IGI/LR1/test1.txt b/IGI/LR1/test1.txt
new file mode 100644
index 0000000..b53298e
--- /dev/null
+++ b/IGI/LR1/test1.txt
@@ -0,0 +1 @@
+Hello, I am a test file :)
diff --git a/IGI/LR1/test2.txt b/IGI/LR1/test2.txt
new file mode 100644
index 0000000..1be15c3
--- /dev/null
+++ b/IGI/LR1/test2.txt
@@ -0,0 +1 @@
+Hello, I am also a test file :)
```

Статистика для коммита:

```
~/253503_KOTOVA_12/IGI/LR1 main
git log --stat
commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sun Feb 18 16:50:31 2024 +0300

    Add some test files

IGI/LR1/test1.txt | 1 +
IGI/LR1/test2.txt | 1 +
2 files changed, 2 insertions(+)

commit a58402460bcbeb7bb3e6b1e6f885b2be3433ac4a
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete HTML files

IGI/LR1/test1.html | 0
IGI/LR1/test2.html | 0
2 files changed, 0 insertions(+), 0 deletions(-)
```

Краткая статистика:

```
~/253503_KOTOVA_12/IGI/LR1 main
git log --shortstat
commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sun Feb 18 16:50:31 2024 +0300

    Add some test files

2 files changed, 2 insertions(+)

commit a58402460bcbeb7bb3e6b1e6f885b2be3433ac4a
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete HTML files

2 files changed, 0 insertions(+), 0 deletions(-)

commit 6a87078a57e83c14d887ec2e70a2359c6aa8b991
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete test.css

1 file changed, 0 insertions(+), 0 deletions(-)
```

## Информация о коммите и имена измененных файлов

```
~/253503_KOTOVA_12/IGI/LR1 main
git log --name-only
commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sun Feb 18 16:50:31 2024 +0300

    Add some test files

IGI/LR1/test1.txt
IGI/LR1/test2.txt

commit a58402460bcbeb7bb3e6b1e6f885b2be3433ac4a
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete HTML files

IGI/LR1/test1.html
IGI/LR1/test2.html

commit 6a87078a57e83c14d887ec2e70a2359c6aa8b991
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete test.css

IGI/LR1/test.css
```

## Сообщение о списке файлов, которые были изменены, в т.ч. добавлены и удалены.

```
~/253503_KOTOVA_12/IGI/LR1 main
git log --name-status
commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sun Feb 18 16:50:31 2024 +0300

    Add some test files

A       IGI/LR1/test1.txt
A       IGI/LR1/test2.txt

commit a58402460bcbeb7bb3e6b1e6f885b2be3433ac4a
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete HTML files

D       IGI/LR1/test1.html
D       IGI/LR1/test2.html

commit 6a87078a57e83c14d887ec2e70a2359c6aa8b991
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: Sat Feb 17 13:58:24 2024 -0500

    Delete test.css

D       IGI/LR1/test.css
```

Отобразить дату применения изменений в относительном формате (например, '1 day ago').

```
~/253503_KOTOVA_12/IGI/LR1/foo/baz main
git log --relative-date
commit 83d7dace7ce3113e0e15d1fb8140c2f379f23775 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: 6 minutes ago

    Add readme.txt and test.txt from indiv task

commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: 59 minutes ago

    Add some test files

commit a58402460bcbeb7bb3e6b1e6f885b2be3433ac4a
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: 20 hours ago

    Delete HTML files

commit 6a87078a57e83c14d887ec2e70a2359c6aa8b991
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Date: 20 hours ago

    Delete test.css
```

Поменять формат вывода истории коммитов: *=online* в одну строку, *=full* - полный и *=short* - краткий вывод.

```
~/253503_KOTOVA_12/IGI/LR1/foo/baz main
git log --pretty=oneline
83d7dace7ce3113e0e15d1fb8140c2f379f23775 (HEAD -> main) Add readme.txt and test.txt from indiv task
6410fa5b13757b711567d5c2ecc5fe100b6278f2 Add some test files
a58402460bcbeb7bb3e6b1e6f885b2be3433ac4a Delete HTML files
6a87078a57e83c14d887ec2e70a2359c6aa8b991 Delete test.css
d26a2983f7ec95e56c7c5bbe378808d9268080e2 Create test files
c2c12f01d5ee90c6d8906667bce07cd21c237b18 Rename file2.txt
582caafbc6d5cb40f30f67121cb923a55643bf85 Rename file1.txt
3d4adcd2ac0871607fb358733442952f8241a835 (STRWEB, LR5_IGI, LR4_STRWEB, LR4_IGI, LR3_STRWEB, LR3_IGI, LR1_IGI, IGI) Modify .gitignore
b4b0d316826290edd8510ff05070623086cebe95 Add .gitignore
7acc1493005586e8c125b93a838e4be7906a78fb Modify file1.txt file2.txt
```

```

~/253503_KOTOVA_12/IGI/LR1/foo/baz main
└─ git log --pretty=short
commit 83d7dace7ce3113e0e15d1fb8140c2f379f23775 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>

    Add readme.txt and test.txt from indiv task

commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>

    Add some test files

commit a58402460bcb7bb3e6b1e6f885b2be3433ac4a
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>

    Delete HTML files

commit 6a87078a57e83c14d887ec2e70a2359c6aa8b991
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>

    Delete test.css

```

```

~/253503_KOTOVA_12/IGI/LR1/foo/baz main
└─ git log --pretty=full
commit 83d7dace7ce3113e0e15d1fb8140c2f379f23775 (HEAD -> main)
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Commit: ksu_kotovaa <ksu_kotovaa@mail.ru>

    Add readme.txt and test.txt from indiv task

commit 6410fa5b13757b711567d5c2ecc5fe100b6278f2
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Commit: ksu_kotovaa <ksu_kotovaa@mail.ru>

    Add some test files

commit a58402460bcb7bb3e6b1e6f885b2be3433ac4a
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Commit: ksu_kotovaa <ksu_kotovaa@mail.ru>

    Delete HTML files

commit 6a87078a57e83c14d887ec2e70a2359c6aa8b991
Author: ksu_kotovaa <ksu_kotovaa@mail.ru>
Commit: ksu_kotovaa <ksu_kotovaa@mail.ru>

    Delete test.css

```

График посторить:

```

└─ git log --oneline --graph --all
* affbcb5 (main) Modify test.txt
* a3d8e82 Add test.txt
| * 2e94dd4 (LR1_IGI) Delete newFile1 newFile2
|/
* 83d7dac Add readme.txt and test.txt from indiv task
* 6410fa5 Add some test files
* a584024 Delete HTML files
* 6a87078 Delete test.css
* d26a298 Create test files
* c2c12f0 Rename file2.txt
* 582caaf Rename file1.txt
* 3d4adcd (HEAD -> IGI, STRWEB, LR5_IGI, LR4_STRWEB, L
* b4b0d31 Add .gitignore
* 7acc149 Modify file1.txt file2.txt

```

i. найдите разницу в изменениях для коммитов

```
~/253503_KOTOVA_12/IGI/LR1 main
git diff HEAD a3d8e82
diff --git a/IGI/LR1/test.txt b/IGI/LR1/test.txt
index b28e3b7..e69de29 100644
--- a/IGI/LR1/test.txt
+++ b/IGI/LR1/test.txt
@@ -1,0 @@
-Hello?
```

```
~/253503_KOTOVA_12/IGI/LR1 main
git diff 83d7dac 6410fa5
diff --git a/IGI/LR1/foo/baz/readme.txt b/IGI/LR1/foo/baz/readme.txt
deleted file mode 100644
index 9f51d08..0000000
--- a/IGI/LR1/foo/baz/readme.txt
+++ /dev/null
@@ -1,0 @@
-426
diff --git a/IGI/LR1/foo/baz/test.txt b/IGI/LR1/foo/baz/test.txt
deleted file mode 100644
index 7ae8d44..0000000
--- a/IGI/LR1/foo/baz/test.txt
+++ /dev/null
@@ -1,0 @@
-665
```

```
~/253503_KOTOVA_12/IGI/LR1 main
git diff b4b0d31 3d4adcd
diff --git a/.gitignore b/.gitignore
index f9d1f86..dc92128 100644
--- a/.gitignore
+++ b/.gitignore
@@ -1,2 @@
geometric_lib/
+*/geometric_lib/
```

j. создайте новый файл test.txt и вставьте в него строчку 'номер варианта'. затем сделайте коммит и отмените его

```
~/253503_KOTOVA_12/IGI/LR1 main
echo "My variant is 12" >> test.txt

~/253503_KOTOVA_12/IGI/LR1 main !1
git add test.txt && git commit -m "Add my variant to test.txt"
[main 0972d04] Add my variant to test.txt
1 file changed, 1 insertion(+)
```

```

~/253503_KOTOVA_12/IGI/LR1 main
git log --oneline
0972d04 (HEAD -> main) Add my variant to test.txt
affbcb5 Modify test.txt
a3d8e82 Add test.txt
83d7dac Add readme.txt and test.txt from indiv task
6410fa5 Add some test files
a584024 Delete HTML files
6a87078 Delete test.css
d26a298 Create test files
c2c12f0 Rename file2.txt
582caaf Rename file1.txt
3d4adcd (STRWEB, LR5_IGI, LR4_STRWEB, LR4_IGI, LR3_STRWEB, LR3_IGI, LR2
b4b0d31 Add .gitignore
7acc149 Modify file1.txt file2.txt

~/253503_KOTOVA_12/IGI/LR1 main
git reset --hard HEAD~1
HEAD is now at affbcb5 Modify test.txt

~/253503_KOTOVA_12/IGI/LR1 main
git log --oneline
affbcb5 (HEAD -> main) Modify test.txt
a3d8e82 Add test.txt
83d7dac Add readme.txt and test.txt from indiv task
6410fa5 Add some test files

```

к. проиндексируйте файл в вашем Git-репозитории, затем отмените его индексацию

```

~/253503_KOTOVA_12/IGI/LR1 main
echo "And I am tiredgit log --oneline" >> test.txt

~/253503_KOTOVA_12/IGI/LR1 main !1
git add test.txt

~/253503_KOTOVA_12/IGI/LR1 main +1
git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   test.txt

~/253503_KOTOVA_12/IGI/LR1 main +1
git restore --staged test.txt

~/253503_KOTOVA_12/IGI/LR1 main !1
git status
On branch main
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")

```



1. внесите изменения в файл в вашем Git-репозитории и затем верните его в исходное состояние.

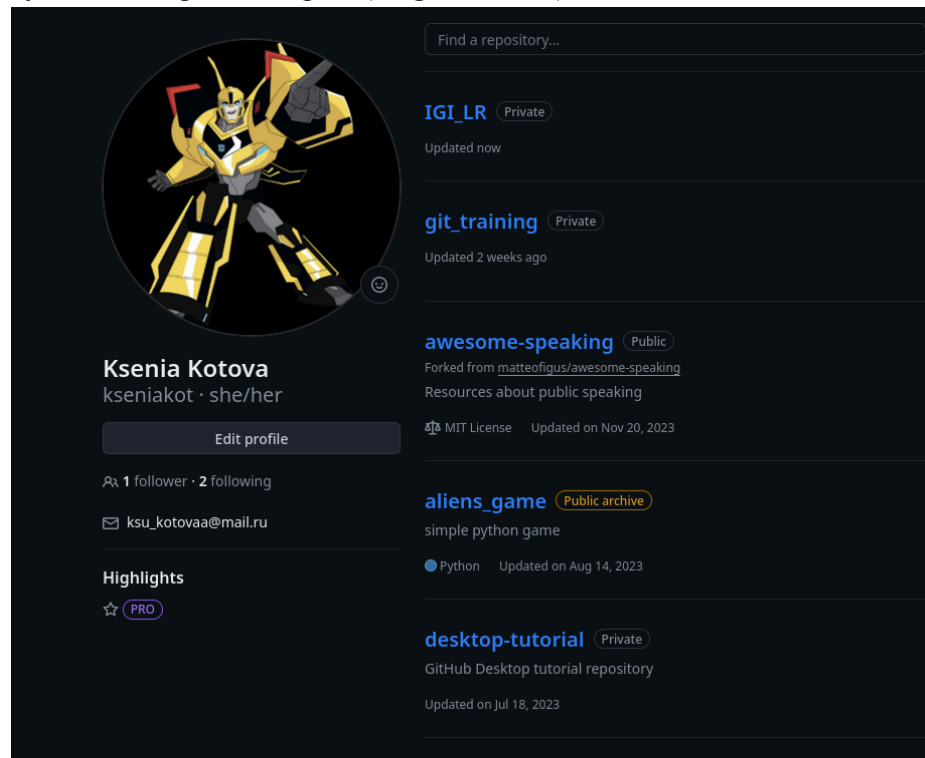
```
~/253503_KOTOVA_12/IGI/LR1 main !1
└─ cat test.txt
Hello?
And I am tiredgit log --oneline

~/253503_KOTOVA_12/IGI/LR1 main !1
└─ git restore test.txt

~/253503_KOTOVA_12/IGI/LR1 main
└─ cat test.txt
Hello?
```

1. Выполните следующие действия с удаленным репозиторием:

a. создайте удаленный репозиторий (на github.com)



b. просмотрите информацию о нем, внесите изменения и опять просмотрите (remote, fetch).

```
~/253503_KOTOVA_12/IGI/LR1 main
└─ git remote add origin git@github.com:kseniakot/IGI_LR.git

~/253503_KOTOVA_12/IGI/LR1 main
└─ git remote -v
origin  git@github.com:kseniakot/IGI_LR.git (fetch)
origin  git@github.com:kseniakot/IGI_LR.git (push)

~/253503_KOTOVA_12/IGI/LR1 main
```

```
~/253503_KOTOVA_12/IGI/LR1 main
└─ git push -u origin main
Enumerating objects: 52, done.
Counting objects: 100% (52/52), done.
Delta compression using up to 8 threads
Compressing objects: 100% (32/32), done.
Writing objects: 100% (52/52), 3.71 KiB | 1.24 MiB/s, done.
Total 52 (delta 7), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (7/7), done.
To github.com:kseniakot/IGI_LR.git
* [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
```

```
~/253503_KOTOVA_12/IGI/LR1 main
└─ git checkout LR1_IGI
Switched to branch 'LR1_IGI'

~/253503_KOTOVA_12/IGI/LR1 LR1_IGI
└─ git push -u origin LR1_IGI
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 343 bytes | 343.00 KiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'LR1_IGI' on GitHub by visiting:
remote:      https://github.com/kseniakot/IGI_LR/pull/new/LR1_IGI
remote:
To github.com:kseniakot/IGI_LR.git
* [new branch]      LR1_IGI -> LR1_IGI
branch 'LR1_IGI' set up to track 'origin/LR1_IGI'.
```

```
~/253503_KOTOVA_12/IGI/LR1 IGI
└─ git rm -f test?.txt
rm 'IGI/LR1/test1.txt'
rm 'IGI/LR1/test2.txt'

~/253503_KOTOVA_12/IGI/LR1 IGI +2
└─ git commit -am 'Delete text files'
[IGI 95af47a] Delete text files
2 files changed, 2 deletions(-)
delete mode 100644 IGI/LR1/test1.txt
delete mode 100644 IGI/LR1/test2.txt

~/253503_KOTOVA_12/IGI/LR1 IGI
└─ git status
On branch IGI
nothing to commit, working tree clean

~/253503_KOTOVA_12/IGI/LR1 IGI
└─ git push -u origin IGI
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
```

```
~/253503_KOTOVA_12/IGI/LR1 IGI
git fetch origin
remote: Enumerating objects: 1, done.
remote: Counting objects: 100% (1/1), done.
remote: Total 1 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (1/1), 897 bytes | 897.00 KiB/s, done.
From github.com:kсениакот/IGI_LR
   affbcb5..0b67973  main       -> origin/main

~/253503_KOTOVA_12/IGI/LR1 IGI
git log --oneline
95af47a (HEAD -> IGI, origin/IGI) Delete text files
affbcb5 (main) Modify test.txt
a3d8e82 Add test.txt
83d7dac Add readme.txt and test.txt from indiv task
6410fa5 Add some test files
a584024 Delete HTML files
6a87078 Delete test.css
d26a298 Create test files
c2c12f0 Rename file2.txt
582caaf Rename file1.txt
3d4adcd (STRWEB, LR5_IGI, LR4_STRWEB, LR4_IGI, LR3_STRWEB, LR3_I
b4b0d31 Add .gitignore
7acc149 Modify file1.txt file2.txt
```

```
~/253503_KOTOVA_12/IGI/LR1 IGI
git checkout main
Switched to branch 'main'
Your branch is behind 'origin/main' by 2 commits, and can be fast-forwarded.
(use "git pull" to update your local branch)

~/253503_KOTOVA_12/IGI/LR1 main ↓ 2
git merge remotes/origin/main
Updating affbcb5..0b67973
Fast-forward
 IGI/LR1/test1.txt | 1 -
 IGI/LR1/test2.txt | 1 -
 2 files changed, 2 deletions(-)
 delete mode 100644 IGI/LR1/test1.txt
 delete mode 100644 IGI/LR1/test2.txt
```

- с. измените несколько файлов в вашем проекте и перенесите их в удаленный репозиторий,

```
~/253503_KOTOVA_12/IGI/LR1 main
cat newFile1.txt
I am modifying this file

~/253503_KOTOVA_12/IGI/LR1 main
echo "Again" >> newFile1.txt

~/253503_KOTOVA_12/IGI/LR1 main !1
git commit -am 'Modify newFile1.txt'
[main f085a4b] Modify newFile1.txt
1 file changed, 1 insertion(+)
```

```
~/253503_KOTOVA_12/IGI/LR1 main ↑1
echo "Again" >> newFile2.txt

~/253503_KOTOVA_12/IGI/LR1 main ↑1 !1
git add newFile2.txt && git commit -c HEAD
[main 77af08e] Modify newFile2.txt
Date: Sun Feb 18 19:40:12 2024 +0300
1 file changed, 1 insertion(+)

~/253503_KOTOVA_12/IGI/LR1 main ↑2
git log --oneline
77af08e (HEAD -> main) Modify newFile2.txt
f085a4b Modify newFile1.txt
0b67973 (origin/main) Merge pull request #1 from kseniakot/IGI
95af47a (origin/IGI, IGI) Delete text files
affbcb5 Modify test.txt
a3d8e82 Add test.txt
83d7dac Add readme.txt and test.txt from indiv task
6410fa5 Add some test files
a584024 Delete HTML files
6a87078 Delete test.css
d26a298 Create test files
```

```
~/253503_KOTOVA_12/IGI/LR1 main ↑2
git push
Enumerating objects: 13, done.
Counting objects: 100% (13/13), done.
Delta compression using up to 8 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (9/9), 787 bytes | 787.00 KiB/s, done.
Total 9 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
To github.com:kseniakot/IGI_LR.git
0b67973..77af08e main -> main
```

Commits on Feb 18, 2024

Modify newFile2.txt kseniakot committed 3 minutes ago	77af08e <a href="#">copy</a> <a href="#">compare</a>
Modify newFile1.txt kseniakot committed 6 minutes ago	f085a4b <a href="#">copy</a> <a href="#">compare</a>

d. переименуйте свой удаленный репозиторий

Repository name

IGI\_LR\_new [Rename](#)

☐ Template repository

```
~/253503_KOTOVA_12/IGI/LR1 main
git remote set-url origin git@github.com:kseniakot/IGI_LR_new.git

~/253503_KOTOVA_12/IGI/LR1 main
git remote -v
origin git@github.com:kseniakot/IGI_LR_new.git (fetch)
origin git@github.com:kseniakot/IGI_LR_new.git (push)
```

```
~/253503_KOTOVA_12 LR2_IGI ?1
git remote rename origin destination
Renaming remote references: 100% (4/4), done.

~/253503_KOTOVA_12 LR2_IGI ?1
git remote -v
destination      git@github.com:kseniakot/IGI_LR_new.git (fetch)
destination      git@github.com:kseniakot/IGI_LR_new.git (push)

~/253503_KOTOVA_12 LR2_IGI ?1
```

е. получите данные из удаленного репозитория

```
~/253503_KOTOVA_12/IGI/LR1 main
git fetch origin
```

ф. просмотреть историю изменений

```
~/253503_KOTOVA_12/IGI/LR1 main
git log --oneline
77af08e (HEAD -> main, origin/main) Modify newFile2.txt
f085a4b Modify newFile1.txt
0b67973 Merge pull request #1 from kseniakot/IGI
95af47a (origin/IGI, IGI) Delete text files
affbcb5 Modify test.txt
a3d8e82 Add test.txt
83d7dac Add readme.txt and test.txt from indiv task
6410fa5 Add some test files
a584024 Delete HTML files
6a87078 Delete test.css
d26a298 Create test files
c2c12f0 Rename file2.txt
582caaf Rename file1.txt
3d4adcd (STRWEB, LR5_IGI, LR4_STRWEB, LR4_IGI, LR3_STRWEB, LR3_IGI, LR2_STRWEB, LR2_IGI, LR1_STRWEB) Modify .gitignore
b4b0d31 Add .gitignore
```