

Министерство образования Республики Беларусь
Учреждение образования «Белорусский государственный университет
информатики и радиоэлектроники»

Факультет компьютерных систем и сетей

Кафедра информатики

Дисциплина: Избранные главы информатики

ОТЧЕТ
к лабораторной работе
на тему

Система контроля версий Git

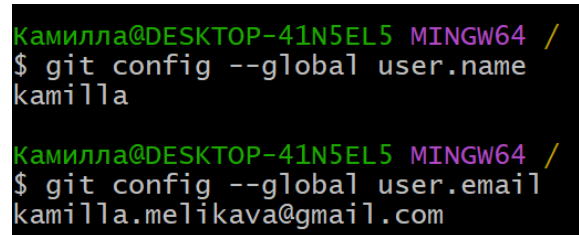
БГУИР КП 1-40 04 01

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Проверила: Жвакина Анна Васильевна

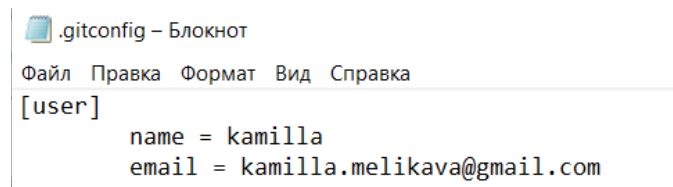
Цель: Познакомиться с возможностями и получить практические навыки работы с системой контроля версий Git.

Задание 1. Подготовьте рабочее окружение в соответствии с типом вашей операционной системы (Windows), установите Git, выполните базовую настройку.



```
Камилла@DESKTOP-41N5EL5 MINGW64 /  
$ git config --global user.name  
kamilla  
  
Камилла@DESKTOP-41N5EL5 MINGW64 /  
$ git config --global user.email  
kamilla.melikava@gmail.com
```

Рисунок 1 – Базовые настройки



```
.gitconfig – Блокнот  
Файл Правка Формат Вид Справка  
[user]  
    name = kamilla  
    email = kamilla.melikava@gmail.com
```

Рисунок 2 – Файл .gitconfig

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

253502_MELIKAVA_15

IGI

LR1 (Папки и файлы в соответствии с индивидуальным заданием, отчет по ЛР1 со скринами действий и результатов)

LR2

LR3

LR4

LR5

STRWEB

LR1

LR2

LR3

LR4

```
C:\Users\Камила\Documents\253505>dir /b
3 семестр
4 семестр
C# Lectures 2 sem

C:\Users\Камила\Documents\253505>md 253502_MELIKAVA_15

C:\Users\Камила\Documents\253505>dir /b
253502_MELIKAVA_15
3 семестр
4 семестр
C# Lectures 2 sem
```

Рисунок 1 – Создание корневой папки

```
C:\Users\Камила\Documents\253505>cd 253502_MELIKAVA_15

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>md IGI

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>md STRWEB

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>dir /b
IGI
STRWEB
```

Рисунок 2 – Создание папок второго уровня

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>cd IGI

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI>md LR1

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI>md LR2

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI>md LR3

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI>md LR4

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI>md LR5

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI>cd ..

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>cd STRWEB

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\STRWEB>md LR1

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\STRWEB>md LR2

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\STRWEB>md LR3

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\STRWEB>md LR4

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\STRWEB>cd ..
```

Рисунок 3 – Создание папок третьего уровня

```

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>cd IGI
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI>cd LR1
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>md bin
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>cd bin
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\bin>md 455
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\bin>md bar
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\bin>cd bar
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\bin\bar>md 277
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\bin\bar>md tail
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\bin\bar>cd tail
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\bin\bar\tail>md 255
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\bin\bar\tail>cd ..
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\bin\bar>copy con readme.txt
244
^Z
Скопировано файлов:      1.
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\bin\bar>type readme.txt
244
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\bin\bar>cd ..
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\bin>cd ..

```

Рисунок 4 – Создание первого поддерева

```

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>md foo
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>cd foo
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\foo>md 213
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\foo>copy con test.txt
717
^Z
Скопировано файлов:      1.
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\foo>type test.txt
717
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\foo>md baz
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\foo>cd baz
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\foo\baz>md 007
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\foo\baz>md example
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\foo\baz>cd example
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\foo\baz\example>md 222
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\foo\baz\example>cd ..
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\foo\baz>cd ..
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1\foo>cd ..
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>cd ..

```

Рисунок 5 – Создание второго поддерева

```

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI>tree LR1
Структура папок
Серийный номер тома: 000000F1 0A96:81A6
C:\USERS\КАМИЛА\DOCUMENTS\253505\253502_MELIKAVA_15\IGI\LR1
├── bin
│   ├── 455
│   └── bar
│       ├── 277
│       └── tail
│           └── 255
└── foo
    ├── 213
    └── baz
        ├── 007
        └── example
            └── 222

```

Рисунок 6 – Визуализация структуры папок

```

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git init
Initialized empty Git repository in C:/Users/Камила/Documents/253505/253502_MELIKAVA_15/.git/

```

Рисунок 7 – Создание локального репозитория

Задание 3. Создайте репозиторий внутри папки LR1 с помощью клонирования проекта с сайта github.com.

```

C:\Users\Камила>cd Documents
C:\Users\Камила\Documents>cd 253505
C:\Users\Камила\Documents\253505>cd 253502_MELIKAVA_15
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>cd IGI
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI>cd LR1
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git clone https://github.com/smartaqorg/geometric_lib
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 | 1.53 MiB/s, done.
Resolving deltas: 100% (6/6), done.

```

Рисунок 1 – Клонирование удаленного репозитория в папку LR1

IGI > LR1			Поиск в: LR1
	Имя		Дата изменения
1	bin		14.02.2024 19:59
	foo		14.02.2024 20:07
	geometric_lib		15.02.2024 16:56

Рисунок 2 – Локальный репозиторий geometric_lib

```

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git status
On branch main

No commits yet

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

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

```

Рисунок 3 – Состояние репозитория после git clone

Задание 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 ...)

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git add bin\bar\readme.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git status
On branch main

No commits yet

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

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

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git add foo\test.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git status
On branch main

No commits yet

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

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

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git add geometric_lib
warning: adding embedded git repository: IGI/LR1/geometric_lib
hint: You've added another git repository inside your current repository.
hint: Clones of the outer repository will not contain the contents of
hint: the embedded repository and will not know how to obtain it.
hint: If you meant to add a submodule, use:
hint:   git submodule add <url> IGI/LR1/geometric_lib
hint: If you added this path by mistake, you can remove it from the
hint: index with:
hint:   git rm --cached IGI/LR1/geometric_lib
hint: See "git help submodule" for more information.

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   bin/bar/readme.txt
        new file:   foo/test.txt
        new file:   geometric_lib
```

- б. внесите изменения в файлы

readme.txt – Блокнот

Файл	Правка	Формат	Вид	Справка
244				
line added to modify the file				

test.txt – Блокнот

Файл Правка Формат Вид Справка

717

another line added

IGI > LR1		Поиск в: LR1
Имя	Дата изменения	
bin	14.02.2024 19:59	
foo	14.02.2024 20:07	
geometric_lib	18.02.2024 21:44	
ReportLR1.docx	18.02.2024 21:55	

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   bin/bar/readme.txt
        new file:   foo/test.txt
        new file:   geometric_lib

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:   bin/bar/readme.txt
        modified:   foo/test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        ReportLR1.docx
```

с. Выполните коммиты к проиндексированным файлам

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git add ReportLR1.docx

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   ReportLR1.docx
        new file:   geometric_lib

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

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git commit -m "Added geometric_lib and the report that I've forgotten to add before"
[main (root-commit) 8d8a13d] Added geometric_lib and the report that I've forgotten to add before
 2 files changed, 1 insertion(+)
 create mode 100644 IGI/LR1/ReportLR1.docx
 create mode 160000 IGI/LR1/geometric_lib
```

First commit

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git add bin\bar\readme.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git status
On branch main

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   bin/bar/readme.txt

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

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git commit -m "Modified readme.txt by adding one line"
[main 2bed2df] Modified readme.txt by adding one line
 1 file changed, 2 insertions(+)
 create mode 100644 IGI/LR1/bin/bar/readme.txt
```

Second commit

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    foo/

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

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git add foo\test.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git commit -m "Modified test.txt"
[main 4c89e0d] Modified test.txt
1 file changed, 2 insertions(+)
create mode 100644 IGI/LR1/foo/test.txt
```

Third commit

Now:

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git status
On branch main
nothing to commit, working tree clean

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git log --pretty=oneline
4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main) Modified test.txt
2bed2dfec2771676283dd2224fe375a23ed883cc Modified readme.txt by adding one line
8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b Added geometric_lib and the report that I've forgotten to add before
```

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

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>for /l %a in (1 1 3) do type nul > "%a.txt"

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>type nul 1>"1.txt"

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>type nul 1>"2.txt"

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>type nul 1>"3.txt"
```

Добавлена группа файлов

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>copy con 4.txt
some text in 4th file
^Z
Скопировано файлов: 1.
```

Добавлен один файл

IGI > LR1		Поиск в: LR1
Имя	Дата изменения	
bin	14.02.2024 19:59	
foo	14.02.2024 20:07	
geometric_lib	18.02.2024 21:44	
1.txt	18.02.2024 22:35	
2.txt	18.02.2024 22:35	
3.txt	18.02.2024 22:35	
4.txt	18.02.2024 22:37	
ReportLR1.docx	18.02.2024 21:55	


```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>del 4.txt
```

Удален один файл

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>del *.txt
```

Удалена группа файлов с расширением .txt

IGI > LR1 >		Поиск в: LR1
Имя	Дата изменения	
bin	14.02.2024 19:59	
foo	14.02.2024 20:07	
geometric_lib	18.02.2024 21:44	
ReportLR1.docx	18.02.2024 21:55	

е. Переименуйте файлы

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>ren ReportLR1.docx LR1Report.docx
```

IGI > LR1		Поиск в: LR1
Имя	Дата изменения	
bin	14.02.2024 19:59	
foo	14.02.2024 20:07	
geometric_lib	18.02.2024 21:44	
LR1Report.docx	18.02.2024 21:55	

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>ren ReportLR1.docx LR1Report.docx
```

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>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)

deleted: ReportLR1.docx

Untracked files:

(use "git add <file>..." to include in what will be committed)

LR1Report.docx

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git commit -a
```

```
[main 8ee6f09] "Renamed a file"
```

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

```
delete mode 100644 IGI/LR1/ReportLR1.docx
```

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git status
```

On branch main

Untracked files:

(use "git add <file>..." to include in what will be committed)

LR1Report.docx

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git add LR1Report.docx

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   LR1Report.docx
```

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git commit -m "saved new file"

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>git status
On branch main
nothing to commit, working tree clean
```

- f. Создайте для IGI и STRWEB, а также для каждой ЛР, вложенной в них, отдельные ветки, переместите папки и файлы на соответствующие ветки.

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --all --decorate --oneline --graph
* cf6f3f8 (HEAD -> main) removed test from main
* c923bcc added test file to main
* c33207b (LR4_web) start strweb/lr4
| * d86ee58 (LR3_web) start strweb/lr3
|/
| * fc74a8e (LR2_web) start strweb/lr2
|/
| * dfc67b9 (LR1_web) start strweb/lr1
|/
* c9910d6 (STRWEB) start strweb
/
* 993ce1b (LR4) start igi/lr4
| * 4ab6c66 (LR3) start igi/lr3
|/
| * 10d5039 (LR2) start igi/lr2
|/
| * c2e29cc (LR1) start igi/lr1
|/
* 2a1e34e (IGI) start igi branch
/
* f9efb79 saved new file and added geometric lib
* 8ee6f09 "Renamed a file"
* 1ac6670 removed empty geometric lib
* 722a09c deleted test.txt
* a5da7fe Added test.txt on main
* 4c89e0d Modified test.txt
* 2bed2df Modified readme.txt by adding one line
* 8d8a13d Added geometric_lib and the report that I've forgotten to add before
```

Как это создавалось:

```

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch IGI
Switched to branch 'IGI'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git branch -v
* IGI 2a1e34e start igi branch
  main f9efb79 saved new file and added geometric lib

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git branch LR1

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git branch -v
* IGI 2a1e34e start igi branch
  LR1 2a1e34e start igi branch
  main f9efb79 saved new file and added geometric lib

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch LR1
Switched to branch 'LR1'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git status
On branch LR1
Untracked files:
  (use "git add <file>..." to include in what will be committed)
  IGI/LR1/start_lr1.txt

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

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git add IGI\LR1\start_lr1.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git status
On branch LR1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
  new file:   IGI/LR1/start_lr1.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git commit -m "start igi/lr1"
[LR1 c2e29cc] start igi/lr1
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 IGI/LR1/start_lr1.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git status
On branch LR1
nothing to commit, working tree clean

```

```

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git branch -v
  IGI 2a1e34e start igi branch
* LR1 c2e29cc start igi/lr1
  main f9efb79 saved new file and added geometric lib

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --all --decorate --oneline --graph
* c2e29cc (HEAD -> LR1) start igi/lr1
* 2a1e34e (IGI) start igi branch
* f9efb79 (main) saved new file and added geometric lib
* 8ee6f09 "Renamed a file"
* 1ac6670 removed empty geometric lib
* 722a09c deleted test.txt
* a5da7fe Added test.txt on main
* 4c89e0d Modified test.txt
* 2bed2df Modified readme.txt by adding one line
* 8d8a13d Added geometric_lib and the report that I've forgotten to add before

```

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

1) -p – Разница в изменениях каждого коммита

```
C:\Users\Камилла\Documents\253505\253502_MELIKAVA_15>git log -p
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:16:06 2024 +0300

    Modified test.txt

diff --git a/IGI/LR1/foo/test.txt b/IGI/LR1/foo/test.txt
new file mode 100644
index 0000000..4d4729b
--- /dev/null
+++ b/IGI/LR1/foo/test.txt
@@ -0,0 +1,2 @@
+717
+another line added
\ No newline at end of file

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:13:43 2024 +0300

    Modified readme.txt by adding one line

diff --git a/IGI/LR1/bin/bar/readme.txt b/IGI/LR1/bin/bar/readme.txt
new file mode 100644
index 0000000..4ad497f
--- /dev/null
+++ b/IGI/LR1/bin/bar/readme.txt
@@ -0,0 +1,2 @@
+244
+line added to modify the file
\ No newline at end of file

commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:07:55 2024 +0300

    Added geometric_lib and the report that I've forgotten to add before

diff --git a/IGI/LR1/ReportLR1.docx b/IGI/LR1/ReportLR1.docx
new file mode 100644
index 0000000..e69de29
<IGI/LR1/ReportLR1.docx> does not seem to be a docx file!
diff --git a/IGI/LR1/geometric_lib b/IGI/LR1/geometric_lib
new file mode 160000
index 0000000..d078c8d
--- /dev/null
+++ b/IGI/LR1/geometric_lib
@@ -0,0 +1 @@
+Subproject commit d078c8d9ee6155f3cb0e577d28d337b791de28e2
```

2) --stat – Статистика для коммита

```
C:\Users\Камилла\Documents\253505\253502_MELIKAVA_15>git log --stat
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:16:06 2024 +0300

    Modified test.txt

IGI/LR1/foo/test.txt | 2 ++
1 file changed, 2 insertions(+)

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:13:43 2024 +0300

    Modified readme.txt by adding one line

IGI/LR1/bin/bar/readme.txt | 2 ++
1 file changed, 2 insertions(+)

commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:07:55 2024 +0300

    Added geometric_lib and the report that I've forgotten to add before

IGI/LR1/ReportLR1.docx | 0
IGI/LR1/geometric_lib | 1 +
2 files changed, 1 insertion(+)
```

3) --shortstat – Количество изменений/вставок/удалений при применении команды --stat

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --stat --shortstat
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:16:06 2024 +0300

    Modified test.txt

IGI/LR1/foo/test.txt | 2 ++
1 file changed, 2 insertions(+)
1 file changed, 2 insertions(+)

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:13:43 2024 +0300

    Modified readme.txt by adding one line

IGI/LR1/bin/bar/readme.txt | 2 ++
1 file changed, 2 insertions(+)
1 file changed, 2 insertions(+)

commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:07:55 2024 +0300

    Added geometric_lib and the report that I've forgotten to add before

IGI/LR1/ReportLR1.docx | 0
IGI/LR1/geometric_lib | 1 +
2 files changed, 1 insertion(+)
2 files changed, 1 insertion(+)
```

4) --name-only – Отображает информацию о коммите и имена измененных файлов

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --name-only
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:16:06 2024 +0300

    Modified test.txt

IGI/LR1/foo/test.txt

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:13:43 2024 +0300

    Modified readme.txt by adding one line

IGI/LR1/bin/bar/readme.txt

commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:07:55 2024 +0300

    Added geometric_lib and the report that I've forgotten to add before

IGI/LR1/ReportLR1.docx
IGI/LR1/geometric_lib
```

5) --name-status – Выводит сообщение о списке файлов, которые были изменены, в т.ч. добавлены и удалены.

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --name-status
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:16:06 2024 +0300

    Modified test.txt

A       IGI/LR1/foo/test.txt

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:13:43 2024 +0300

    Modified readme.txt by adding one line

A       IGI/LR1/bin/bar/readme.txt

commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:07:55 2024 +0300

    Added geometric_lib and the report that I've forgotten to add before

A       IGI/LR1/ReportLR1.docx
A       IGI/LR1/geometric_lib
```

6) --relative-date – Отображает дату применения изменений в относительном формате

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --relative-date
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Date: 15 hours ago

    Modified test.txt

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Date: 15 hours ago

    Modified readme.txt by adding one line

commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
Author: kamilla <kamilla.melikava@gmail.com>
Date: 15 hours ago

    Added geometric_lib and the report that I've forgotten to add before
```

7) `--pretty=oneline/full/short` – Меняет формат вывода истории коммитов (в одну строку, полный вывод, краткий вывод)

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --pretty=oneline
4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI) Modified test.txt
2bed2dfec2771676283dd2224fe375a23ed883cc Modified readme.txt by adding one line
8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b Added geometric_lib and the report that I've forgotten to add before

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --pretty=short
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>

    Modified test.txt

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>

    Modified readme.txt by adding one line

commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
Author: kamilla <kamilla.melikava@gmail.com>

    Added geometric_lib and the report that I've forgotten to add before

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --pretty=full
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Commit: kamilla <kamilla.melikava@gmail.com>

    Modified test.txt

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Commit: kamilla <kamilla.melikava@gmail.com>

    Modified readme.txt by adding one line

commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
Author: kamilla <kamilla.melikava@gmail.com>
Commit: kamilla <kamilla.melikava@gmail.com>

    Added geometric_lib and the report that I've forgotten to add before
```

8) `--graph` – Показывает ветвление веток Git и историю их слияний

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --graph
* commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
| Author: kamilla <kamilla.melikava@gmail.com>
| Date: Sun Feb 18 22:16:06 2024 +0300
|
|    Modified test.txt
|
* commit 2bed2dfec2771676283dd2224fe375a23ed883cc
| Author: kamilla <kamilla.melikava@gmail.com>
| Date: Sun Feb 18 22:13:43 2024 +0300
|
|    Modified readme.txt by adding one line
|
* commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
| Author: kamilla <kamilla.melikava@gmail.com>
| Date: Sun Feb 18 22:07:55 2024 +0300
|
|    Added geometric_lib and the report that I've forgotten to add before
```

h. 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)

1) -n

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log -n
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:16:06 2024 +0300

    Modified test.txt

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:13:43 2024 +0300

    Modified readme.txt by adding one line
```

2) --since, --after

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --since="2024-02-14"
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:16:06 2024 +0300

    Modified test.txt

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:13:43 2024 +0300

    Modified readme.txt by adding one line

commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:07:55 2024 +0300

    Added geometric_lib and the report that I've forgotten to add before

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --since="2024-03-01"
```

3) --until, --before

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --until="2024-03-03"
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:16:06 2024 +0300

    Modified test.txt

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:13:43 2024 +0300

    Modified readme.txt by adding one line

commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:07:55 2024 +0300

    Added geometric_lib and the report that I've forgotten to add before
```

4) --author

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --author="kamilla"
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:16:06 2024 +0300

    Modified test.txt

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:13:43 2024 +0300

    Modified readme.txt by adding one line

commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:07:55 2024 +0300

    Added geometric_lib and the report that I've forgotten to add before

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --author="kamila"
```

5) --committer

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --committer="kamilla"
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:16:06 2024 +0300

    Modified test.txt

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:13:43 2024 +0300

    Modified readme.txt by adding one line

commit 8d8a13d2e6be0ff8c426be6fa5821b2e2b75ef2b
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:07:55 2024 +0300

    Added geometric_lib and the report that I've forgotten to add before
```

6) --grep

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --grep="Modified"
commit 4c89e0d2f78406ed54ab1fde6ecd5b5f97048e9b (HEAD -> main, STRWEB, LR5, LR4_S, LR4, LR3_S, LR3, LR2_S, LR2, LR1_S, LR1, IGI)
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:16:06 2024 +0300

    Modified test.txt

commit 2bed2dfec2771676283dd2224fe375a23ed883cc
Author: kamilla <kamilla.melikava@gmail.com>
Date: Sun Feb 18 22:13:43 2024 +0300

    Modified readme.txt by adding one line
```

i. Найдите разницу в изменениях для каждого коммита

```
* 2bed2df Modified readme.txt by adding one line
* 8d8a13d Added geometric_lib and the report that I've forgotten to add before

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git diff 8d8a13d 2bed2df
diff --git a/IGI/LR1/bin/bar/readme.txt b/IGI/LR1/bin/bar/readme.txt
new file mode 100644
index 0000000..4ad497f
--- /dev/null
+++ b/IGI/LR1/bin/bar/readme.txt
@@ -0,0 +1,2 @@
+244
+line added to modify the file
\ No newline at end of file
```



```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git diff cf6f3f8 c923bcc
diff --git a/test/test.txt b/test/test.txt
new file mode 100644
index 0000000..e69de29
```

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

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch LR1
Switched to branch 'LR1'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>cd IGI\LR1

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>copy con test.txt
15 variant
^Z
Скопировано файлов:          1.

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI\LR1>cd..

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15\IGI>cd..

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git status
On branch LR1
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    IGI/LR1/test.txt

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

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git add IGI\LR1\test.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git status
On branch LR1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   IGI/LR1/test.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git commit -m "added test.txt"
[LR1 f902ab2] added test.txt
1 file changed, 1 insertion(+)
create mode 100644 IGI/LR1/test.txt
```

```

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --all --oneline --graph
* f902ab2 (HEAD -> LR1) added test.txt
* c2e29cc start igi/lr1
| * cf6f3f8 (main) removed test from main
| * c923bcc added test file to main
| | * c33207b (LR4_web) start strweb/lr4
| | | * d86ee58 (LR3_web) start strweb/lr3
| | | /
| | | * fc74a8e (LR2_web) start strweb/lr2
| | | /
| | | * dfc67b9 (LR1_web) start strweb/lr1
| | | /
| | * c9910d6 (STRWEB) start strweb
| | /
| | * 993ce1b (LR4) start igi/lr4
| | /
| | /
| | * 4ab6c66 (LR3) start igi/lr3
| | /
| | /
| | * 10d5039 (LR2) start igi/lr2
| | /
| | /
| * 2a1e34e (IGI) start igi branch
| /
* f9efb79 saved new file and added geometric lib
* 8ee6f09 "Renamed a file"
* 1ac6670 removed empty geometric lib
* 722a09c deleted test.txt
* a5da7fe Added test.txt on main
* 4c89e0d Modified test.txt
* 2bed2df Modified readme.txt by adding one line
* 8d8a13d Added geometric_lib and the report that I've forgotten to add before

```

```

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git reset --hard HEAD~1
HEAD is now at c2e29cc start igi/lr1

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --all --oneline --decorate --graph
* cf6f3f8 (main) removed test from main
* c923bcc added test file to main
| * c33207b (LR4_web) start strweb/lr4
| | * d86ee58 (LR3_web) start strweb/lr3
| | | /
| | | * fc74a8e (LR2_web) start strweb/lr2
| | | /
| | | * dfc67b9 (LR1_web) start strweb/lr1
| | | /
| | * c9910d6 (STRWEB) start strweb
| | /
| | * 993ce1b (LR4) start igi/lr4
| | | * 4ab6c66 (LR3) start igi/lr3
| | | /
| | | /
| | | * 10d5039 (LR2) start igi/lr2
| | | /
| | | * c2e29cc (HEAD -> LR1) start igi/lr1
| | | /
| | | /
| | * 2a1e34e (IGI) start igi branch
| /
* f9efb79 saved new file and added geometric lib
* 8ee6f09 "Renamed a file"
* 1ac6670 removed empty geometric lib
* 722a09c deleted test.txt
* a5da7fe Added test.txt on main
* 4c89e0d Modified test.txt
* 2bed2df Modified readme.txt by adding one line
* 8d8a13d Added geometric_lib and the report that I've forgotten to add before

```

k. Проиндексируйте файл в вашем Git-репозитории, затем отмените его индексацию.

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git status
On branch LR1
nothing to commit, working tree clean

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git status
On branch LR1
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:   IGI/LR1/start_lr1.txt

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

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git add IGI\LR1\start_lr1.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git status
On branch LR1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   IGI/LR1/start_lr1.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git restore --staged IGI\LR1\start_lr1.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git status
On branch LR1
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:   IGI/LR1/start_lr1.txt

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

l. Внесите изменения в файл в вашем Git-репозитории и затем верните его в исходное состояние.



*start_lr1.txt – Блокнот

Файл Правка Формат Вид Справка

modified (task k)

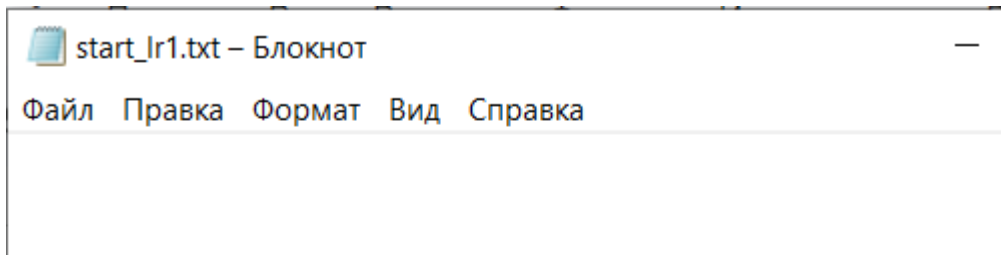
modify again (task l)

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git status
On branch LR1
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:   IGI/LR1/start_lr1.txt

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

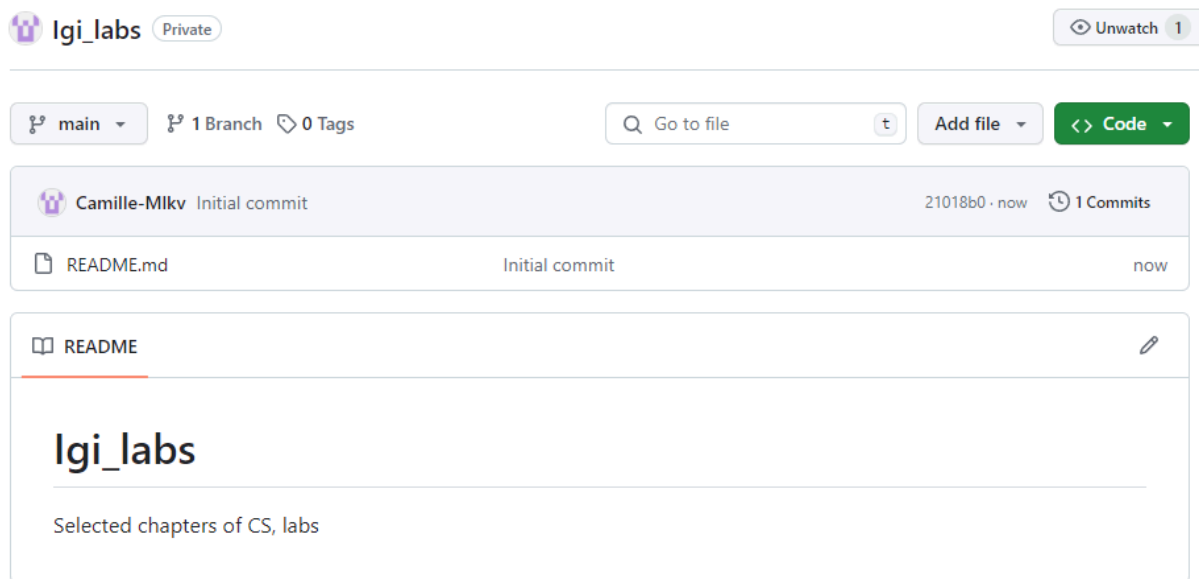
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git restore --worktree --staged IGI\LR1\start_lr1.txt

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git status
On branch LR1
nothing to commit, working tree clean
```



5. Выполните следующие действия с удаленным репозиторием:

а. создайте удаленный репозиторий (на github.com)



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

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git remote add Igi_labs https://github.com/Camille-Mlkv/Igi_labs.git
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git status
On branch main
nothing to commit, working tree clean

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git remote show
Igi_labs

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git remote show Igi_labs
* remote Igi_labs
Fetch URL: https://github.com/Camille-Mlkv/Igi_labs.git
Push URL: https://github.com/Camille-Mlkv/Igi_labs.git
HEAD branch: main
Remote branch:
  main new (next fetch will store in remotes/Igi_labs)
Local ref configured for 'git push':
  main pushes to main (local out of date)
```

Igi_labs / README.md in main

Edit Preview Code 55% faster with GitHub Copilot

```
1 # Igi_labs
2 Selected chapters of CS, labs
3 now it's modified|
```

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git fetch Igi_labs
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 6 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (6/6), 1.79 KiB | 228.00 KiB/s, done.
From https://github.com/Camille-Mlkv/Igi_labs
* [new branch]      main      -> Igi_labs/main
```

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --all --oneline --decorate --graph
* 97f1f62 (Igi_labs/main) Modify README.md
* 21018b0 Initial commit
* cf6f3f8 (HEAD -> main) removed test from main
* c923bcc added test file to main
* c33207b (LR4_web) start strweb/lr4
| * d86ee58 (LR3_web) start strweb/lr3
|/
| * fc74a8e (LR2_web) start strweb/lr2
|/
| * dfc67b9 (LR1_web) start strweb/lr1
|/
* c9910d6 (STRWEB) start strweb
/
* 993ce1b (LR4) start igi/lr4
| * 4ab6c66 (LR3) start igi/lr3
|/
| * 10d5039 (LR2) start igi/lr2
|/
| * c2e29cc (LR1) start igi/lr1
|/
* 2a1e34e (IGI) start igi branch
/
* f9efb79 saved new file and added geometric lib
* 8ee6f09 "Renamed a file"
* 1ac6670 removed empty geometric lib
* 722a09c deleted test.txt
* a5da7fe Added test.txt on main
* 4c89e0d Modified test.txt
* 2bed2df Modified readme.txt by adding one line
* 8d8a13d Added geometric_lib and the report that I've forgotten to add before
```

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

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git checkout Igi_labs/main
warning: unable to rmdir 'IGI/LR1/geometric_lib': Directory not empty
Note: switching to 'Igi_labs/main'.
```

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>
```

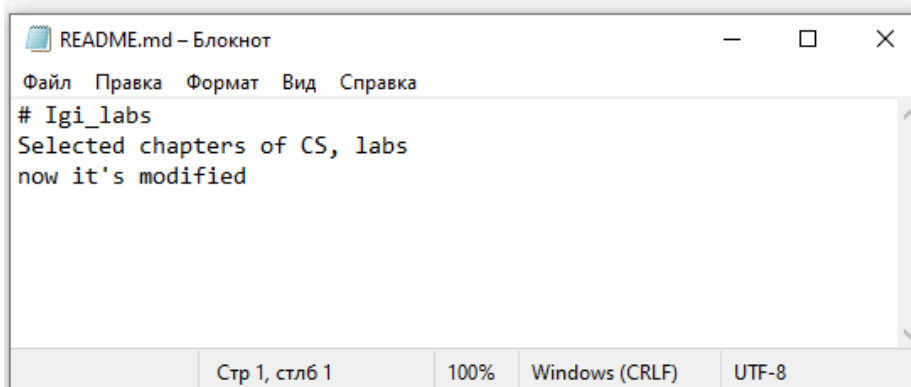
Or undo this operation with:

```
git switch -
```

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

HEAD is now at 97f1f62 Modify README.md

Имя	Дата изменения	Тип	Размер
.git	29.02.2024 21:26	Папка с файлами	
IGI	29.02.2024 20:54	Папка с файлами	
README.md	29.02.2024 21:26	Файл "MD"	1 КБ



```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git checkout main
Previous HEAD position was 97f1f62 Modify README.md
Switched to branch 'main'
```

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git merge Igi_labs/main
fatal: refusing to merge unrelated histories
```

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git merge Igi_labs/main --allow-unrelated-histories
Merge made by the 'ort' strategy.
 README.md | 3 +++
 1 file changed, 3 insertions(+)
 create mode 100644 README.md
```

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git push Igi_labs main
Enumerating objects: 45, done.
Counting objects: 100% (45/45), done.
Delta compression using up to 16 threads
Compressing objects: 100% (22/22), done.
Writing objects: 100% (44/44), 3.36 KiB | 1.12 MiB/s, done.
Total 44 (delta 6), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (6/6), done.
To https://github.com/Camille-Mlkv/Igi_labs.git
97f1f62..64c6c4b  main -> main
```

Igi_labs Private
Unwatch 1

main
1 Branch
0 Tags

Add file
Code

	Camille-Mlkv Merge remote-tracking branch 'Igi_labs/main'		64c6c4b · 6 minutes ago	14 Commits
	IGI/LR1	saved new file and added geometric lib	11 hours ago	
	README.md	Modify README.md	1 hour ago	
	main_file.txt	added main_file for a test	23 minutes ago	

README

Igi_labs

Selected chapters of CS, labs now it's modified

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch IGI
Switched to branch 'IGI'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git push Igi_labs IGI
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 318 bytes | 318.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'IGI' on GitHub by visiting:
remote:   https://github.com/Camille-Mlkv/Igi_labs/pull/new/IGI
remote:
To https://github.com/Camille-Mlkv/Igi_labs.git
* [new branch]      IGI -> IGI

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch STRWEB
Switched to branch 'STRWEB'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git push Igi_labs STRWEB
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 320 bytes | 320.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'STRWEB' on GitHub by visiting:
remote:   https://github.com/Camille-Mlkv/Igi_labs/pull/new/STRWEB
remote:
To https://github.com/Camille-Mlkv/Igi_labs.git
* [new branch]      STRWEB -> STRWEB
```



```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch LR1
Switched to branch 'LR1'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git push Igi_labs LR1
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 16 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 385 bytes | 385.00 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' on GitHub by visiting:
remote:   https://github.com/Camille-Mlkv/Igi_labs/pull/new/LR1
remote:
To https://github.com/Camille-Mlkv/Igi_labs.git
 * [new branch]      LR1 -> LR1

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch LR2
Switched to branch 'LR2'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git push Igi_labs LR2
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 385 bytes | 385.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'LR2' on GitHub by visiting:
remote:   https://github.com/Camille-Mlkv/Igi_labs/pull/new/LR2
remote:
To https://github.com/Camille-Mlkv/Igi_labs.git
 * [new branch]      LR2 -> LR2
```

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch LR3
Switched to branch 'LR3'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git push Igi_labs LR3
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 383 bytes | 383.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'LR3' on GitHub by visiting:
remote:   https://github.com/Camille-Mlkv/Igi_labs/pull/new/LR3
remote:
To https://github.com/Camille-Mlkv/Igi_labs.git
 * [new branch]      LR3 -> LR3

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch LR4
Switched to branch 'LR4'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git push Igi_labs LR4
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 383 bytes | 383.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'LR4' on GitHub by visiting:
remote:   https://github.com/Camille-Mlkv/Igi_labs/pull/new/LR4
remote:
To https://github.com/Camille-Mlkv/Igi_labs.git
 * [new branch]      LR4 -> LR4
```



```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch LR1_web
Switched to branch 'LR1_web'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git push Igi_labs LR1_web
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 16 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 396 bytes | 396.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'LR1_web' on GitHub by visiting:
remote:   https://github.com/Camille-Mlkv/Igi_labs/pull/new/LR1_web
remote:
To https://github.com/Camille-Mlkv/Igi_labs.git
 * [new branch]      LR1_web -> LR1_web

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch LR2_web
Switched to branch 'LR2_web'

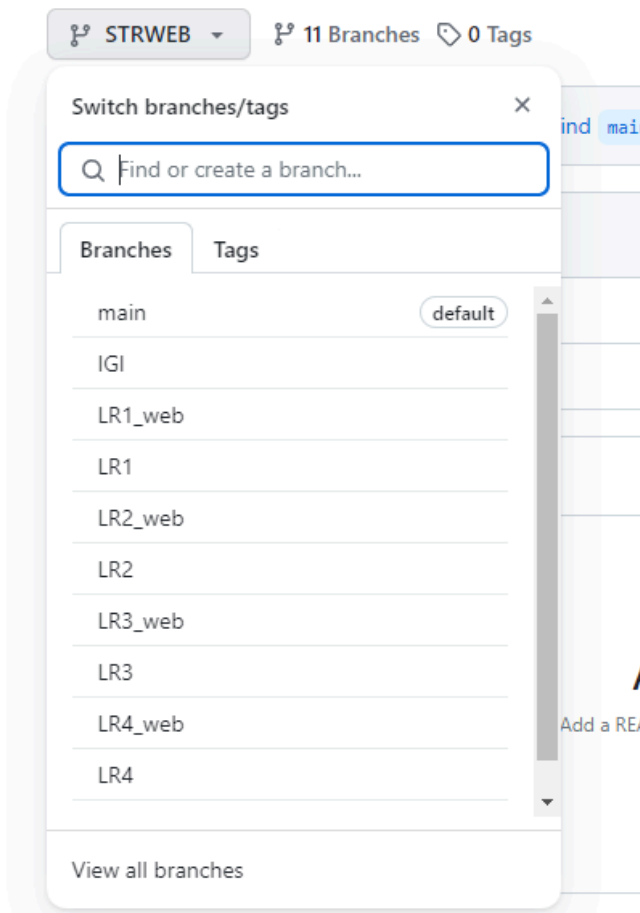
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git push Igi_labs LR2_web
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 16 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 395 bytes | 395.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'LR2_web' on GitHub by visiting:
remote:   https://github.com/Camille-Mlkv/Igi_labs/pull/new/LR2_web
remote:
To https://github.com/Camille-Mlkv/Igi_labs.git
 * [new branch]      LR2_web -> LR2_web
```

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch LR3_web
Switched to branch 'LR3_web'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git push Igi_labs LR3_web
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 16 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 394 bytes | 394.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'LR3_web' on GitHub by visiting:
remote:   https://github.com/Camille-Mlkv/Igi_labs/pull/new/LR3_web
remote:
To https://github.com/Camille-Mlkv/Igi_labs.git
 * [new branch]      LR3_web -> LR3_web

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch LR4_web
Switched to branch 'LR4_web'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git push Igi_labs LR4_web
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 16 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 395 bytes | 395.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'LR4_web' on GitHub by visiting:
remote:   https://github.com/Camille-Mlkv/Igi_labs/pull/new/LR4_web
remote:
To https://github.com/Camille-Mlkv/Igi_labs.git
 * [new branch]      LR4_web -> LR4_web
```

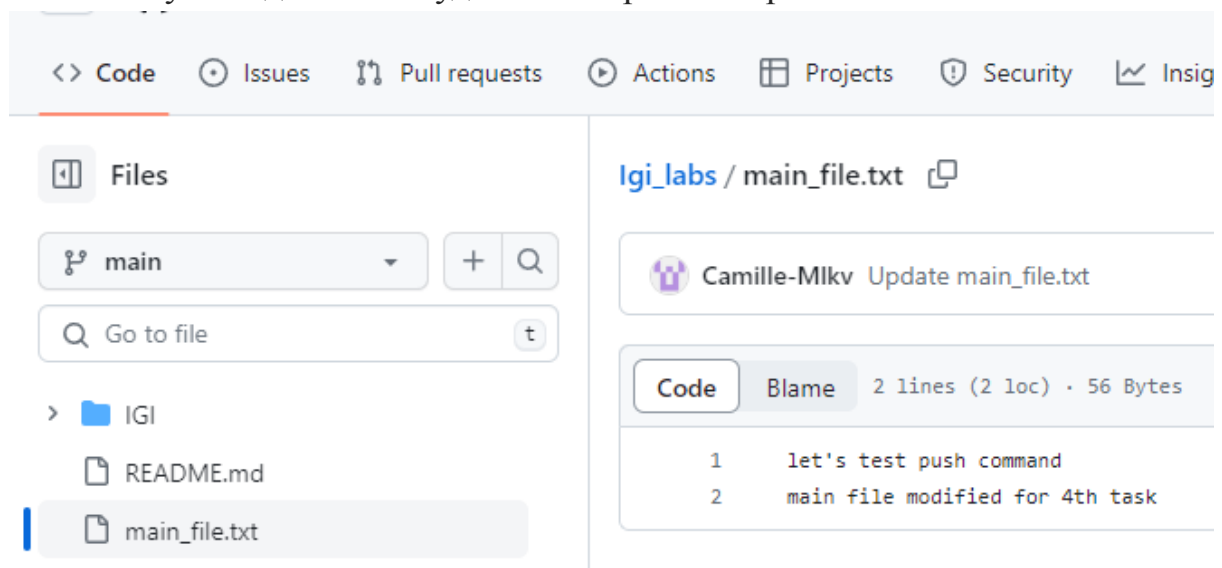


d. Переименуйте свой удаленный репозиторий.

```
C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git remote rename Igi_labs IGI_labs
Renaming remote references: 100% (11/11), done.

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git remote
IGI_labs
```

e. Получите данные из удаленного репозитория



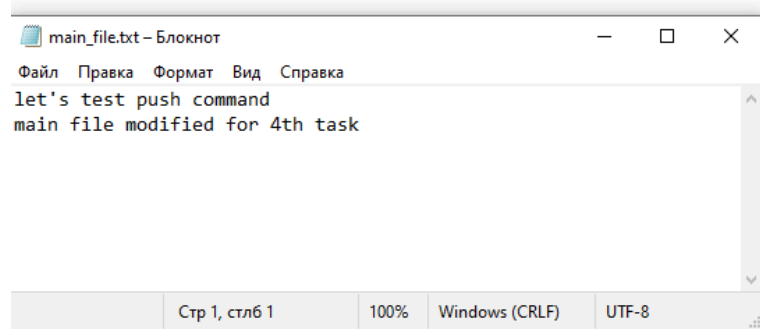
```

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git switch main
Switched to branch 'main'

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git pull IGI_labs main
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), 963 bytes | 87.00 KiB/s, done.
From https://github.com/Camille-Mlkv/Igi_labs
 * branch          main          -> FETCH_HEAD
 * [new branch]     main          -> IGI_labs/main
Updating 64c6c4b..240d31a
Fast-forward
 main_file.txt | 3 ++-
1 file changed, 2 insertions(+), 1 deletion(-)

```

Имя	Дата изменения	Тип	Размер
.git	29.02.2024 22:53	Папка с файлами	
IGI	29.02.2024 22:28	Папка с файлами	
main_file.txt	29.02.2024 22:53	Текстовый докум...	1 КБ
README.md	29.02.2024 22:52	Файл "MD"	1 КБ



f. Просмотреть историю изменений.

```

C:\Users\Камила\Documents\253505\253502_MELIKAVA_15>git log --all --graph --oneline --decorate
* 240d31a (HEAD -> main, Igi_labs/main) Update main_file.txt
* 64c6c4b Merge remote-tracking branch 'Igi_labs/main'

/
 * 97f1f62 Modify README.md
 * 21018b0 Initial commit
 * be76995 added main_file for a test
 * cf6f3f8 removed test from main
 * c923bcc added test file to main
 * c33207b (Igi_labs/LR4_web, LR4_web) start strweb/lr4
 * d86ee58 (Igi_labs/LR3_web, LR3_web) start strweb/lr3
/
 * fc74a8e (Igi_labs/LR2_web, LR2_web) start strweb/lr2
/
 * dfc67b9 (Igi_labs/LR1_web, LR1_web) start strweb/lr1
/
 * c9910d6 (Igi_labs/STRWEB, STRWEB) start strweb
/
 * 993ce1b (Igi_labs/LR4, LR4) start igi/lr4
 * 4ab6c66 (Igi_labs/LR3, LR3) start igi/lr3
/
 * 10d5039 (Igi_labs/LR2, LR2) start igi/lr2
/
 * c2e29cc (Igi_labs/LR1, LR1) start igi/lr1
/
 * 2a1e34e (Igi_labs/IGI, IGI) start igi branch
/
 * f9efb79 saved new file and added geometric lib
 * 8ee6f09 "Renamed a file"
 * 1ac6670 removed empty geometric lib
 * 722a09c deleted test.txt
 * a5da7fe Added test.txt on main
 * 4c89e0d Modified test.txt
 * 2bed2df Modified readme.txt by adding one line
 * 8d8a13d Added geometric_lib and the report that I've forgotten to add before

```

