Лабораторная работа №1

Тема: Система контроля версий Git.

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

1. Подготовьте рабочее окружение в соответствии с типом вашей операционной системы

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe$ lsb_release -a
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 22.04.5 LTS
Release:        22.04
Codename:       jammy
```

a. Установите Git

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe$ sudo add-apt-repository ppa:git-core/ppa
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe$ sudo apt update
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe$ sudo apt upgrade git
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe$ git --version
git version 2.53.0
```

b. Выполните базовую настройку

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe$ git config --global init.defaultBranch main
```

Результат в файле .gitconfig:

```
[init]
        defaultBranch = main
```

Информация об имени и почте пользователя уже была предустановлена с помощью аналогичных команд вида git config –global user.:

```
[user]
        name = anton
        email = a_____@gmail.com
```

2. Создайте структуру папок (использовать командную строку) и поместите в репозиторий Git на своем локальном компьютере: (Наименование для базовой папки: 453501_IVANOV_12, где 12 – порядковый номер в журнале) Внутри создайте структуру (в каждую папку поместите файл ИмяПапкиTest.txt): GROUP_NUMBER_YOUR_LAST_NAME_ NUMBER_IN_LIST IGI LR1 LR2 LR3

LR4 Папки и файлы в соответствии с индивидуальным заданием Отчет по ЛР1 со скринами действий и результатов LR5 STRWEB LR1 LR2 LR3 LR4.

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git init
Initialized empty Git repository in /home/anton/4_sem_vsakoe/453501_KOLESNIKOW_12/.git/
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ mkdir IGI STRWEB
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ touch IGI/IGITest.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ touch STRWEB/STRWEBTest.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ mkdir STRWEB/LR1 STRWEB/LR2 STRWEB/LR3 STRWEB/LR4
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ touch STRWEB/LR1/LR1Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ touch STRWEB/LR2/LR2Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ touch STRWEB/LR3/LR3Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ touch STRWEB/LR4/LR4Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ mkdir IGI/LR1 IGI/LR2 IGI/LR3 IGI/LR4 IGI/LR5
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ touch IGI/LR1/LR1Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ touch IGI/LR2/LR2Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ touch IGI/LR3/LR3Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ touch IGI/LR4/LR4Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ touch IGI/LR5/LR5Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ mkdir IGI/LR1/bin IGI/LR1/foo
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ mkdir IGI/LR1/bin/755 IGI/LR1/bin/bar IGI/LR1/foo/555 IGI/LR1/foo/baz
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ mkdir IGI/LR1/bin/bar/777 IGI/LR1/foo/baz/444 IGI/LR1/foo/baz/env IGI/LR1/foo/baz/example
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "426" > IGI/LR1/foo/baz/readme.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "665" > IGI/LR1/foo/baz/test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ mkdir IGI/LR1/foo/baz/env/767 IGI/LR1/foo/baz/example/277
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ tree .
```

```
.
├── IGI
│   ├── IGITest.txt
│   ├── LR1
│   │   ├── LR1Test.txt
│   │   ├── bin
│   │   │   ├── 755
│   │   │   └── bar
│   │   │       └── 777
│   │   └── foo
│   │       ├── 555
│   │       └── baz
│   │           ├── 444
│   │           ├── env
│   │           │   └── 767
│   │           ├── example
│   │           │   └── 277
│   │           ├── readme.txt
│   │           └── test.txt
│   ├── LR2
│   │   └── LR2Test.txt
│   ├── LR3
│   │   └── LR3Test.txt
│   ├── LR4
│   │   └── LR4Test.txt
│   └── LR5
│       └── LR5Test.txt
└── STRWEB
    ├── LR1
    │   └── LR1Test.txt
    ├── LR2
    │   └── LR2Test.txt
    ├── LR3
    │   └── LR3Test.txt
    ├── LR4
    │   └── LR4Test.txt
    └── STRWEBTest.txt

23 directories, 13 files
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ cat IGI/LR1/foo/baz/readme.txt
426
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ cat IGI/LR1/foo/baz/test.txt
665
```

3. Создайте репозиторий внутри папки LR1 с помощью клонирования проекта с сайта github.com (https://github.com/smartiqaorg/geometric_lib)

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ cd IGI/LR1/
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/IGI/LR1$ ls
LR1Test.txt  bin  foo
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/IGI/LR1$ git clone https://github.com/smartiqaorg/geometric_lib
Cloning into 'geometric_lib'...
remote: Enumerating objects: 35, done.
remote: Total 35 (delta 0), reused 0 (delta 0), pack-reused 35 (from 1)
Receiving objects: 100% (35/35), 4.69 KiB | 2.35 MiB/s, done.
Resolving deltas: 100% (5/5), done.
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/IGI/LR1$ ls
LR1Test.txt  bin  foo  geometric_lib
```

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

a. сделайте индексацию нескольких файлов в вашем Git-репозитории (git add …),

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main

No commits yet

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

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add IGI/LR1/LR1Test.txt IGI/LR2/LR2Test.txt IGI/LR3/LR3Test.txt IGI/LR4/LR4Test.txt IGI/LR5/LR5Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   IGI/LR1/LR1Test.txt
        new file:   IGI/LR2/LR2Test.txt
        new file:   IGI/LR3/LR3Test.txt
        new file:   IGI/LR4/LR4Test.txt
        new file:   IGI/LR5/LR5Test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/IGITest.txt
        IGI/LR1/foo/
        IGI/LR1/geometric_lib/
        STRWEB/
```

b. внесите изменения в файлы,

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "NEWText" > IGI/LR1/LR1Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "NEWText" > IGI/LR2/LR2Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "NEWText" > IGI/LR3/LR3Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "NEWText" > IGI/LR4/LR4Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "NEWText" > IGI/LR5/LR5Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ cat IGI/LR1/LR1Test.txt
NEWText
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ cat IGI/LR2/LR2Test.txt
NEWText
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ cat IGI/LR3/LR3Test.txt
NEWText
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ cat IGI/LR4/LR4Test.txt
NEWText
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ cat IGI/LR5/LR5Test.txt
NEWText
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   IGI/LR1/LR1Test.txt
        new file:   IGI/LR2/LR2Test.txt
        new file:   IGI/LR3/LR3Test.txt
        new file:   IGI/LR4/LR4Test.txt
        new file:   IGI/LR5/LR5Test.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:   IGI/LR1/LR1Test.txt
        modified:   IGI/LR2/LR2Test.txt
        modified:   IGI/LR3/LR3Test.txt
        modified:   IGI/LR4/LR4Test.txt
        modified:   IGI/LR5/LR5Test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/IGITest.txt
        IGI/LR1/foo/
        IGI/LR1/geometric_lib/
        STRWEB/
```

c. выполните коммиты к проиндексированным файлам,

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "Empty files"
[main (root-commit) 5b08a54] Empty files
 5 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 IGI/LR1/LR1Test.txt
 create mode 100644 IGI/LR2/LR2Test.txt
 create mode 100644 IGI/LR3/LR3Test.txt
 create mode 100644 IGI/LR4/LR4Test.txt
 create mode 100644 IGI/LR5/LR5Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ 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:   IGI/LR1/LR1Test.txt
        modified:   IGI/LR2/LR2Test.txt
        modified:   IGI/LR3/LR3Test.txt
        modified:   IGI/LR4/LR4Test.txt
        modified:   IGI/LR5/LR5Test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/IGITest.txt
        IGI/LR1/foo/
        IGI/LR1/geometric_lib/
        STRWEB/

no changes added to commit (use "git add" and/or "git commit -a")
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add IGI/LR1/LR1Test.txt IGI/LR2/LR2Test.txt IGI/LR3/LR3Test.txt IGI/LR4/LR4Test.txt IGI/LR5/LR5Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   IGI/LR1/LR1Test.txt
        modified:   IGI/LR2/LR2Test.txt
        modified:   IGI/LR3/LR3Test.txt
        modified:   IGI/LR4/LR4Test.txt
        modified:   IGI/LR5/LR5Test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/IGITest.txt
        IGI/LR1/foo/
        IGI/LR1/geometric_lib/
        STRWEB/
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "Modified files"
[main f6b9bc8] Modified files
 5 files changed, 5 insertions(+)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --pretty=oneline
f6b9bc843662877165d65b8defee52c1c2866392 (HEAD -> main) Modified files
5b08a5498590854325df6c786230d1e291bacde0 Empty files
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main
Untracked files:
   (use "git add <file>..." to include in what will be committed)
        IGI/IGITest.txt
        IGI/LR1/foo/
        IGI/LR1/geometric_lib/
        STRWEB/

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)

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add IGI/IGITest.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   IGI/IGITest.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/foo/
        IGI/LR1/geometric_lib/
        STRWEB/

anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git rm IGI/IGITest.txt
error: the following file has changes staged in the index:
    IGI/IGITest.txt
(use --cached to keep the file, or -f to force removal)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git rm --cached IGI/IGITest.txt
rm 'IGI/IGITest.txt'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/IGITest.txt
        IGI/LR1/foo/
        IGI/LR1/geometric_lib/
        STRWEB/

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

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ git add "*.txt"
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   LR1/LR1Test.txt
        new file:   LR2/LR2Test.txt
        new file:   LR3/LR3Test.txt
        new file:   LR4/LR4Test.txt
        new file:   STRWEBTest.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        ../IGI/IGITest.txt
        ../IGI/LR1/foo/
        ../IGI/LR1/geometric_lib/

anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ git rm --cached "*.txt"
rm 'STRWEB/LR1/LR1Test.txt'
rm 'STRWEB/LR2/LR2Test.txt'
rm 'STRWEB/LR3/LR3Test.txt'
rm 'STRWEB/LR4/LR4Test.txt'
rm 'STRWEB/STRWEBTest.txt'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        ../IGI/IGITest.txt
        ../IGI/LR1/foo/
        ../IGI/LR1/geometric_lib/
        ./

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

е. переименуйте файлы

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ git add STRWEBTest.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ git mv STRWEBTest.txt STRWEBTest2.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ git add LR1/LR1Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ git mv LR1/LR1Test.txt LR1/LR1TestNew.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   LR1/LR1TestNew.txt
        new file:   STRWEBTest2.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        ../IGI/IGITest.txt
        ../IGI/LR1/foo/
        ../IGI/LR1/geometric_lib/
        LR2/
        LR3/
        LR4/

anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ git commit -m "Renamed 2 files"
[main 7553030] Renamed 2 files
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 STRWEB/LR1/LR1TestNew.txt
 create mode 100644 STRWEB/STRWEBTest2.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        ../IGI/IGITest.txt
        ../IGI/LR1/foo/
        ../IGI/LR1/geometric_lib/
        LR2/
        LR3/
        LR4/

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

f. создайте для IGI и STRWEB, а также для каждой ЛР, вложенной в них, отдельные ветки, поместите файлы на соответствующие ветки

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ git branch
* main
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12/STRWEB$ cd ..
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch IGI
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch STRWEB
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch IGI-LR1
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch IGI-LR2
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch IGI-LR3
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch IGI-LR4
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch IGI-LR5
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch STRWEB-LR1
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch STRWEB-LR2
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch STRWEB-LR3
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch STRWEB-LR4
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch
  IGI
  IGI-LR1
  IGI-LR2
  IGI-LR3
  IGI-LR4
  IGI-LR5
  STRWEB
  STRWEB-LR1
  STRWEB-LR2
  STRWEB-LR3
  STRWEB-LR4
* main
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout IGI
Switched to branch 'IGI'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/IGITest.txt
        IGI/LR1/foo/
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add IGI/IGITest.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   IGI/IGITest.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/foo/
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "IGI - added 1 file"
[IGI 828c652] IGI - added 1 file
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 IGI/IGITest.txt
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout IGI-LR1
Switched to branch 'IGI-LR1'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI-LR1
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/foo/
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add IGI/LR1/foo/
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI-LR1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   IGI/LR1/foo/baz/readme.txt
        new file:   IGI/LR1/foo/baz/test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit "IGI-LR1 - added 2 files"
error: pathspec 'IGI-LR1 - added 2 files' did not match any file(s) known to git
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "IGI-LR1 - added 2 files"
[IGI-LR1 0832497] IGI-LR1 - added 2 files
 2 files changed, 2 insertions(+)
 create mode 100644 IGI/LR1/foo/baz/readme.txt
 create mode 100644 IGI/LR1/foo/baz/test.txt
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout IGI-LR2
Switched to branch 'IGI-LR2'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI-LR2
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "File changed" > IGI/LR2/LR2Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI-LR2
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/LR2/LR2Test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

no changes added to commit (use "git add" and/or "git commit -a")
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add IGI/LR2/LR2Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI-LR2
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   IGI/LR2/LR2Test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "IGI-LR2 - modified 1 file"
[IGI-LR2 c76a534] IGI-LR2 - modified 1 file
 1 file changed, 1 insertion(+), 1 deletion(-)
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout IGI-LR3
Switched to branch 'IGI-LR3'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI-LR3
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "File changed" > IGI/LR3/LR3Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI-LR3
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/LR3/LR3Test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

no changes added to commit (use "git add" and/or "git commit -a")
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add IGI/LR3/LR3Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI-LR3
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   IGI/LR3/LR3Test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "IGI-LR3 - modified 1 file"
[IGI-LR3 a879f92] IGI-LR3 - modified 1 file
 1 file changed, 1 insertion(+), 1 deletion(-)
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout IGI-LR4
Switched to branch 'IGI-LR4'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI-LR4
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "File changed" > IGI/LR4/LR4Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI-LR4
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/LR4/LR4Test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

no changes added to commit (use "git add" and/or "git commit -a")
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add IGI/LR4/LR4Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "IGI-LR4 - modified 1 file"
[IGI-LR4 a64b925] IGI-LR4 - modified 1 file
 1 file changed, 1 insertion(+), 1 deletion(-)
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout IGI-LR5
Switched to branch 'IGI-LR5'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "File changed" > IGI/LR5/LR5Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add IGI/LR5/LR5Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "IGI-LR5 - modified 1 file"
[IGI-LR5 e1f40ae] IGI-LR5 - modified 1 file
 1 file changed, 1 insertion(+), 1 deletion(-)
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout STRWEB
Switched to branch 'STRWEB'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch STRWEB
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "File changed" > STRWEB/STRWEBTest2.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add STRWEB/STRWEBTest2.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "STRWEB - modified 1 file"
[STRWEB bb99afd] STRWEB - modified 1 file
 1 file changed, 1 insertion(+)
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout STRWEB-LR1
Switched to branch 'STRWEB-LR1'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch STRWEB-LR1
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "File changed" > STRWEB/LR1/LR1TestNew.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add STRWEB/LR1/LR1TestNew.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "STRWEB-LR1 - modified 1 file"
[STRWEB-LR1 cce9667] STRWEB-LR1 - modified 1 file
 1 file changed, 1 insertion(+)
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout STRWEB-LR2
Switched to branch 'STRWEB-LR2'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch STRWEB-LR2
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR2/
        STRWEB/LR3/
        STRWEB/LR4/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add STRWEB/LR2/
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "STRWEB-LR2 - added 1 file"
[STRWEB-LR2 b39009a] STRWEB-LR2 - added 1 file
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 STRWEB/LR2/LR2Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout STRWEB-LR3
Switched to branch 'STRWEB-LR3'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch STRWEB-LR3
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR3/
        STRWEB/LR4/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add STRWEB/LR3/
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "STRWEB-LR3 - added 1 file"
[STRWEB-LR3 b37795f] STRWEB-LR3 - added 1 file
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 STRWEB/LR3/LR3Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout STRWEB-LR4
Switched to branch 'STRWEB-LR4'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch STRWEB-LR4
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        STRWEB/LR4/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add STRWEB/LR4/
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "STRWEB-LR4 - added 1 file"
[STRWEB-LR4 d62e569] STRWEB-LR4 - added 1 file
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 STRWEB/LR4/LR4Test.txt
```

g. выведите историю коммитов: полностью и с ограничением вывода – отобрать 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/ ,

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --all
commit d62e56992cf8a5101a2befd1b47a60c1e632c21a (STRWEB-LR4)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Thu Feb 19 00:04:29 2026 +0300

    STRWEB-LR4 - added 1 file

commit b37795f7408988fb2e6e85b2d7e17ba8117fc6ce (STRWEB-LR3)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Thu Feb 19 00:03:50 2026 +0300

    STRWEB-LR3 - added 1 file

commit b39009a016c0512d944b118cd0bbfee66c3ee0f9 (STRWEB-LR2)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Thu Feb 19 00:02:58 2026 +0300

    STRWEB-LR2 - added 1 file

commit cce9667e61b601bd6a6609f0fde7327a81787c55 (STRWEB-LR1)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Thu Feb 19 00:00:51 2026 +0300

    STRWEB-LR1 - modified 1 file

commit bb99afddf055904be4209c78dfd45343039dbf92 (STRWEB)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 23:58:02 2026 +0300

    STRWEB - modified 1 file

commit e1f40ae50a1eb97d253801e01a1eb1390150528d (IGI-LR5)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 23:54:24 2026 +0300

    IGI-LR5 - modified 1 file

commit a64b925b8d075fd6d6682c83a8268f5e8b27dcd2 (IGI-LR4)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 23:50:25 2026 +0300

    IGI-LR4 - modified 1 file

commit a879f9289055b4a70175af4ae70c50d9324451fb (IGI-LR3)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 23:45:53 2026 +0300

    IGI-LR3 - modified 1 file

commit c76a534d83454d70683294f848ee065ac76344a7 (IGI-LR2)
Author: anton <antonio.kolesnikow@gmail.com>
```

```
commit c76a534d83454d70683294f848ee065ac76344a7 (IGI-LR2)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:42:42 2026 +0300

    IGI-LR2 - modified 1 file

commit 083249744988823a2c01c7b0306cedc852e941df (IGI-LR1)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:38:13 2026 +0300

    IGI-LR1 - added 2 files

commit 828c652fb16004c3a07d57dda8a65234834c4c3e (IGI)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:34:36 2026 +0300

    IGI - added 1 file

commit 7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:04:16 2026 +0300

    Renamed 2 files

commit f6b9bc843662877165d65b8defee52c1c2866392
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:24:24 2026 +0300

    Modified files

commit 5b08a5498590854325df6c786230d1e291bacde0
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:22:42 2026 +0300

    Empty files
(END)
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --all -n 2
commit d62e56992cf8a5101a2befd1b47a60c1e632c21a (STRWEB-LR4)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:04:29 2026 +0300

    STRWEB-LR4 - added 1 file

commit b37795f7408988fb2e6e85b2d7e17ba8117fc6ce (STRWEB-LR3)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:03:50 2026 +0300

    STRWEB-LR3 - added 1 file
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --all --before="Wed Feb 18 23:40:00 2026 +0300"
commit 083249744988823a2c01c7b0306cedc852e941df (IGI-LR1)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:38:13 2026 +0300

    IGI-LR1 - added 2 files

commit 828c652fb16004c3a07d57dda8a65234834c4c3e (IGI)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:34:36 2026 +0300

    IGI - added 1 file

commit 7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:04:16 2026 +0300

    Renamed 2 files

commit f6b9bc843662877165d65b8defee52c1c2866392
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:24:24 2026 +0300

    Modified files

commit 5b08a5498590854325df6c786230d1e291bacde0
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:22:42 2026 +0300

    Empty files
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --all --after="Wed Feb 18 23:40:00 2026 +0300"
commit d62e56992cf8a5101a2befd1b47a60c1e632c21a (STRWEB-LR4)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:04:29 2026 +0300
commit d62e56992cf8a5101a2befd1b47a60c1e632c21a (STRWEB-LR4)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:04:29 2026 +0300

    STRWEB-LR4 - added 1 file

commit b37795f7408988fb2e6e85b2d7e17ba8117fc6ce (STRWEB-LR3)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:03:50 2026 +0300

    STRWEB-LR3 - added 1 file

commit b39009a016c0512d944b118cd0bbfee66c3ee0f9 (STRWEB-LR2)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:02:58 2026 +0300

    STRWEB-LR2 - added 1 file

commit cce9667e61b601bd6a6609f0fde7327a81787c55 (STRWEB-LR1)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:00:51 2026 +0300

    STRWEB-LR1 - modified 1 file

commit bb99afddf055904be4209c78dfd45343039dbf92 (STRWEB)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:58:02 2026 +0300

    STRWEB - modified 1 file

commit e1f40ae50a1eb97d253801e01a1eb1390150528d (IGI-LR5)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:54:24 2026 +0300

    IGI-LR5 - modified 1 file

commit a64b925b8d075fd6d6682c83a8268f5e8b27dcd2 (IGI-LR4)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:50:25 2026 +0300

    IGI-LR4 - modified 1 file

commit a879f9289055b4a70175af4ae70c50d9324451fb (IGI-LR3)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:45:53 2026 +0300

    IGI-LR3 - modified 1 file
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --all --author=anton
commit d62e56992cf8a5101a2befd1b47a60c1e632c21a (STRWEB-LR4)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:04:29 2026 +0300

    STRWEB-LR4 - added 1 file

commit b37795f7408988fb2e6e85b2d7e17ba8117fc6ce (STRWEB-LR3)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:03:50 2026 +0300

    STRWEB-LR3 - added 1 file

commit b39009a016c0512d944b118cd0bbfee66c3ee0f9 (STRWEB-LR2)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:02:58 2026 +0300

    STRWEB-LR2 - added 1 file

commit cce9667e61b601bd6a6609f0fde7327a81787c55 (STRWEB-LR1)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:00:51 2026 +0300

    STRWEB-LR1 - modified 1 file

commit bb99afddf055904be4209c78dfd45343039dbf92 (STRWEB)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:58:02 2026 +0300

    STRWEB - modified 1 file

commit e1f40ae50a1eb97d253801e01a1eb1390150528d (IGI-LR5)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:54:24 2026 +0300

    IGI-LR5 - modified 1 file

commit a64b925b8d075fd6d6682c83a8268f5e8b27dcd2 (IGI-LR4)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:50:25 2026 +0300

    IGI-LR4 - modified 1 file

commit a879f9289055b4a70175af4ae70c50d9324451fb (IGI-LR3)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:45:53 2026 +0300

    IGI-LR3 - modified 1 file
```

```
commit c76a534d83454d70683294f848ee065ac76344a7 (IGI-LR2)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:42:42 2026 +0300

    IGI-LR2 - modified 1 file

commit 083249744988823a2c01c7b0306cedc852e941df (IGI-LR1)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:38:13 2026 +0300

    IGI-LR1 - added 2 files

commit 828c652fb16004c3a07d57dda8a65234834c4c3e (IGI)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:34:36 2026 +0300

    IGI - added 1 file

commit 7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:04:16 2026 +0300

    Renamed 2 files

commit f6b9bc843662877165d65b8defee52c1c2866392
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:24:24 2026 +0300

    Modified files

commit 5b08a5498590854325df6c786230d1e291bacde0
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:22:42 2026 +0300

    Empty files
(END)
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --all --committer=anton
commit d62e56992cf8a5101a2befd1b47a60c1e632c21a (STRWEB-LR4)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:04:29 2026 +0300

    STRWEB-LR4 - added 1 file

commit b37795f7408988fb2e6e85b2d7e17ba8117fc6ce (STRWEB-LR3)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:03:50 2026 +0300

    STRWEB-LR3 - added 1 file

commit b39009a016c0512d944b118cd0bbfee66c3ee0f9 (STRWEB-LR2)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:02:58 2026 +0300

    STRWEB-LR2 - added 1 file

commit cce9667e61b601bd6a6609f0fde7327a81787c55 (STRWEB-LR1)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Thu Feb 19 00:00:51 2026 +0300

    STRWEB-LR1 - modified 1 file

commit bb99afddf055904be4209c78dfd45343039dbf92 (STRWEB)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:58:02 2026 +0300

    STRWEB - modified 1 file

commit e1f40ae50a1eb97d253801e01a1eb1390150528d (IGI-LR5)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:54:24 2026 +0300

    IGI-LR5 - modified 1 file

commit a64b925b8d075fd6d6682c83a8268f5e8b27dcd2 (IGI-LR4)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:50:25 2026 +0300

    IGI-LR4 - modified 1 file

commit a879f9289055b4a70175af4ae70c50d9324451fb (IGI-LR3)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:45:53 2026 +0300

    IGI-LR3 - modified 1 file
```

```
commit c76a534d83454d70683294f848ee065ac76344a7 (IGI-LR2)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:42:42 2026 +0300

    IGI-LR2 - modified 1 file

commit 083249744988823a2c01c7b0306cedc852e941df (IGI-LR1)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:38:13 2026 +0300

    IGI-LR1 - added 2 files

commit 828c652fb16004c3a07d57dda8a65234834c4c3e (IGI)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:34:36 2026 +0300

    IGI - added 1 file

commit 7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:04:16 2026 +0300

    Renamed 2 files

commit f6b9bc843662877165d65b8defee52c1c2866392
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:24:24 2026 +0300

    Modified files

commit 5b08a5498590854325df6c786230d1e291bacde0
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:22:42 2026 +0300

    Empty files
(END)
```

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

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log -p
commit 7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:04:16 2026 +0300

    Renamed 2 files

diff --git a/STRWEB/LR1/LR1TestNew.txt b/STRWEB/LR1/LR1TestNew.txt
new file mode 100644
index 0000000..e69de29
diff --git a/STRWEB/STRWEBTest2.txt b/STRWEB/STRWEBTest2.txt
new file mode 100644
index 0000000..e69de29

commit f6b9bc843662877165d65b8defee52c1c2866392
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:24:24 2026 +0300

    Modified files

diff --git a/IGI/LR1/LR1Test.txt b/IGI/LR1/LR1Test.txt
index e69de29..39af6bb 100644
--- a/IGI/LR1/LR1Test.txt
+++ b/IGI/LR1/LR1Test.txt
@@ -0,0 +1 @@
+NEWText
diff --git a/IGI/LR2/LR2Test.txt b/IGI/LR2/LR2Test.txt
index e69de29..39af6bb 100644
--- a/IGI/LR2/LR2Test.txt
+++ b/IGI/LR2/LR2Test.txt
@@ -0,0 +1 @@
+NEWText
diff --git a/IGI/LR3/LR3Test.txt b/IGI/LR3/LR3Test.txt
index e69de29..39af6bb 100644
--- a/IGI/LR3/LR3Test.txt
+++ b/IGI/LR3/LR3Test.txt
@@ -0,0 +1 @@
+NEWText
diff --git a/IGI/LR4/LR4Test.txt b/IGI/LR4/LR4Test.txt
index e69de29..39af6bb 100644
--- a/IGI/LR4/LR4Test.txt
+++ b/IGI/LR4/LR4Test.txt
@@ -0,0 +1 @@
+NEWText
diff --git a/IGI/LR5/LR5Test.txt b/IGI/LR5/LR5Test.txt
index e69de29..39af6bb 100644
--- a/IGI/LR5/LR5Test.txt
+++ b/IGI/LR5/LR5Test.txt
@@ -0,0 +1 @@
+NEWText
```

```
commit 5b08a5498590854325df6c786230d1e291bacde0
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:22:42 2026 +0300

    Empty files

diff --git a/IGI/LR1/LR1Test.txt b/IGI/LR1/LR1Test.txt
new file mode 100644
index 0000000..e69de29
diff --git a/IGI/LR2/LR2Test.txt b/IGI/LR2/LR2Test.txt
new file mode 100644
index 0000000..e69de29
diff --git a/IGI/LR3/LR3Test.txt b/IGI/LR3/LR3Test.txt
new file mode 100644
index 0000000..e69de29
diff --git a/IGI/LR4/LR4Test.txt b/IGI/LR4/LR4Test.txt
new file mode 100644
index 0000000..e69de29
diff --git a/IGI/LR5/LR5Test.txt b/IGI/LR5/LR5Test.txt
new file mode 100644
index 0000000..e69de29
(END)
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --stat
commit 7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:04:16 2026 +0300

    Renamed 2 files

 STRWEB/LR1/LR1TestNew.txt | 0
 STRWEB/STRWEBTest2.txt    | 0
 2 files changed, 0 insertions(+), 0 deletions(-)

commit f6b9bc843662877165d65b8defee52c1c2866392
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:24:24 2026 +0300

    Modified files

 IGI/LR1/LR1Test.txt | 1 +
 IGI/LR2/LR2Test.txt | 1 +
 IGI/LR3/LR3Test.txt | 1 +
 IGI/LR4/LR4Test.txt | 1 +
 IGI/LR5/LR5Test.txt | 1 +
 5 files changed, 5 insertions(+)

commit 5b08a5498590854325df6c786230d1e291bacde0
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:22:42 2026 +0300

    Empty files

 IGI/LR1/LR1Test.txt | 0
 IGI/LR2/LR2Test.txt | 0
 IGI/LR3/LR3Test.txt | 0
 IGI/LR4/LR4Test.txt | 0
 IGI/LR5/LR5Test.txt | 0
 5 files changed, 0 insertions(+), 0 deletions(-)
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --shortstat
commit 7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:04:16 2026 +0300

    Renamed 2 files

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

commit f6b9bc843662877165d65b8defee52c1c2866392
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:24:24 2026 +0300

    Modified files

 5 files changed, 5 insertions(+)

commit 5b08a5498590854325df6c786230d1e291bacde0
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:22:42 2026 +0300

    Empty files

 5 files changed, 0 insertions(+), 0 deletions(-)
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --name-only
commit 7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:04:16 2026 +0300

    Renamed 2 files

STRWEB/LR1/LR1TestNew.txt
STRWEB/STRWEBTest2.txt

commit f6b9bc843662877165d65b8defee52c1c2866392
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:24:24 2026 +0300

    Modified files

IGI/LR1/LR1Test.txt
IGI/LR2/LR2Test.txt
IGI/LR3/LR3Test.txt
IGI/LR4/LR4Test.txt
IGI/LR5/LR5Test.txt

commit 5b08a5498590854325df6c786230d1e291bacde0
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:22:42 2026 +0300

    Empty files

IGI/LR1/LR1Test.txt
IGI/LR2/LR2Test.txt
IGI/LR3/LR3Test.txt
IGI/LR4/LR4Test.txt
IGI/LR5/LR5Test.txt
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --relative-date
commit 7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    2 hours ago

    Renamed 2 files

commit f6b9bc843662877165d65b8defee52c1c2866392
Author: anton <antonio.kolesnikow@gmail.com>
Date:    2 hours ago

    Modified files

commit 5b08a5498590854325df6c786230d1e291bacde0
Author: anton <antonio.kolesnikow@gmail.com>
Date:    2 hours ago

    Empty files
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --pretty=oneline
7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main) Renamed 2 files
f6b9bc843662877165d65b8defee52c1c2866392 Modified files
5b08a5498590854325df6c786230d1e291bacde0 Empty files
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --name-status
commit 7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 23:04:16 2026 +0300

    Renamed 2 files

A        STRWEB/LR1/LR1TestNew.txt
A        STRWEB/STRWEBTest2.txt

commit f6b9bc843662877165d65b8defee52c1c2866392
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 22:24:24 2026 +0300

    Modified files

M        IGI/LR1/LR1Test.txt
M        IGI/LR2/LR2Test.txt
M        IGI/LR3/LR3Test.txt
M        IGI/LR4/LR4Test.txt
M        IGI/LR5/LR5Test.txt

commit 5b08a5498590854325df6c786230d1e291bacde0
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 22:22:42 2026 +0300

    Empty files

A        IGI/LR1/LR1Test.txt
A        IGI/LR2/LR2Test.txt
A        IGI/LR3/LR3Test.txt
A        IGI/LR4/LR4Test.txt
A        IGI/LR5/LR5Test.txt
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --graph
* commit 7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main)
| Author: anton <antonio.kolesnikow@gmail.com>
| Date:   Wed Feb 18 23:04:16 2026 +0300
|
|       Renamed 2 files
|
* commit f6b9bc843662877165d65b8defee52c1c2866392
| Author: anton <antonio.kolesnikow@gmail.com>
| Date:   Wed Feb 18 22:24:24 2026 +0300
|
|       Modified files
|
* commit 5b08a5498590854325df6c786230d1e291bacde0
  Author: anton <antonio.kolesnikow@gmail.com>
  Date:   Wed Feb 18 22:22:42 2026 +0300

        Empty files
```

i. найдите разницу в изменениях для каждого коммита

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --all -p --word-diff
commit d62e56992cf8a5101a2befd1b47a60c1e632c21a (STRWEB-LR4)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Thu Feb 19 00:04:29 2026 +0300

    STRWEB-LR4 - added 1 file

diff --git a/STRWEB/LR4/LR4Test.txt b/STRWEB/LR4/LR4Test.txt
new file mode 100644
index 0000000..e69de29

commit b37795f7408988fb2e6e85b2d7e17ba8117fc6ce (STRWEB-LR3)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Thu Feb 19 00:03:50 2026 +0300

    STRWEB-LR3 - added 1 file

diff --git a/STRWEB/LR3/LR3Test.txt b/STRWEB/LR3/LR3Test.txt
new file mode 100644
index 0000000..e69de29

commit b39009a016c0512d944b118cd0bbfee66c3ee0f9 (STRWEB-LR2)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Thu Feb 19 00:02:58 2026 +0300

    STRWEB-LR2 - added 1 file

diff --git a/STRWEB/LR2/LR2Test.txt b/STRWEB/LR2/LR2Test.txt
new file mode 100644
index 0000000..e69de29

commit cce9667e61b601bd6a6609f0fde7327a81787c55 (STRWEB-LR1)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Thu Feb 19 00:00:51 2026 +0300

    STRWEB-LR1 - modified 1 file

diff --git a/STRWEB/LR1/LR1TestNew.txt b/STRWEB/LR1/LR1TestNew.txt
index e69de29..b9b7c9e 100644
--- a/STRWEB/LR1/LR1TestNew.txt
+++ b/STRWEB/LR1/LR1TestNew.txt
@@ -0,0 +1 @@
{+File changed+}

commit bb99afddf055904be4209c78dfd45343039dbf92 (STRWEB)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 23:58:02 2026 +0300

    STRWEB - modified 1 file
```

```
commit bb99afddf055904be4209c78dfd45343039dbf92 (STRWEB)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 23:58:02 2026 +0300

    STRWEB - modified 1 file

diff --git a/STRWEB/STRWEBTest2.txt b/STRWEB/STRWEBTest2.txt
index e69de29..b9b7c9e 100644
--- a/STRWEB/STRWEBTest2.txt
+++ b/STRWEB/STRWEBTest2.txt
@@ -0,0 +1 @@
{+File changed+}

commit e1f40ae50a1eb97d253801e01a1eb1390150528d (IGI-LR5)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 23:54:24 2026 +0300

    IGI-LR5 - modified 1 file

diff --git a/IGI/LR5/LR5Test.txt b/IGI/LR5/LR5Test.txt
index 39af6bb..b9b7c9e 100644
--- a/IGI/LR5/LR5Test.txt
+++ b/IGI/LR5/LR5Test.txt
@@ -1 +1 @@
[-NEWText-]{+File changed+}

commit a64b925b8d075fd6d6682c83a8268f5e8b27dcd2 (IGI-LR4)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 23:50:25 2026 +0300

    IGI-LR4 - modified 1 file

diff --git a/IGI/LR4/LR4Test.txt b/IGI/LR4/LR4Test.txt
index 39af6bb..b9b7c9e 100644
--- a/IGI/LR4/LR4Test.txt
+++ b/IGI/LR4/LR4Test.txt
@@ -1 +1 @@
[-NEWText-]{+File changed+}
```

```
commit a879f9289055b4a70175af4ae70c50d9324451fb (IGI-LR3)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 23:45:53 2026 +0300

    IGI-LR3 - modified 1 file

diff --git a/IGI/LR3/LR3Test.txt b/IGI/LR3/LR3Test.txt
index 39af6bb..b9b7c9e 100644
--- a/IGI/LR3/LR3Test.txt
+++ b/IGI/LR3/LR3Test.txt
@@ -1 +1 @@
[-NEWText-]{+File changed+}

commit c76a534d83454d70683294f848ee065ac76344a7 (IGI-LR2)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 23:42:42 2026 +0300

    IGI-LR2 - modified 1 file

diff --git a/IGI/LR2/LR2Test.txt b/IGI/LR2/LR2Test.txt
index 39af6bb..b9b7c9e 100644
--- a/IGI/LR2/LR2Test.txt
+++ b/IGI/LR2/LR2Test.txt
@@ -1 +1 @@
[-NEWText-]{+File changed+}

commit 083249744988823a2c01c7b0306cedc852e941df (IGI-LR1)
Author: anton <antonio.kolesnikow@gmail.com>
Date:    Wed Feb 18 23:38:13 2026 +0300

    IGI-LR1 - added 2 files

diff --git a/IGI/LR1/foo/baz/readme.txt b/IGI/LR1/foo/baz/readme.txt
new file mode 100644
index 0000000..9f51d08
--- /dev/null
+++ b/IGI/LR1/foo/baz/readme.txt
@@ -0,0 +1 @@
{+426+}
diff --git a/IGI/LR1/foo/baz/test.txt b/IGI/LR1/foo/baz/test.txt
new file mode 100644
index 0000000..7ae8d44
--- /dev/null
+++ b/IGI/LR1/foo/baz/test.txt
@@ -0,0 +1 @@
{+665+}
```

```
commit 828c652fb16004c3a07d57dda8a65234834c4c3e (IGI)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:34:36 2026 +0300

    IGI - added 1 file

diff --git a/IGI/IGITest.txt b/IGI/IGITest.txt
new file mode 100644
index 0000000..e69de29

commit 7553030b2ffbb6c466354ac094470e9843d5bf95 (HEAD -> main)
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 23:04:16 2026 +0300

    Renamed 2 files

diff --git a/STRWEB/LR1/LR1TestNew.txt b/STRWEB/LR1/LR1TestNew.txt
new file mode 100644
index 0000000..e69de29
diff --git a/STRWEB/STRWEBTest2.txt b/STRWEB/STRWEBTest2.txt
new file mode 100644
index 0000000..e69de29

commit f6b9bc843662877165d65b8defee52c1c2866392
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:24:24 2026 +0300

    Modified files

diff --git a/IGI/LR1/LR1Test.txt b/IGI/LR1/LR1Test.txt
index e69de29..39af6bb 100644
--- a/IGI/LR1/LR1Test.txt
+++ b/IGI/LR1/LR1Test.txt
@@ -0,0 +1 @@
{+NEWText+}
diff --git a/IGI/LR2/LR2Test.txt b/IGI/LR2/LR2Test.txt
index e69de29..39af6bb 100644
--- a/IGI/LR2/LR2Test.txt
+++ b/IGI/LR2/LR2Test.txt
@@ -0,0 +1 @@
{+NEWText+}
```

```
diff --git a/IGI/LR3/LR3Test.txt b/IGI/LR3/LR3Test.txt
index e69de29..39af6bb 100644
--- a/IGI/LR3/LR3Test.txt
+++ b/IGI/LR3/LR3Test.txt
@@ -0,0 +1 @@
{+NEWText+}
diff --git a/IGI/LR4/LR4Test.txt b/IGI/LR4/LR4Test.txt
index e69de29..39af6bb 100644
--- a/IGI/LR4/LR4Test.txt
+++ b/IGI/LR4/LR4Test.txt
@@ -0,0 +1 @@
{+NEWText+}
diff --git a/IGI/LR5/LR5Test.txt b/IGI/LR5/LR5Test.txt
index e69de29..39af6bb 100644
--- a/IGI/LR5/LR5Test.txt
+++ b/IGI/LR5/LR5Test.txt
@@ -0,0 +1 @@
{+NEWText+}

commit 5b08a5498590854325df6c786230d1e291bacde0
Author: anton <antonio.kolesnikow@gmail.com>
Date:   Wed Feb 18 22:22:42 2026 +0300

    Empty files

diff --git a/IGI/LR1/LR1Test.txt b/IGI/LR1/LR1Test.txt
new file mode 100644
index 0000000..e69de29
diff --git a/IGI/LR2/LR2Test.txt b/IGI/LR2/LR2Test.txt
new file mode 100644
index 0000000..e69de29
diff --git a/IGI/LR3/LR3Test.txt b/IGI/LR3/LR3Test.txt
new file mode 100644
index 0000000..e69de29
diff --git a/IGI/LR4/LR4Test.txt b/IGI/LR4/LR4Test.txt
new file mode 100644
index 0000000..e69de29
diff --git a/IGI/LR5/LR5Test.txt b/IGI/LR5/LR5Test.txt
new file mode 100644
index 0000000..e69de29
(END)
```

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

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ ls
IGI  STRWEB
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "Номер варианта" > test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ ls
IGI  STRWEB  test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/

anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "added text file"
[main a6bf1ef] added text file
 1 file changed, 1 insertion(+)
 create mode 100644 test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git revert HEAD
[main 19e6cc7] Revert "added text file"
 1 file changed, 1 deletion(-)
 delete mode 100644 test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --pretty=oneline
19e6cc7f00b7806c95e592be5584aba13e3a3016 (HEAD -> main) Revert "added text file"
a6bf1efd18c90cd776b71d164e62982505c9ea29 added text file
7553030b2ffbb6c466354ac094470e9843d5bf95 Renamed 2 files
f6b9bc843662877165d65b8defee52c1c2866392 Modified files
5b08a5498590854325df6c786230d1e291bacde0 Empty files
```

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

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add IGI/LR1/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:
hint:   git submodule add <url> IGI/LR1/geometric_lib
hint:
hint: If you added this path by mistake, you can remove it from the
hint: index with:
hint:
hint:   git rm --cached IGI/LR1/geometric_lib
hint:
hint: See "git help submodule" for more information.
hint: Disable this message with "git config set advice.addEmbeddedRepo false"
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git rm --cached IGI/LR1/geometric_lib
error: the following file has staged content different from both the
file and the HEAD:
    IGI/LR1/geometric_lib
(use -f to force removal)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch STRWEB-LR1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   IGI/LR1/geometric_lib

anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git rm --cached -f IGI/LR1/geometric_lib
rm 'IGI/LR1/geometric_lib'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch STRWEB-LR1
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/

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

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

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "changed" > IGI/LR1/foo/baz/readme.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI-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/foo/baz/readme.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/

no changes added to commit (use "git add" and/or "git commit -a")
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git restore IGI/LR1/foo/baz/readme.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch IGI-LR1
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ cat IGI/LR1/foo/baz/readme.txt
426
```
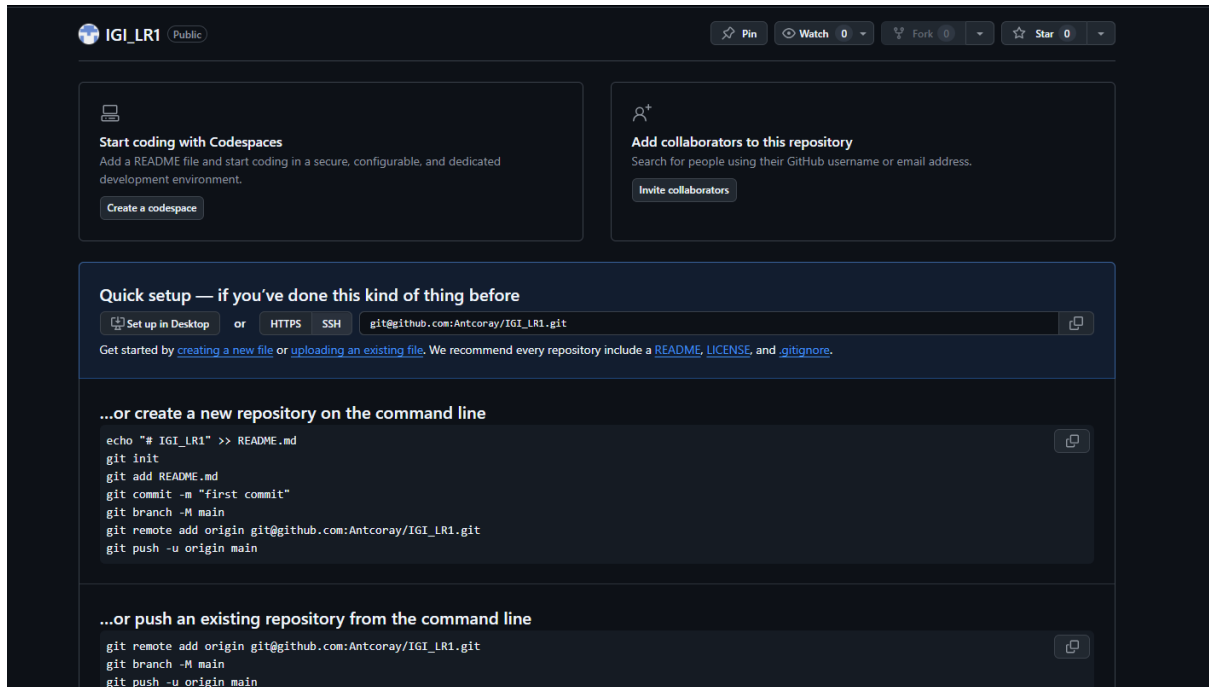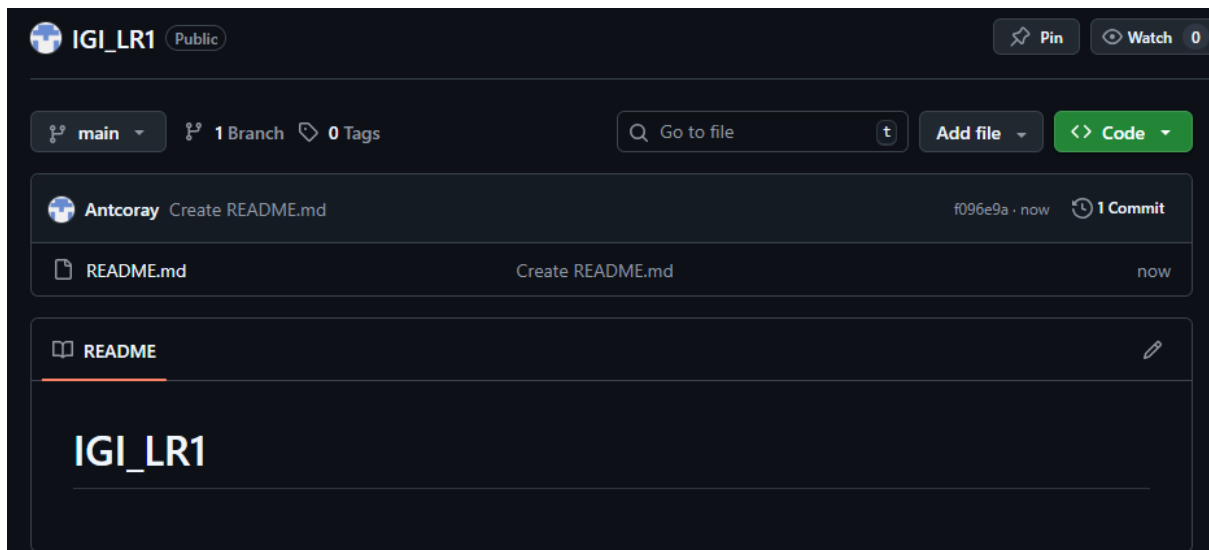
5. Выполните следующие действия с удаленным репозиторием:

a. создайте удаленный репозиторий (на github.com)

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

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log origin/main
commit f096e9ac4c7224a40e1c626f04cfb34b44c5dd0f (origin/main, origin/HEAD)
Author: Antcoray <antonio.kolesnikow@gmail.com>
Date:     Thu Feb 19 01:24:31 2026 +0300

    Create README.md
```

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

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ ls
IGI  STRWEB
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "remote test" > Newfile.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ echo "remote test 2" > Newfile2.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/
        Newfile.txt
        Newfile2.txt

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git add Newfile.txt Newfile2.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   Newfile.txt
        new file:   Newfile2.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/

anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "remote test"
[main 5b51a87] remote test
 2 files changed, 2 insertions(+)
 create mode 100644 Newfile.txt
 create mode 100644 Newfile2.txt
```
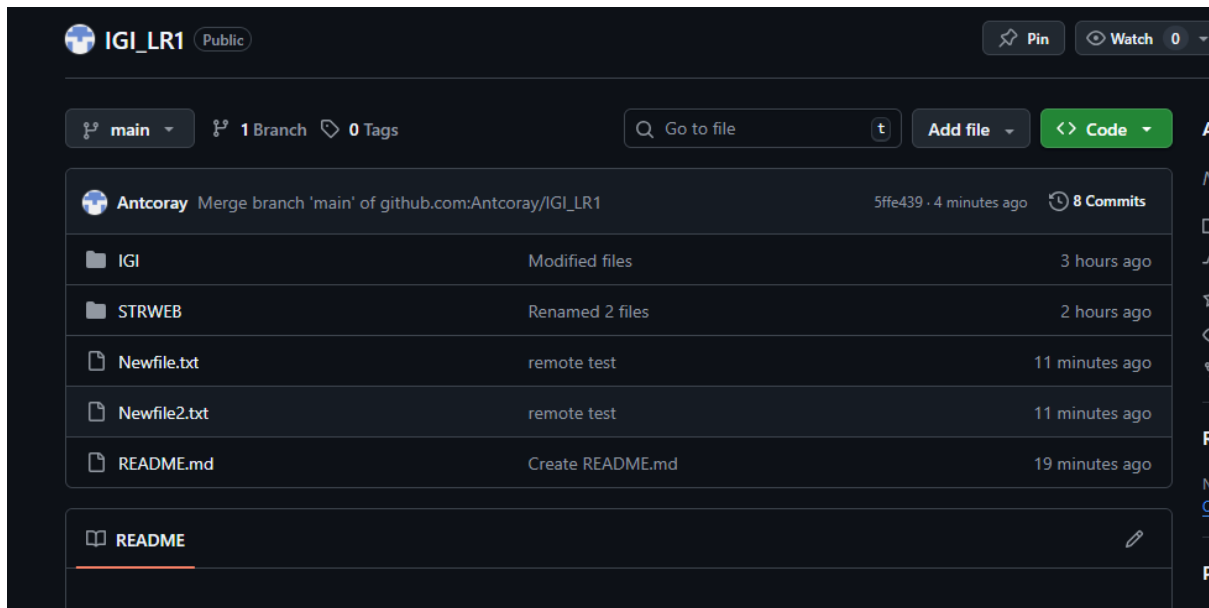
```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git pull --no-rebase origin main --allow-unrelated-histories
From github.com:Antcoray/IGI_LR1
 * branch            main       -> FETCH_HEAD
Merge made by the 'ort' strategy.
 README.md | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 README.md
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ ls
IGI  Newfile.txt  Newfile2.txt  README.md  STRWEB
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/

nothing added to commit but untracked files present (use "git add" to track)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git push origin main
Enumerating objects: 33, done.
Counting objects: 100% (33/33), done.
Delta compression using up to 12 threads
Compressing objects: 100% (14/14), done.
Writing objects: 100% (32/32), 2.51 KiB | 429.00 KiB/s, done.
Total 32 (delta 3), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (3/3), done.
To github.com:Antcoray/IGI_LR1.git
   f096e9a..5ffe439  main -> main
```

d. переименуйте свой удаленный репозиторий

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git remote rename origin my-origin
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git remote
my-origin
```

e. получите данные из удаленного репозитория

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git fetch my-origin
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$
```

f. просмотреть историю изменений

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git log --oneline --graph --all
*   5ffe439 (HEAD -> main, my-origin/main, my-origin/HEAD) Merge branch 'main' of github.com:Antcoray/IGI_LR1
|\
| * f096e9a Create README.md
* 5b51a87 remote test
* 19e6cc7 Revert "added text file"
* a6bf1ef added text file
| * d62e569 (STRWEB-LR4) STRWEB-LR4 - added 1 file
|/
| * b37795f (STRWEB-LR3) STRWEB-LR3 - added 1 file
|/
| * b39009a (STRWEB-LR2) STRWEB-LR2 - added 1 file
|/
| * cce9667 (STRWEB-LR1) STRWEB-LR1 - modified 1 file
|/
| * bb99afd (STRWEB) STRWEB - modified 1 file
|/
| * e1f40ae (IGI-LR5) IGI-LR5 - modified 1 file
|/
| * a64b925 (IGI-LR4) IGI-LR4 - modified 1 file
|/
| * a879f92 (IGI-LR3) IGI-LR3 - modified 1 file
|/
| * c76a534 (IGI-LR2) IGI-LR2 - modified 1 file
|/
| * 0832497 (IGI-LR1) IGI-LR1 - added 2 files
|/
| * 828c652 (IGI) IGI - added 1 file
|/
* 7553030 Renamed 2 files
* f6b9bc8 Modified files
* 5b08a54 Empty files
```

g. создайте дополнительную ветку 1 в удаленном репозитории, перенесите в нее два файла из другой ветки, удалите один из файлов

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch remote-1
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout remote-1
Switched to branch 'remote-1'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git push -u my-origin remote-1
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'remote-1' on GitHub by visiting:
remote:        https://github.com/Antcoray/IGI_LR1/pull/new/remote-1
remote:
To github.com:Antcoray/IGI_LR1.git
 * [new branch]      remote-1 -> remote-1
branch 'remote-1' set up to track 'my-origin/remote-1'.
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git rm Newfile2.txt
rm 'Newfile2.txt'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch remote-1
Your branch is up to date with 'my-origin/remote-1'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        deleted:    Newfile2.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/

anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "deleted 1 file"
[remote-1 36f7bdb] deleted 1 file
 1 file changed, 1 deletion(-)
 delete mode 100644 Newfile2.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git push
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 225 bytes | 225.00 KiB/s, done.
Total 2 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:Antcoray/IGI_LR1.git
   5ffe439..36f7bdb  remote-1 -> remote-1
```

h. создайте дополнительную ветку 2 в удаленном репозитории, перенесите в нее два файла из вашего проекта, слить изменения в основную ветку, удалить дополнительную ветку 2

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout IGI-LR2 -- IGI/LR2/LR2Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout IGI-LR3 -- IGI/LR3/LR3Test.txt
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ ls
IGI  Newfile.txt  Newfile2.txt  README.md  STRWEB
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git status
On branch remote-2
Your branch is up to date with 'my-origin/remote-2'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   IGI/LR2/LR2Test.txt
        modified:   IGI/LR3/LR3Test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        IGI/LR1/geometric_lib/

anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git commit -m "added files"
[remote-2 ce4baed] added files
 2 files changed, 2 insertions(+), 2 deletions(-)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git push
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (6/6), 514 bytes | 257.00 KiB/s, done.
Total 6 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:Antcoray/IGI_LR1.git
   5ffe439..ce4baed  remote-2 -> remote-2
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git checkout main
Switched to branch 'main'
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git merge remote-2
Updating 5ffe439..ce4baed
Fast-forward
 IGI/LR2/LR2Test.txt | 2 +-
 IGI/LR3/LR3Test.txt | 2 +-
 2 files changed, 2 insertions(+), 2 deletions(-)
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git push my-origin main
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:Antcoray/IGI_LR1.git
   5ffe439..ce4baed  main -> main
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git branch -d remote-2
Deleted branch remote-2 (was ce4baed).
```

```
anton@HP-PROBOOK-G10:~/4_sem_vsakoe/453501_KOLESNIKOW_12$ git push my-origin --delete remote-2
To github.com:Antcoray/IGI_LR1.git
 - [deleted]         remote-2
```

6. Сгенерируйте в DeepSeek файл html и файл css для сайта визитки компании или человека с областью занятости на выбор.

https://antcoray.github.io/visitka/