

Задание:

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

- a. Установите Git
- b. Выполните базовую настройку

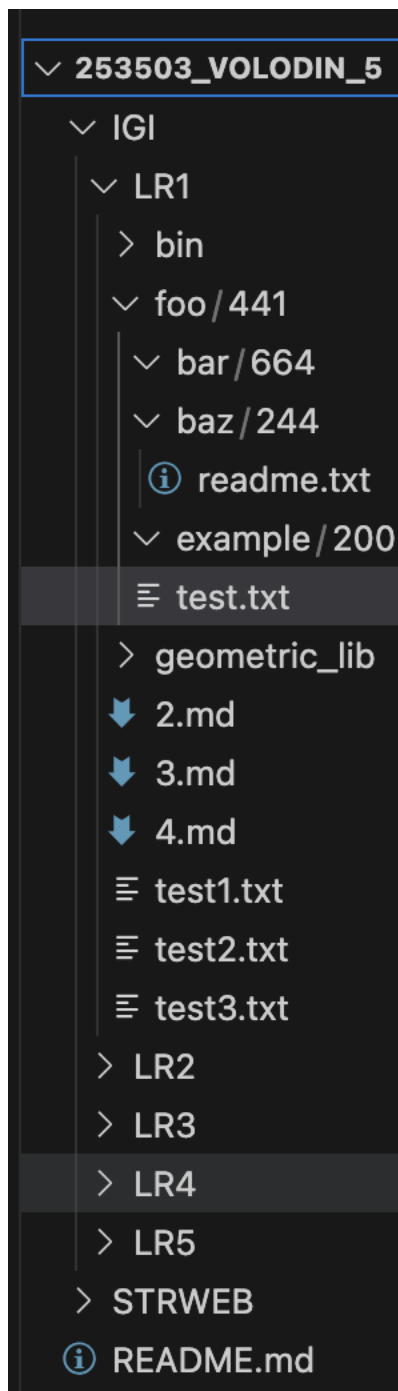
```
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % git --version
git version 2.44.0
```

```
macbookair@MacBook-Air-MacBookAir LR1 % cat ~/.gitconfig
[user]
    email = roofer1809@gmail.com
    name = foolin1
```

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

```
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % mkdir IGI
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % cd IGI
macbookair@MacBook-Air-MacBookAir IGI % mkdir LR1
macbookair@MacBook-Air-MacBookAir IGI % mkdir LR2
macbookair@MacBook-Air-MacBookAir IGI % mkdir LR3
macbookair@MacBook-Air-MacBookAir IGI % mkdir LR4
macbookair@MacBook-Air-MacBookAir IGI % mkdir LR5
macbookair@MacBook-Air-MacBookAir IGI % cd ..
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % mkdir STRWEB
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % cd STRWEB
macbookair@MacBook-Air-MacBookAir STRWEB % mkdir LR1 LR2 LR3 LR4
macbookair@MacBook-Air-MacBookAir STRWEB % cd ..
```

```
macbookair@MacBook-Air-MacBookAir LR1 % mkdir -p bin/700/date/700
macbookair@MacBook-Air-MacBookAir LR1 % mkdir -p foo/441
macbookair@MacBook-Air-MacBookAir LR1 % echo 000 > foo/441/test.txt
macbookair@MacBook-Air-MacBookAir LR1 % mkdir -p foo/441/bar/664
macbookair@MacBook-Air-MacBookAir LR1 % mkdir -p foo/441/example/200
macbookair@MacBook-Air-MacBookAir LR1 % mkdir -p foo/441/baz/244
macbookair@MacBook-Air-MacBookAir LR1 % echo 411 > foo/441/baz/244/readme.txt
macbookair@MacBook-Air-MacBookAir LR1 %
macbookair@MacBook-Air-MacBookAir LR1 %
macbookair@MacBook-Air-MacBookAir LR1 % git clone https://github.com/smartiqaorg/geometric_lib
Клонирование в «geometric_lib»...
remote: Enumerating objects: 35, done.
remote: Total 35 (delta 0), reused 0 (delta 0), pack-reused 35
Получение объектов: 100% (35/35), 4.60 КиБ | 4.60 МиБ/с, готово.
Определение изменений: 100% (6/6), готово.
```



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

(https://github.com/smartigaorg/geometric_lib)

```
macbookair@MacBook-Air-MacBookAir LR1 % git clone https://github.com/smartigaorg/geometric_lib
Клонирование в «geometric_lib»...
remote: Enumerating objects: 35, done.
remote: Total 35 (delta 0), reused 0 (delta 0), pack-reused 35
Получение объектов: 100% (35/35), 4.60 КиБ | 4.60 МиБ/с, готово.
Определение изменений: 100% (6/6), готово.
```

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 ...),

```
macbookair@MacBook-Air-MacBookAir IGI % touch 1.md
macbookair@MacBook-Air-MacBookAir IGI % touch 2.md
macbookair@MacBook-Air-MacBookAir IGI % rm 1.md 2.md
macbookair@MacBook-Air-MacBookAir IGI % cd ..
macbookair@MacBook-Air-MacBookAir 253503_V0L0DIN_5 % cd IGI
macbookair@MacBook-Air-MacBookAir IGI % cd LR1
macbookair@MacBook-Air-MacBookAir LR1 % touch 1.md
macbookair@MacBook-Air-MacBookAir LR1 % touch 2.md
macbookair@MacBook-Air-MacBookAir LR1 % touch 3.md
macbookair@MacBook-Air-MacBookAir LR1 % git add .
macbookair@MacBook-Air-MacBookAir LR1 % git status
Текущая ветка: IGI/LR1
Изменения, которые будут включены в коммит:
(используйте «git restore --staged <файл>...», чтобы убрать из индекса)
    новый файл:      1.md
    новый файл:      2.md
    новый файл:      3.md
```

- b. внесите изменения в файлы,

- c. выполните коммиты к проиндексированным файлам

```
(используйте «git add», чтобы проиндексировать их)
macbookair@MacBook-Air-MacBookAir LR1 % echo "hello" >> test1.txt
macbookair@MacBook-Air-MacBookAir LR1 % git status
Текущая ветка: IGI/LR1
Неотслеживаемые файлы:
(используйте «git add <файл>...», чтобы добавить в то, что будет включено в коммит)
test1.txt

индекс пуст, но есть неотслеживаемые файлы
(используйте «git add», чтобы проиндексировать их)
macbookair@MacBook-Air-MacBookAir LR1 % git restore test1.txt
error: pathspec 'test1.txt' did not match any file(s) known to git
macbookair@MacBook-Air-MacBookAir LR1 % git add .
macbookair@MacBook-Air-MacBookAir LR1 % git commit -m "change test1.txt"
[IGI/LR1 5a6ef04] change test1.txt
1 file changed, 1 insertion(+)
create mode 100644 IGI/LR1/test1.txt
```

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

```
rename IGI/LR1/{1.md => 4.md} (100%)
macbookair@MacBook-Air-MacBookAir LR1 % git rm 4.md
rm 'IGI/LR1/4.md'
macbookair@MacBook-Air-MacBookAir LR1 % git rm $(git ls-files "*.md")
rm 'IGI/LR1/2.md'
rm 'IGI/LR1/3.md'
rm 'IGI/LR1/geometric_lib/docs/README.md'
```

- e. переименуйте файлы

```
macbookair@MacBook-Air-MacBookAir LR1 % git commit -m "rename file"
[IGI/LR1 6d35ecb] rename file
1 file changed, 0 insertions(+), 0 deletions(-)
rename IGI/LR1/{1.md => 4.md} (100%)
```

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

```
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % git branch IGI/LR1
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % git branch IGI/LR2
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % git branch IGI/LR3
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % git branch IGI/LR4
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % git branch IGI/LR5
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % git branch STRWEB/LR1
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % git branch STRWEB/LR2
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % git branch STRWEB/LR3
macbookair@MacBook-Air-MacBookAir 253503_VOLODIN_5 % git branch STRWEB/LR4
```

- g. выведите историю коммитов: полностью и с ограничением вывода – отобразить только последние, до и после указанной даты, по автору файлов, коммитов (флаги n, since, after, until, before, author, committer, grep) <https://code.mu/ru/tool/git/basis/limit-output-commit-history-flags/> ,

```
macbookair@MacBook-Air-MacBookAir LR1 % git log --author="foolin1"
commit 6d35ecb51360b0385f265acb7e2e2a4860d68d85 (HEAD -> IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

commit c12ef0330d98fa1230f63cfeaaaf200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

commit ee89ce93303cce2aa585ce1ee580156baacba00e (lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit
```

```
macbookair@MacBook-Air-MacBookAir LR1 % git log -n 5
commit 6d35ecb51360b0385f265acb7e2e2a4860d68d85 (HEAD -> IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

commit c12ef0330d98fa1230f63cfeaaaf200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

commit ee89ce93303cce2aa585ce1ee580156baacba00e (lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit
```

```
initial commit
macbookair@MacBook-Air-MacBookAir LR1 % git log --committer="foolin1"
commit 6d35ecb51360b0385f265acb7e2e2a4860d68d85 (HEAD -> IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

commit c12ef0330d98fa1230f63cfeaaf200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

commit ee89ce93303cce2aa585ce1ee580156baacba00e (lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit
```

```
macbookair@MacBook-Air-MacBookAir LR1 % git log --grep="initial commit"
commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

commit ee89ce93303cce2aa585ce1ee580156baacba00e (lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit
```

```
initial commit
macbookair@MacBook-Air-MacBookAir LR1 % git log --after="2022-01-01"
commit 6d35ecb51360b0385f265acb7e2e2a4860d68d85 (HEAD -> IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

commit c12ef0330d98fa1230f63cfeaaf200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

commit ee89ce93303cce2aa585ce1ee580156baacba00e (lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit
```

```
initial commit
macbookair@MacBook-Air-MacBookAir LR1 % git log --before="2025-01-01"
commit 6d35ecb51360b0385f265acb7e2e2a4860d68d85 (HEAD -> IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

commit c12ef0330d98fa1230f63cfeaaf200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

commit ee89ce93303cce2aa585ce1ee580156baacba00e (lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit
```

```

macbookair@MacBook-Air-MacBookAir LR1 % git log --since="2 days ago"
commit 8b6d0ffe6168c97305ef1fc536e029d4a762ecac (HEAD -> IGI/LR1, origin/IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sun Apr 7 00:06:52 2024 +0300

    add files

commit 5a6ef0485e6f3740f761cf320f908e67612a3302
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 23:42:25 2024 +0300

    change test.1.txt

commit 6d35ecb51360b0385f765acb7e2e2a4860d68d85
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

commit c12ef0330d98fa1230f63cfeaaaf200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

commit ee89ce93303cce2aa585ce1ee580156baacba00e (origin/lab, lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit

```

```

macbookair@MacBook-Air-MacBookAir LR1 % git log --until="2025-01-01 12:00:00"
commit 8b6d0ffe6168c97305ef1fc536e029d4a762ecac (HEAD -> IGI/LR1, origin/IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sun Apr 7 00:06:52 2024 +0300

    add files

commit 5a6ef0485e6f3740f761cf320f908e67612a3302
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 23:42:25 2024 +0300

    change test.1.txt

commit 6d35ecb51360b0385f765acb7e2e2a4860d68d85
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

commit c12ef0330d98fa1230f63cfeaaaf200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

commit ee89ce93303cce2aa585ce1ee580156baacba00e (origin/lab, lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit

```

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

```

macbookair@MacBook-Air-MacBookAir LR1 % git log
commit 6d35ecb51360b0385f765acb7e2e2a4860d68d85 (HEAD -> IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

commit c12ef0330d98fa1230f63cfeaaaf200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

commit ee89ce93303cce2aa585ce1ee580156baacba00e (lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit

```

```

macbookair@MacBook-Air-MacBookAir LR1 % git log --graph
* commit 6d35ecb51360b0385f265acb7e2e2a4860d68d85 (HEAD -> IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

* commit c12ef0330d98fa1230f63cfeaa200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

* commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

* commit ee89ce93303cce2aa585ce1ee580156baacba00e (lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit

```

```

6683ce93303cce99282ce766280128099c99006 (fwp' 218MEB\LR4' 218MEB\LR3' 218MEB\LR2' 218MEB\LR1' IGI\LR2' IGI\LR4' IGI\LR3' IGI\LR5) TUTT9f commit
1c80904310d01d300c27e1d001c3p3e388834c30 TUTT9f commit
c12ef0330d98fa1230f63cfeaa200dab6723efd (HEAD -> IGI/LR1) LGU9W6 47fe
04326c0213000038213029c01e363948000000002 (HEAD -> IGI/LR1) LGU9W6 47fe
macbookair@MacBook-Air-MacBookAir LR1 % git log --graph
TUTT9f commit

```

```

macbookair@MacBook-Air-MacBookAir LR1 % git log -p
commit 6d35ecb51360b0385f265acb7e2e2a4860d68d85 (HEAD -> IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

diff --git a/IGI/LR1/1.md b/IGI/LR1/4.md
similarity index 100%
rename from IGI/LR1/1.md
rename to IGI/LR1/4.md

commit c12ef0330d98fa1230f63cfeaa200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

diff --git a/IGI/LR1/1.md b/IGI/LR1/1.md
new file mode 100644
index 0000000..e69de29
diff --git a/IGI/LR1/2.md b/IGI/LR1/2.md
new file mode 100644
index 0000000..e69de29
diff --git a/IGI/LR1/3.md b/IGI/LR1/3.md
new file mode 100644
index 0000000..e69de29

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

diff --git a/IGI/LR1/foo/441/baz/244/readme.txt b/IGI/LR1/foo/441/baz/244/readme.txt
new file mode 100644
index 0000000..617de7e
--- /dev/null
+++ b/IGI/LR1/foo/441/baz/244/readme.txt
@@ -0,0 +1 @@
+411
diff --git a/IGI/LR1/foo/441/test.txt b/IGI/LR1/foo/441/test.txt
new file mode 100644
index 0000000..8f087a3
--- /dev/null
+++ b/IGI/LR1/foo/441/test.txt
@@ -0,0 +1 @@
+000

```



```

macbookair@MacBook-Air-MacBookAir LR1 % git log --name-only
commit 6d35ecb51360b0385f265acb7e2e2a4860d68d85 (HEAD -> IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

IGI/LR1/4.md

commit c12ef0330d98fa1230f63cfeaa200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

IGI/LR1/1.md
IGI/LR1/2.md
IGI/LR1/3.md

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

IGI/LR1/foo/441/baz/244/readme.txt
IGI/LR1/foo/441/test.txt
IGI/LR1/geometric_lib/circle.py
IGI/LR1/geometric_lib/docs/README.md
IGI/LR1/geometric_lib/square.py

commit ee89ce93303cce2aa585ce1ee580156baacba00e (lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit

README.md

```

```

macbookair@MacBook-Air-MacBookAir LR1 % git log --stat
commit 6d35ecb51360b0385f265acb7e2e2a4860d68d85 (HEAD -> IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

IGI/LR1/{1.md => 4.md} | 0
1 file changed, 0 insertions(+), 0 deletions(-)

commit c12ef0330d98fa1230f63cfeaa200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

IGI/LR1/1.md | 0
IGI/LR1/2.md | 0
IGI/LR1/3.md | 0
3 files changed, 0 insertions(+), 0 deletions(-)

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

IGI/LR1/foo/441/baz/244/readme.txt | 1 +
IGI/LR1/foo/441/test.txt | 1 +
IGI/LR1/geometric_lib/circle.py | 10 ++++++++
IGI/LR1/geometric_lib/docs/README.md | 10 ++++++++
IGI/LR1/geometric_lib/square.py | 7 ++++++
5 files changed, 29 insertions(+)

commit ee89ce93303cce2aa585ce1ee580156baacba00e (lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit

README.md | 0
1 file changed, 0 insertions(+), 0 deletions(-)

```



```

macbookair@MacBook-Air-MacBookAir LR1 % git log --name-status
commit 6d35ecb51360b0385f265acb7e2e2a4860d68d85 (HEAD -> IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

R100    IGI/LR1/1.md    IGI/LR1/4.md

commit c12ef0330d98fa1230f63cfeaf200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

A       IGI/LR1/1.md
A       IGI/LR1/2.md
A       IGI/LR1/3.md

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

A       IGI/LR1/foo/441/baz/244/readme.txt
A       IGI/LR1/foo/441/test.txt
A       IGI/LR1/geometric_lib/circle.py
A       IGI/LR1/geometric_lib/docs/README.md
A       IGI/LR1/geometric_lib/square.py

commit ee89ce93303cce2aa585ce1ee580156baacba00e (lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit

A       README.md

```

```

macbookair@MacBook-Air-MacBookAir LR1 % git log --relative-date
commit 6d35ecb51360b0385f265acb7e2e2a4860d68d85 (HEAD -> IGI/LR1)
Author: foolin1 <roofer1809@gmail.com>
Date: 16 минут назад

    rename file

commit c12ef0330d98fa1230f63cfeaf200dab6723efd
Author: foolin1 <roofer1809@gmail.com>
Date: 18 минут назад

    create files

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolin1 <roofer1809@gmail.com>
Date: 34 минуты назад

    initial commit

commit ee89ce93303cce2aa585ce1ee580156baacba00e (lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolin1 <roofer1809@gmail.com>
Date: 62 минуты назад

    initial commit

```

- i. найдите разницу в изменениях для каждого коммита

```

macbookair@MacBook-Air-MacBookAir LR1 % git diff ee89ce9 fc80a04
diff --git a/IGI/LR1/foo/441/baz/244/readme.txt b/IGI/LR1/foo/441/baz/244/readme.txt
new file mode 100644
index 0000000..617de7e
--- /dev/null
+++ b/IGI/LR1/foo/441/baz/244/readme.txt
@@ -0,0 +1 @@
+411
diff --git a/IGI/LR1/foo/441/test.txt b/IGI/LR1/foo/441/test.txt
new file mode 100644
index 0000000..8f087a3
--- /dev/null
+++ b/IGI/LR1/foo/441/test.txt
@@ -0,0 +1 @@
+000
diff --git a/IGI/LR1/geometric_lib/circle.py b/IGI/LR1/geometric_lib/circle.py
new file mode 100644
index 0000000..c3eb864
--- /dev/null
+++ b/IGI/LR1/geometric_lib/circle.py
@@ -0,0 +1,10 @@
+import math
+
+
+def area(r):
+    return math.pi * r * r
+
+
+def perimeter(r):
+    return 2 * math.pi * r
+
diff --git a/IGI/LR1/geometric_lib/docs/README.md b/IGI/LR1/geometric_lib/docs/README.md
new file mode 100644
index 0000000..63f8727
--- /dev/null
+++ b/IGI/LR1/geometric_lib/docs/README.md
@@ -0,0 +1,10 @@
+# Math formulas
+## Area
+- Circle:  $S = \pi R^2$ 
+- Rectangle:  $S = ab$ 
+- Square:  $S = a^2$ 
+
+## Perimeter
+- Circle:  $P = 2\pi R$ 
+- Rectangle:  $P = 2a + 2b$ 
+- Square:  $P = 4a$ 
+
\ No newline at end of file
macbookair@MacBook-Air-MacBookAir LR1 % git diff fc80a04 c12ef03
diff --git a/IGI/LR1/1.md b/IGI/LR1/1.md
new file mode 100644
index 0000000..e69de29
diff --git a/IGI/LR1/2.md b/IGI/LR1/2.md
new file mode 100644
index 0000000..e69de29
diff --git a/IGI/LR1/3.md b/IGI/LR1/3.md
new file mode 100644
index 0000000..e69de29
macbookair@MacBook-Air-MacBookAir LR1 % git diff c12ef03 6d35ecb
diff --git a/IGI/LR1/1.md b/IGI/LR1/4.md
similarity index 100%
rename from IGI/LR1/1.md
rename to IGI/LR1/4.md

```

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

```

rename to IGI/LR1/4.md
macbookair@MacBook-Air-MacBookAir LR1 % echo '5' > test.txt
macbookair@MacBook-Air-MacBookAir LR1 % git add test.txt
macbookair@MacBook-Air-MacBookAir LR1 % git commit -m "add test.txt"
[IGI/LR1 f7a7ee6] add test.txt
5 files changed, 1 insertion(+), 10 deletions(-)
delete mode 100644 IGI/LR1/2.md
delete mode 100644 IGI/LR1/3.md
delete mode 100644 IGI/LR1/4.md
delete mode 100644 IGI/LR1/geometric_lib/docs/README.md
create mode 100644 IGI/LR1/test.txt
macbookair@MacBook-Air-MacBookAir LR1 % git reset --hard HEAD~1
Указатель HEAD сейчас на коммите 6d35ecb rename file

```

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

```

macbookair@MacBook-Air-MacBookAir LR1 % touch test1.txt
macbookair@MacBook-Air-MacBookAir LR1 % git add test1.txt
macbookair@MacBook-Air-MacBookAir LR1 % git status
Текущая ветка: IGI/LR1
Изменения, которые будут включены в коммит:
  (используйте «git restore --staged <файл>...», чтобы убрать из индекса)
    новый файл:      test1.txt

macbookair@MacBook-Air-MacBookAir LR1 % git restore --staged test1.txt
macbookair@MacBook-Air-MacBookAir LR1 % git status
Текущая ветка: IGI/LR1
Неотслеживаемые файлы:
  (используйте «git add <файл>...», чтобы добавить в то, что будет включено в коммит)
    test1.txt

индекс пуст, но есть неотслеживаемые файлы
(используйте «git add», чтобы проиндексировать их)

```

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

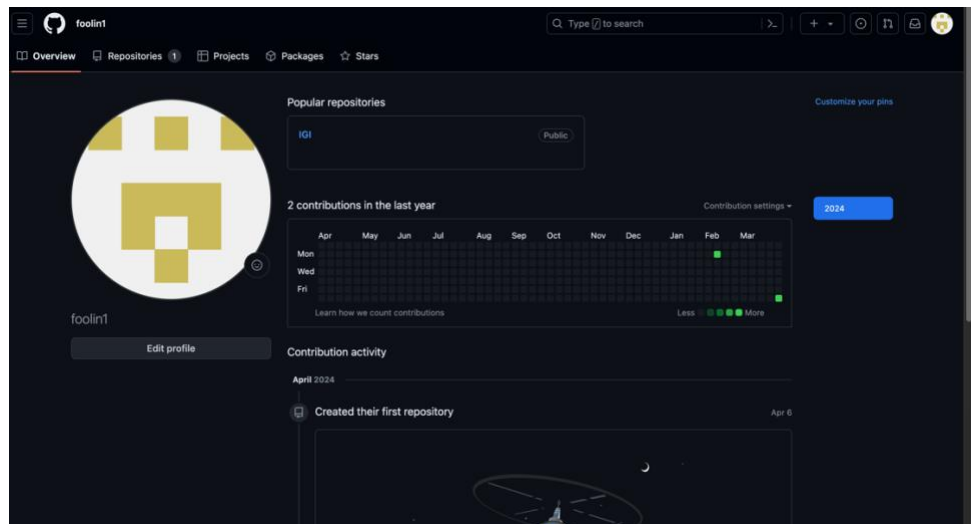
```

macbookair@MacBook-Air-MacBookAir LR1 % git add .
macbookair@MacBook-Air-MacBookAir LR1 % git commit -m "change test.1.txt"
[IGI/LR1 5a6ef04] change test.1.txt
1 file changed, 1 insertion(+)
create mode 100644 IGI/LR1/test1.txt
macbookair@MacBook-Air-MacBookAir LR1 % echo "hello world" >> test1.txt
macbookair@MacBook-Air-MacBookAir LR1 % git restore test1.txt
macbookair@MacBook-Air-MacBookAir LR1 % cat test1.txt
hello

```

5. Выполните следующие действия с удаленным репозиторием:

- а. создайте удаленный репозиторий (на github.com)



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

```
macbookair@MacBook-Air-MacBookAir LR1 % git remote remove origin
macbookair@MacBook-Air-MacBookAir LR1 % git remote add origin https://github.com/foolin1/IGI.git
macbookair@MacBook-Air-MacBookAir LR1 % git remote -v
origin https://github.com/foolin1/IGI.git (fetch)
origin https://github.com/foolin1/IGI.git (push)
macbookair@MacBook-Air-MacBookAir LR1 % git remote -v
origin https://github.com/foolin1/IGI.git (fetch)
origin https://github.com/foolin1/IGI.git (push)
macbookair@MacBook-Air-MacBookAir LR1 % git fetch origin
macbookair@MacBook-Air-MacBookAir LR1 % git push -u origin main
error: src refspec main ничему не соответствует
error: не удалось отправить некоторые ссылки в «https://github.com/foolin1/IGI.git»
macbookair@MacBook-Air-MacBookAir LR1 % git branch
* IGI/LR1
  IGI/LR2
  IGI/LR3
  IGI/LR4
  IGI/LR5
  STRWEB/LR1
  STRWEB/LR2
  STRWEB/LR3
  STRWEB/LR4
  lab
macbookair@MacBook-Air-MacBookAir LR1 % git checkout lab
Переключились на ветку «lab»
macbookair@MacBook-Air-MacBookAir LR1 % git push -u origin lab
Перечисление объектов: 3, готово.
Подсчет объектов: 100% (3/3), готово.
Запись объектов: 100% (3/3), 209 байтов | 209.00 КиБ/с, готово.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/foolin1/IGI.git
 * [new branch]      lab -> lab
branch 'lab' set up to track 'origin/lab'.
```

```
macbookair@MacBook-Air-MacBookAir LR1 % git checkout IGI/LR1
Переключились на ветку «IGI/LR1»
macbookair@MacBook-Air-MacBookAir LR1 % git push -u origin IGI/LR1
Перечисление объектов: 29, готово.
Подсчет объектов: 100% (29/29), готово.
При сжатии изменений используется до 8 потоков
Сжатие объектов: 100% (17/17), готово.
Запись объектов: 100% (28/28), 1.92 КиБ | 1.92 МиБ/с, готово.
Total 28 (delta 3), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (3/3), done.
remote:
remote: Create a pull request for 'IGI/LR1' on GitHub by visiting:
remote:   https://github.com/foolin1/IGI/pull/new/IGI/LR1
remote:
To https://github.com/foolin1/IGI.git
 * [new branch]      IGI/LR1 -> IGI/LR1
branch 'IGI/LR1' set up to track 'origin/IGI/LR1'.
```

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

```
macbookair@MacBook-Air-MacBookAir LR1 % echo "hello" >> test2.txt
macbookair@MacBook-Air-MacBookAir LR1 % echo "hello world" >> test3.txt
macbookair@MacBook-Air-MacBookAir LR1 % git commit -m "add files"
Текущая ветка: IGI/LR1
Эта ветка соответствует «origin/IGI/LR1».

Неотслеживаемые файлы:
(используйте «git add <файл>...», чтобы добавить в то, что будет включено в коммит)
test2.txt
test3.txt

индекс пуст, но есть неотслеживаемые файлы
(используйте «git add», чтобы проиндексировать их)
macbookair@MacBook-Air-MacBookAir LR1 % git add .
macbookair@MacBook-Air-MacBookAir LR1 % git commit -m "add files"
[IGI/LR1 8b6d0ff] add files
2 files changed, 2 insertions(+)
create mode 100644 IGI/LR1/test2.txt
create mode 100644 IGI/LR1/test3.txt
macbookair@MacBook-Air-MacBookAir LR1 % git push origin IGI/LR1
Перечисление объектов: 8, готово.
Подсчет объектов: 100% (8/8), готово.
При сжатии изменений используется до 8 потоков
Сжатие объектов: 100% (3/3), готово.
Запись объектов: 100% (5/5), 416 байтов | 416.00 КиБ/с, готово.
Total 5 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/foolin1/IGI.git
 5a6ef04..8b6d0ff IGI/LR1 -> IGI/LR1
```

Commits

IGI/LR1

Commits on Apr 7, 2024

add files
foolin1 committed yesterday
8b6d0ff

Commits on Apr 6, 2024

change test.1.txt
foolin1 committed yesterday
5a6ef04

rename file
foolin1 committed yesterday
6d35ecb

create files
foolin1 committed yesterday
c12ef03

initial commit
foolin1 committed yesterday
fc80a04

initial commit
foolin1 committed yesterday
ee89ce9

- d. переименуйте свой удаленный репозиторий

General

Repository name

IGI_Labs

Rename

```
macbookair@MacBook-Air-MacBookAir LR1 % git remote set-url origin https://github.com/foolin1/IGI_Labs.git
```

- e. получите данные из удаленного репозитория

```

macbookair@MacBook-Air-MacBookAir LR1 % git fetch origin
macbookair@MacBook-Air-MacBookAir LR1 % git log origin/LR1
fatal: неоднозначный аргумент «origin/LR1»: неизвестная редакция или не путь в рабочем каталоге.
Используйте «<» для отгеления путей от редакций, вот так:
«git <команда> [<редакция>...] -- [<файл>...]»
macbookair@MacBook-Air-MacBookAir LR1 % git log origin/IGI/LR1
commit 8b0d0ffe6168c97385ef1fc536e029d4a762ecac (HEAD -> IGI/LR1, origin/IGI/LR1)
Author: foolini1 <roofer1809@gmail.com>
Date: Sun Apr 7 00:06:52 2024 +0300

    add files

commit 5a6ef0485e6f3740f761cf320f908e67612a3302
Author: foolini1 <roofer1809@gmail.com>
Date: Sat Apr 6 23:42:25 2024 +0300

    change test.1.txt

commit 6d35ecb51360b0385f265acb7e2e2a4860d68d85
Author: foolini1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:49:29 2024 +0300

    rename file

commit c12ef0330d98fa1230f63cfeaf200dab6723efd
Author: foolini1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:47:42 2024 +0300

    create files

commit fc80a043f9b7d209cb51e79807e3b3628883dc20
Author: foolini1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:31:17 2024 +0300

    initial commit

commit ee89ce93303cce2aa585ce1ee580156baacba00e (origin/lab, lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2)
Author: foolini1 <roofer1809@gmail.com>
Date: Sat Apr 6 22:03:40 2024 +0300

    initial commit

```

f. просмотреть историю изменений

```

macbookair@MacBook-Air-MacBookAir LR1 % git log --oneline
8b6d0ff (HEAD -> IGI/LR1, origin/IGI/LR1) add files
5a6ef04 change test.1.txt
6d35ecb rename file
c12ef03 create files
fc80a04 initial commit
ee89ce9 (origin/lab, lab, STRWEB/LR4, STRWEB/LR3, STRWEB/LR2, STRWEB/LR1, IGI/LR5, IGI/LR4, IGI/LR3, IGI/LR2) initial commit

```