

Лабораторная работа №1

по дисциплине ИГИ

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Задание 2.

Создание структуры папок согласно индивидуальному заданию.

```
● lllymuk@MacBook-Air-Daniil-2 LR1 % mkdir bar
● lllymuk@MacBook-Air-Daniil-2 LR1 % mkdir foo
● lllymuk@MacBook-Air-Daniil-2 LR1 % cd bar
● lllymuk@MacBook-Air-Daniil-2 bar % mkdir 705
● lllymuk@MacBook-Air-Daniil-2 bar % cd 705
● lllymuk@MacBook-Air-Daniil-2 705 % mkdir bin
● lllymuk@MacBook-Air-Daniil-2 705 % mkdir foo
● lllymuk@MacBook-Air-Daniil-2 705 % cd bin
● lllymuk@MacBook-Air-Daniil-2 bin % mkdir 700
● lllymuk@MacBook-Air-Daniil-2 bin % cd 700
● lllymuk@MacBook-Air-Daniil-2 700 % mkdir echo
● lllymuk@MacBook-Air-Daniil-2 700 % cd echo
● lllymuk@MacBook-Air-Daniil-2 echo % mkdir 555
● lllymuk@MacBook-Air-Daniil-2 echo % cd ..
● lllymuk@MacBook-Air-Daniil-2 700 % echo 400 > readme.txt
● lllymuk@MacBook-Air-Daniil-2 700 % cd ..
● lllymuk@MacBook-Air-Daniil-2 bin % cd ..
● lllymuk@MacBook-Air-Daniil-2 705 % mkdir baz
● lllymuk@MacBook-Air-Daniil-2 705 % mkdir 644
● lllymuk@MacBook-Air-Daniil-2 705 % mkdir example
● lllymuk@MacBook-Air-Daniil-2 705 % mkdir 222
⊗ lllymuk@MacBook-Air-Daniil-2 705 % rmdir
usage: rmdir [-pv] directory ...
● lllymuk@MacBook-Air-Daniil-2 705 % rmdir 222
● lllymuk@MacBook-Air-Daniil-2 705 % rmdir example
● lllymuk@MacBook-Air-Daniil-2 705 % rmdir 644
● lllymuk@MacBook-Air-Daniil-2 705 % cd baz
● lllymuk@MacBook-Air-Daniil-2 baz % mkdir 644
● lllymuk@MacBook-Air-Daniil-2 baz % cd 644
● lllymuk@MacBook-Air-Daniil-2 644 % mkdir example
● lllymuk@MacBook-Air-Daniil-2 644 % cd example
● lllymuk@MacBook-Air-Daniil-2 example % mkdir 222
● lllymuk@MacBook-Air-Daniil-2 example % cd ../../../../..
● lllymuk@MacBook-Air-Daniil-2 LR1 % cd foo
● lllymuk@MacBook-Air-Daniil-2 foo % mkdir 233
● lllymuk@MacBook-Air-Daniil-2 foo % cd 233
● lllymuk@MacBook-Air-Daniil-2 233 % echo 007 > test.txt
○ lllymuk@MacBook-Air-Daniil-2 233 %
```

Дерево каталогов и файлов:

```
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % tree IGI/LR1
IGI/LR1
├── bar
│   ├── 705
│   │   ├── baz
│   │   │   ├── 644
│   │   │   │   └── example
│   │   │   │       └── 222
│   │   └── bin
│   │       ├── 700
│   │       │   ├── echo
│   │       │   │   └── 555
│   │       └── readme.txt
│   └── foo
├── foo
│   ├── 233
│   └── test.txt
└── geometric_lib
    ├── main.py
    ├── readme
    └── README.md

16 directories, 4 files
```

Задание 3.

Клонирование проекта из github.

```
llymuk@MacBook-Air-Daniil-2 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
Receiving objects: 100% (35/35), 4.60 KiB | 1.53 MiB/s, done.
Resolving deltas: 100% (6/6), done.
llymuk@MacBook-Air-Daniil-2 LR1 %
```

Задание 4.

a. Попытка проиндексировать файлы в репозитории.

```
llymuk@MacBook-Air-Daniil-2 geometric_lib % git add docs/README.md
llymuk@MacBook-Air-Daniil-2 geometric_lib % git add circle.py
llymuk@MacBook-Air-Daniil-2 geometric_lib % git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
llymuk@MacBook-Air-Daniil-2 geometric_lib %
```

b. Изменение файла circle.py и вывод git status

```
ПРОБЛЕМЫ  ТЕРМИНАЛ  ...  + v zsh - geometric_lib  [ ] [ ] ... ^ x

llymuk@MacBook-Air-Daniil-2 geometric_lib % git status
On branch main
Your branch is up to date with 'origin/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:   circle.py

no changes added to commit (use "git add" and/or "git commit -a")
llymuk@MacBook-Air-Daniil-2 geometric_lib %
```

с. Индексирование и коммит изменений

```
llymuk@MacBook-Air-Daniil-2 geometric_lib % git add circle.py
llymuk@MacBook-Air-Daniil-2 geometric_lib % git commit -m "Delete perimeter from circle"
[main 3273a7ff] Delete perimeter from circle
1 file changed, 2 insertions(+), 2 deletions(-)
llymuk@MacBook-Air-Daniil-2 geometric_lib % git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
(use "git push" to publish your local commits)

nothing to commit, working tree clean
llymuk@MacBook-Air-Daniil-2 geometric_lib %
```

d, e. Удаление файлов заканчивающихся на «е» с расширением «ру». Добавление файла main.py и переименовыва папки docs

```
llymuk@MacBook-Air-Daniil-2 geometric_lib % rm *.e.py
llymuk@MacBook-Air-Daniil-2 geometric_lib % ls
docs
llymuk@MacBook-Air-Daniil-2 geometric_lib % nano main.py
MacBook-Air-Daniil-2:geometric_lib llymuk$ mv ./docs ./readme
MacBook-Air-Daniil-2:geometric_lib llymuk$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
(use "git push" to publish your local commits)

Changes not staged for commit:
  (use "git add/rm <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        deleted:    circle.py
        deleted:    docs/README.md
        deleted:    square.py

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

no changes added to commit (use "git add" and/or "git commit -a")
MacBook-Air-Daniil-2:geometric_lib llymuk$
```

f. Процесс создания веток для каждой папки. На данный момент была создана ветка IGI и на изображении представлено создание ветки LR1.

```
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git checkout -b LR1
Switched to a new branch 'LR1'
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git add ./IGI/LR1/README.md
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git commit -m "LR1 Initial ommit"
[LR1 d254377] LR1 Initial ommit
4 files changed, 4 insertions(+)
create mode 100644 IGI/LR1/README.md
create mode 100644 IGI/LR1/bar/705/bin/700/readme.txt
create mode 100644 IGI/LR1/foo/233/test.txt
create mode 160000 IGI/LR1/geometric lib
```

LR4...

```
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git checkout IGI
Switched to branch 'IGI'
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % echo Lab Work 4 > ./IGI/LR4/README.md
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git checkout -b LR4
Switched to a new branch 'LR4'
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git add ./IGI/LR4/README.md
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git log
commit da00f5221c75737b10507402c4f3fe5adc7847d4 (HEAD -> LR4, IGI)
Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 18:24:28 2024 +0300

    IGI Initial commit

commit f3056a0e3b5f34e043a3a727389f19fe56de8c49 (main)
Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 18:15:34 2024 +0300

    Initial commit
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git commit -c f3056a0e3b5f34e0
[LR4 7fcf95e] LR4 Initial commit
Date: Sat Feb 10 18:15:34 2024 +0300
1 file changed, 1 insertion(+)
create mode 100644 IGI/LR4/README.md
```

Полученные ветки

```
* commit 07bc0a3fbeb7ed044e5bda407220e4e3e3cf43c (STRWEB_LR4)
Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 19:55:37 2024 +0300

    LR4 Initial commit

* commit 8361d9586f0c1a0860f6283130cb3d684467bdb0 (STRWEB_LR3)
/ Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 19:53:48 2024 +0300

    STRWEB LR3 Initial commit

* commit 682dcc22b92433ffed110444c556f293dd85f57 (STRWEB_LR2)
/ Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 19:44:41 2024 +0300

    LR2 Initial commit

* commit a6c64872726bd396469a1a29c0f9cdbc53897435 (STRWEB_LR1)
/ Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 19:42:56 2024 +0300

    LR1 Initial commit

* commit e1dd0622b037734f2c404b3d7d0079455acffb25 (STRWEB)
Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 19:23:07 2024 +0300

    STRWEB Initial commit

* commit 3edd1bbdccb40c166c4031c278eba5dd54c9945d (IGI_LR5)
Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 18:15:34 2024 +0300

    LR5 Initial commit

* commit 7fcf95e00b554fc7916a1d6ca59b3447fc358010 (IGI_LR4)
/ Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 18:15:34 2024 +0300

    LR4 Initial commit

* commit 5076a73700f9a5e9dc1841e9b6a8ab30df572756 (IGI_LR3)
/ Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 19:15:30 2024 +0300

    LR3 Initial commit

* commit 73c83f6d839cbfd3a51868cfb2fffa51174c8c2c (IGI_LR2)
/ Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 19:08:24 2024 +0300

    LR2 Initial commit

* commit d25437749232988b50b2ac4245fc9473e02f2894 (HEAD -> IGI_LR1)
/ Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 18:50:26 2024 +0300

    LR1 Initial ommit

* commit da00f5221c75737b10507402c4f3fe5adc7847d4 (IGI)
/ Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 18:24:28 2024 +0300

    IGI Initial commit

* commit f3056a0e3b5f34e043a3a727389f19fe56de8c49 (main)
Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 18:15:34 2024 +0300

    Initial commit

~
```

g. Все коммиты полностью:

```
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git log --pretty="%C(yellow)%h%Creset - %s, %C(blue)%cr%Creset" --br
anches
07bc0a3 - LR4 Initial commit, 57 minutes ago
8361d95 - STRWEB LR3 Initial commit, 59 minutes ago
682dccb - LR2 Initial commit, 68 minutes ago
a6c6487 - LR1 Initial commit, 69 minutes ago
e1dd062 - STRWEB Initial commit, 89 minutes ago
3edd1bb - LR5 Initial commit, 2 hours ago
7fcf95e - LR4 Initial commit, 2 hours ago
5076a73 - LR3 Initial commit, 2 hours ago
73c83f6 - LR2 Initial commit, 2 hours ago
d254377 - LR1 Initial commit, 2 hours ago
da00f52 - IGI Initial commit, 2 hours ago
f3056a0 - Initial commit, 3 hours ago
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 %
```

3 последних коммита

```
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git log --pretty="%C(yellow)%h%Creset - %s, %C(blue)%cr%Creset" --br
anches -3
07bc0a3 - LR4 Initial commit, 58 minutes ago
8361d95 - STRWEB LR3 Initial commit, 59 minutes ago
682dccb - LR2 Initial commit, 69 minutes ago
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 %
```

Коммиты старше 110 минут:

```
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git log --pretty="%C(yellow)%h%Creset - %s, %C(blue)%cr%Creset" --br
anches --before=110.minute
73c83f6 - LR2 Initial commit, 2 hours ago
d254377 - LR1 Initial commit, 2 hours ago
da00f52 - IGI Initial commit, 3 hours ago
f3056a0 - Initial commit, 3 hours ago
```

Мое авторство:

```
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git log --pretty="%C(yellow)%h%Creset - %s, %C(blue)%cr%Creset" --br
anches --author="dan200412@gmail.com"
07bc0a3 - LR4 Initial commit, 68 minutes ago
8361d95 - STRWEB LR3 Initial commit, 70 minutes ago
682dccb - LR2 Initial commit, 79 minutes ago
a6c6487 - LR1 Initial commit, 81 minutes ago
e1dd062 - STRWEB Initial commit, 2 hours ago
3edd1bb - LR5 Initial commit, 2 hours ago
7fcf95e - LR4 Initial commit, 2 hours ago
5076a73 - LR3 Initial commit, 2 hours ago
73c83f6 - LR2 Initial commit, 2 hours ago
d254377 - LR1 Initial commit, 2 hours ago
da00f52 - IGI Initial commit, 3 hours ago
f3056a0 - Initial commit, 3 hours ago
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 %
```

i. Разница в изменениях для каждого коммита на ветке IGI_LR1

```
llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git log --patch --graph
* commit d25437749232988b50b2ac4245fc9473e02f2894 (HEAD -> IGI_LR1)
Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 18:50:26 2024 +0300

    LR1 Initial ommit

diff --git a/IGI/LR1/README.md b/IGI/LR1/README.md
new file mode 100644
index 0000000..a07689f
--- /dev/null
+++ b/IGI/LR1/README.md
@@ -0,0 +1 @@
+Laboratory work number One. Learning GIT
\ No newline at end of file
diff --git a/IGI/LR1/bar/705/bin/700/readme.txt b/IGI/LR1/bar/705/bin/700/readme.txt
new file mode 100644
index 0000000..d411bb7
--- /dev/null
+++ b/IGI/LR1/bar/705/bin/700/readme.txt
@@ -0,0 +1 @@
+400
diff --git a/IGI/LR1/foo/233/test.txt b/IGI/LR1/foo/233/test.txt
new file mode 100644
index 0000000..0c294ed
--- /dev/null
+++ b/IGI/LR1/foo/233/test.txt
@@ -0,0 +1 @@
+007
diff --git a/IGI/LR1/geometric_lib b/IGI/LR1/geometric_lib
new file mode 160000
index 0000000..c44d2ae
--- /dev/null
+++ b/IGI/LR1/geometric_lib
@@ -0,0 +1 @@
+Subproject commit c44d2aedd1aa0ef1d6d9bf840bd4aae376c15b58

* commit da00f5221c75737b10507402c4f3fe5adc7847d4 (IGI)
Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 18:24:28 2024 +0300

    IGI Initial commit

diff --git a/IGI/README.md b/IGI/README.md
new file mode 100644
index 0000000..26c47be
--- /dev/null
+++ b/IGI/README.md
@@ -0,0 +1 @@
+Fourth semester discipline
\ No newline at end of file

* commit f3056a0e3b5f34e043a3a727389f19fe56de8c49 (main)
Author: Daniil Shumskiy <dan200412@gmail.com>
Date: Sat Feb 10 18:15:34 2024 +0300

    Initial commit

diff --git a/README.md b/README.md
new file mode 100644
index 0000000..4cea3da
--- /dev/null
+++ b/README.md
@@ -0,0 +1 @@
+Laboratory works
```

j. Отмена коммита

```
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % echo Privet mir > test.txt
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % echo 27 >> test.txt
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git checkout main
warning: unable to rmdir 'IGI/LR1/geometric_lib': Directory not empty
Switched to branch 'main'
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git add test.txt
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % 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)
        .DS_Store
        .clj-kondo/
        .lsp/
        IGI/

● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git commit -m "Add test.txt"
[main 7cd65c0] Add test.txt
 1 file changed, 2 insertions(+)
 create mode 100644 test.txt
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git log --branches --graph --oneline
* 7cd65c0 (HEAD -> main) Add test.txt
* 07bc0a3 (STRWEB_LR4) LR4 Initial commit
* 8361d95 (STRWEB_LR3) STRWEB LR3 Initial commit
//
* 682dccb (STRWEB_LR2) LR2 Initial commit
//
* a6c6487 (STRWEB_LR1) LR1 Initial commit
//
* e1dd062 (STRWEB) STRWEB Initial commit
//
* 3edd1bb (IGI_LR5) LR5 Initial commit
* 7fcf95e (IGI_LR4) LR4 Initial commit
//
* 5076a73 (IGI_LR3) LR3 Initial commit
//
* 73c83f6 (IGI_LR2) LR2 Initial commit
//
* d254377 (IGI_LR1) LR1 Initial commit
//
* da00f52 (IGI) IGI Initial commit
//
* f3056a0 Initial commit
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git reset HEAD~1
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git log --branches --graph --oneline
* 07bc0a3 (STRWEB_LR4) LR4 Initial commit
* 8361d95 (STRWEB_LR3) STRWEB LR3 Initial commit
//
* 682dccb (STRWEB_LR2) LR2 Initial commit
//
* a6c6487 (STRWEB_LR1) LR1 Initial commit
//
* e1dd062 (STRWEB) STRWEB Initial commit
* 3edd1bb (IGI_LR5) LR5 Initial commit
* 7fcf95e (IGI_LR4) LR4 Initial commit
//
* 5076a73 (IGI_LR3) LR3 Initial commit
//
* 73c83f6 (IGI_LR2) LR2 Initial commit
//
* d254377 (IGI_LR1) LR1 Initial commit
//
* da00f52 (IGI) IGI Initial commit
//
* f3056a0 (HEAD -> main) Initial commit
○ llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 %
```

к. Отмена индексации созданного файла

```
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % touch file.file
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git add file.file
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   file.file

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

● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git restore --staged file.file
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % ls
IGI  README.md  STRWEB  file.file
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    .DS_Store
    .clj-kondo/
    .lsp/
    IGI/
    file.file

nothing added to commit but untracked files present (use "git add" to track)
○ llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 %
```

л. Возврат в исходное состояние проиндексированного файла

```
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % touch file.txt
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git add file.txt
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   file.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:   file.txt

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

● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git restore file.txt
```

Задание 5.

а. Добавление удаленного репозитория

```
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git remote add origin https://github.com/LoDesFire/PythonLW.git
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git remote show
origin
● llymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git remote show origin
* remote origin
  Fetch URL: https://github.com/LoDesFire/PythonLW.git
  Push URL: https://github.com/LoDesFire/PythonLW.git
  HEAD branch: (unknown)
```


b. Внесение изменений

```
● lllymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git push origin --all
Enumerating objects: 62, done.
Counting objects: 100% (62/62), done.
Delta compression using up to 8 threads
Compressing objects: 100% (32/32), done.
Writing objects: 100% (61/61), 4.00 KiB | 819.00 KiB/s, done.
Total 61 (delta 8), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (8/8), done.
To https://github.com/LoDesFire/PythonLW.git
* [new branch]      IGI -> IGI
* [new branch]      IGI_LR1 -> IGI_LR1
* [new branch]      IGI_LR2 -> IGI_LR2
* [new branch]      IGI_LR3 -> IGI_LR3
* [new branch]      IGI_LR4 -> IGI_LR4
* [new branch]      IGI_LR5 -> IGI_LR5
* [new branch]      STRWEB -> STRWEB
* [new branch]      STRWEB_LR1 -> STRWEB_LR1
* [new branch]      STRWEB_LR2 -> STRWEB_LR2
* [new branch]      STRWEB_LR3 -> STRWEB_LR3
* [new branch]      STRWEB_LR4 -> STRWEB_LR4
● lllymuk@MacBook-Air-Daniil-2 253501_SHUMSKI_27 % git remote show origin
* remote origin
  Fetch URL: https://github.com/LoDesFire/PythonLW.git
  Push URL: https://github.com/LoDesFire/PythonLW.git
  HEAD branch: main
  Remote branches:
    IGI          tracked
    IGI_LR1      tracked
    IGI_LR2      tracked
    IGI_LR3      tracked
    IGI_LR4      tracked
    IGI_LR5      tracked
    STRWEB       tracked
    STRWEB_LR1   tracked
    STRWEB_LR2   tracked
    STRWEB_LR3   tracked
    STRWEB_LR4   tracked
    main         tracked
  Local refs configured for 'git push':
    IGI          pushes to IGI          (up to date)
    IGI_LR1      pushes to IGI_LR1      (up to date)
    IGI_LR2      pushes to IGI_LR2      (up to date)
    IGI_LR3      pushes to IGI_LR3      (up to date)
    IGI_LR4      pushes to IGI_LR4      (up to date)
    IGI_LR5      pushes to IGI_LR5      (up to date)
    STRWEB       pushes to STRWEB       (up to date)
    STRWEB_LR1   pushes to STRWEB_LR1   (up to date)
    STRWEB_LR2   pushes to STRWEB_LR2   (up to date)
    STRWEB_LR3   pushes to STRWEB_LR3   (up to date)
    STRWEB_LR4   pushes to STRWEB_LR4   (up to date)
    main         pushes to main         (up to date)
```

с. Изменение файлов и выполнение git push

```
● llymuk@MacBook-Air-Daniil-2 LR1 % git status
On branch IGI_LR1
Changes to be committed:
  (use "git restore --staged <file>.." to unstage)
        modified:   bar/705/bin/700/readme.txt

Untracked files:
  (use "git add <file>.." to include in what will be committed)
        ../../.DS_Store
        ../../.clj-kondo/
        ../../.lsp/
        ../../.DS_Store

● llymuk@MacBook-Air-Daniil-2 LR1 % git commit -m "Change README.md"
[IGI_LR1 68f1e25] Change README.md
1 file changed, 1 insertion(+), 1 deletion(-)
● llymuk@MacBook-Air-Daniil-2 LR1 % git push -u origin IGI_LR1
Enumerating objects: 17, done.
Counting objects: 100% (17/17), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (9/9), 684 bytes | 684.00 KiB/s, done.
Total 9 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/LoDesFire/PythonLW.git
   d254377..68f1e25  IGI_LR1 -> IGI_LR1
branch 'IGI_LR1' set up to track 'origin/IGI_LR1'.
```

d, e. Переименовывание удаленного репозитория

```
● llymuk@MacBook-Air-Daniil-2 LR1 % git remote rename origin remote_repo
Renaming remote references: 100% (12/12), done.
● llymuk@MacBook-Air-Daniil-2 LR1 % git remote show
remote_repo
● llymuk@MacBook-Air-Daniil-2 LR1 % git remote show remote_repo
* remote remote_repo
Fetch URL: https://github.com/LoDesFire/PythonLW.git
Push URL: https://github.com/LoDesFire/PythonLW.git
HEAD branch: main
Remote branches:
  IGI          tracked
  IGI_LR1     tracked
  IGI_LR2     tracked
  IGI_LR3     tracked
  IGI_LR4     tracked
  IGI_LR5     tracked
  STRWEB      tracked
  STRWEB_LR1  tracked
  STRWEB_LR2  tracked
  STRWEB_LR3  tracked
  STRWEB_LR4  tracked
  main        tracked
Local branch configured for 'git pull':
  IGI_LR1 merges with remote IGI_LR1
Local refs configured for 'git push':
  IGI          pushes to IGI          (up to date)
  IGI_LR2     pushes to IGI_LR2     (up to date)
  IGI_LR3     pushes to IGI_LR3     (up to date)
  IGI_LR4     pushes to IGI_LR4     (up to date)
  IGI_LR5     pushes to IGI_LR5     (up to date)
  STRWEB      pushes to STRWEB      (up to date)
  STRWEB_LR1  pushes to STRWEB_LR1  (up to date)
  STRWEB_LR2  pushes to STRWEB_LR2  (up to date)
  STRWEB_LR3  pushes to STRWEB_LR3  (up to date)
  STRWEB_LR4  pushes to STRWEB_LR4  (up to date)
  main        pushes to main        (up to date)
```

f. Просмотр истории изменений

```
commit da00f5221c73737b10507402c4131e3ddc7047d4 (remote_repo/IGI, IGI)
● l1lymuk@MacBook-Air-Daniil-2 PythonLW % git log --all --oneline
68f1e25 (HEAD -> IGI_LR1, remote_repo/IGI_LR1) Change README.md
07bc0a3 (remote_repo/STRWEB_LR4, STRWEB_LR4) LR4 Initial commit
8361d95 (remote_repo/STRWEB_LR3, STRWEB_LR3) STRWEB LR3 Initial commit
682dccb (remote_repo/STRWEB_LR2, STRWEB_LR2) LR2 Initial commit
a6c6487 (remote_repo/STRWEB_LR1, STRWEB_LR1) LR1 Initial commit
e1dd062 (remote_repo/STRWEB, STRWEB) STRWEB Initial commit
3edd1bb (remote_repo/IGI_LR5, IGI_LR5) LR5 Initial commit
7fcf95e (remote_repo/IGI_LR4, IGI_LR4) LR4 Initial commit
5076a73 (remote_repo/IGI_LR3, IGI_LR3) LR3 Initial commit
73c83f6 (remote_repo/IGI_LR2, IGI_LR2) LR2 Initial commit
d254377 LR1 Initial ommit
da00f52 (remote_repo/IGI, IGI) IGI Initial commit
f3056a0 (remote_repo/main, remote_repo/HEAD, main) Initial commit
l1lymuk@MacBook-Air-Daniil-2 PythonLW %
```