

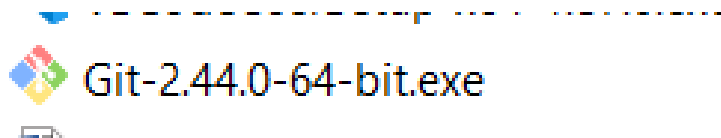
Лабораторная работа №1

Тема: Система контроля версий Git.

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

Задания:

1. Подготовьте рабочее окружение в соответствии с типом вашей операционной системы:
 - a. Установите Git.



- b. Выполните базовую настройку.

```
USER@HOME-PC MINGW64 ~  
$ git config --global user.name "lanetsvlad"  
  
USER@HOME-PC MINGW64 ~  
$ git config --global user.email lanetsvlad2809@gmail.com
```

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

```
USER@HOME-PC MINGW64 /d  
$ mkdir 253501_LANETS_12  
  
USER@HOME-PC MINGW64 /d  
$ cd 253501_LANETS_12  
  
USER@HOME-PC MINGW64 /d/253501_LANETS_12  
$ mkdir IGI STRWEB
```

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI  
$ for i in {1..5}; do mkdir "LR$i"  
> done  
  
USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI  
$ cd ../STRWEB  
  
USER@HOME-PC MINGW64 /d/253501_LANETS_12/STRWEB  
$ for i in {1..4}; do mkdir "LR$i"  
> done  
  
USER@HOME-PC MINGW64 /d/253501_LANETS_12/STRWEB  
$ ls  
LR1/ LR2/ LR3/ LR4/  
  
USER@HOME-PC MINGW64 /d/253501_LANETS_12/STRWEB  
$ ls ../IGI  
LR1/ LR2/ LR3/ LR4/ LR5/  
  
USER@HOME-PC MINGW64 /d/253501_LANETS_12/STRWEB  
$ |
```

Этот компьютер > Новый том (D:) > 253501_LANETS_12 > IGI >

Имя	Дата изменения	Тип	Размер
LR1	04.03.2024 17:43	Папка с файлами	
LR2	04.03.2024 17:43	Папка с файлами	
LR3	04.03.2024 17:43	Папка с файлами	
LR4	04.03.2024 17:43	Папка с файлами	
LR5	04.03.2024 17:43	Папка с файлами	

Этот компьютер > Новый том (D:) > 253501_LANETS_12 > STRWEB

Имя	Дата изменения	Тип	Размер
LR1	04.03.2024 17:45	Папка с файлами	
LR2	04.03.2024 17:45	Папка с файлами	
LR3	04.03.2024 17:45	Папка с файлами	
LR4	04.03.2024 17:45	Папка с файлами	

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12
$ git init
Initialized empty Git repository in D:/253501_LANETS_12/.git/
```

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12 (main)
$ git add .

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (main)
$ git commit -m "Initial commit"
[main (root-commit) 5802cd1] Initial commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 "IGI/LR1/\320\276\321\202\321\207\320\265\321\202 \320\270\320\263\320\270 1 \320\273\320\260\320\261\320\260.docx"

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (main)
$ |
```

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

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (main)
$ git clone https://github.com/smartigaorg/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.
```

4. Выполните следующие действия, каждый раз проверяя состояние файлов в локальном репозитории до и после выполнения операции:
 - а. сделайте индексацию нескольких файлов в вашем Git-репозитории (git add ...),

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ echo > file.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ echo > file2.cpp

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        file.txt
        file2.cpp

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


USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git add .
warning: in the working copy of 'file.txt', LF will be replaced by CRLF the next
time Git touches it
warning: in the working copy of 'file2.cpp', LF will be replaced by CRLF the nex
t time Git touches it

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   file.txt
        new file:   file2.cpp


```

б. внесите изменения в файлы,

 *file.txt – Блокнот

Файл Правка Формат Вид Справка

qwerty|

 file2.cpp – Блокнот

Файл Правка Формат Вид Справка


```


#include <iostream>

int main() {

    return 0;
}

```

 square.py

D: > 253501_LANETS_12 > IGI > LR1 > geometric_lib >  square.py

```

1
2 def area(a):
3     return a * a
4
5
6 def perimeter(a):
7     return 4 * a
8
9
10 def halfperimeter(a):
11     return 2*a

```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   file.txt
        new file:   file2.cpp

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
        modified:   file2.cpp
        modified:   square.py

```

с. выполните коммиты к проиндексированным файлам,

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git add .
warning: in the working copy of 'file.txt', LF will be replaced by CRLF the next time
it touches it
warning: in the working copy of 'file2.cpp', LF will be replaced by CRLF the next time
Git touches it

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   file.txt
        new file:   file2.cpp
        modified:   square.py

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git commit -m "Initial commit"
[main c2e75d8] Initial commit
3 files changed, 11 insertions(+)
create mode 100644 file.txt
create mode 100644 file2.cpp

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ 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

```

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

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ touch file3.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    file3.txt

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

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git add file3.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   file3.txt
```

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git rm -f file3.txt
rm 'file3.txt'

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ 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
```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ touch filee1.txt filee2.txt filee3.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        filee1.txt
        filee2.txt
        filee3.txt

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

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git add .

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   filee1.txt
        new file:   filee2.txt
        new file:   filee3.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git rm -f filee*
rm 'filee1.txt'
rm 'filee2.txt'
rm 'filee3.txt'

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ 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

```

е. переименуйте файлы

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git mv file.txt FILE.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

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

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git mv file2.cpp FILE2.cpp

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/geometric_lib (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        renamed:   file.txt -> FILE.txt
        renamed:   file2.cpp -> FILE2.cpp

```

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

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI (igi)
$ git branch
* igi
  main

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI (igi)
$ echo >README.md

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI (igi)
$ git status
On branch igi
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    LR1/geometric_lib/
    README.md

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

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI (igi)
$ git add README.md
warning: in the working copy of 'IGI/README.md', LF will be replaced by CRLF the
next time Git touches it

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI (igi)
$ git status
On branch igi
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   README.md

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

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI (igi)
$ git commit -m "first igi commit"
[igi ddfc21d] first igi commit
1 file changed, 1 insertion(+)
create mode 100644 IGI/README.md

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI (igi)
$
```

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI (igi)
$ cd LR1

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi)
$ git checkout -b igi-LR1
Switched to a new branch 'igi-LR1'

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git branch
* igi-LR1
  main

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ echo >README.md

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git status
On branch igi-LR1
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    README.md
    geometric_lib/

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

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git add README.md
warning: in the working copy of 'IGI/LR1/README.md', LF will be replaced by CRLF
the next time Git touches it

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git status
On branch igi-LR1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   README.md

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

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git commit -m "first igi-LR1 commit"
[igi-LR1 56c487e] first igi-LR1 commit
1 file changed, 1 insertion(+)
create mode 100644 IGI/LR1/README.md

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$
```

Сделал аналогично с другими папками:

```
$ git branch
* igi
igi-LR1
igi-LR2
igi-LR3
igi-LR4
igi-LR5
main
strweb
strweb-LR1
strweb-LR2
strweb-LR3
strweb-LR4
```

- г. выведите историю коммитов: полностью и с ограничением вывода — отобразить только последние, до и после указанной даты, по автору файлов, коммитов

```
$ git log
commit 9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:31:37 2024 +0300

    first strweb-LR4 commit

commit 4129173be8a7ef598358777d717be820f9547538 (strweb-LR3)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:29:57 2024 +0300

    first strweb-LR3 commit

commit dd55ab46a2379cc9ea6839defb9ec45521f8bd59 (strweb-LR2)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:27:56 2024 +0300

    first strweb-LR2 commit

commit 3e5ff589d6cbc78154e23fa04f0c1e14cd8a5f87 (strweb-LR1)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:25:56 2024 +0300

    first strweb-LR1 commit

commit 931e21d084eaec3deda2421a78d5b5d609c6e34f (strweb)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:23:59 2024 +0300

    first strweb commit

commit ee22f96f03824f1e86a74e3a26f8f7f751dde967 (igi-LR5)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:16:17 2024 +0300

    first igi-LR5 commit

commit 507972152be51843af776a4bbbf9168af27be4e2 (igi-LR4)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:13:58 2024 +0300

    first igi-LR4 commit

commit 48d2be732d59a88be0309b52333ab5417f105a7e (igi-LR3)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
```



```

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log -n 3
commit 9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:31:37 2024 +0300

    first strweb-LR4 commit

commit 4129173be8a7ef598358777d717be820f9547538 (strweb-LR3)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:29:57 2024 +0300

    first strweb-LR3 commit

commit dd55ab46a2379cc9ea6839defb9ec45521f8bd59 (strweb-LR2)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:27:56 2024 +0300

    first strweb-LR2 commit

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)

```

```

$ git log --since="2024-03-18"
commit 9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:31:37 2024 +0300

    first strweb-LR4 commit

commit 4129173be8a7ef598358777d717be820f9547538 (strweb-LR3)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:29:57 2024 +0300

    first strweb-LR3 commit

commit dd55ab46a2379cc9ea6839defb9ec45521f8bd59 (strweb-LR2)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:27:56 2024 +0300

    first strweb-LR2 commit

commit 3e5ff589d6cbc78154e23fa04f0c1e14cd8a5f87 (strweb-LR1)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:25:56 2024 +0300

    first strweb-LR1 commit

commit 931e21d084eaec3deda2421a78d5b5d609c6e34f (strweb)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:23:59 2024 +0300

    first strweb commit

```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log --until="2024-03-01"

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$

```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log --author="lanetsvlad"
commit 9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:31:37 2024 +0300

    first strweb-LR4 commit

commit 4129173be8a7ef598358777d717be820f9547538 (strweb-LR3)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:29:57 2024 +0300

    first strweb-LR3 commit

commit dd55ab46a2379cc9ea6839defb9ec45521f8bd59 (strweb-LR2)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:27:56 2024 +0300

    first strweb-LR2 commit

commit 3e5ff589d6cbc78154e23fa04f0c1e14cd8a5f87 (strweb-LR1)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:25:56 2024 +0300

    first strweb-LR1 commit

```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log --grep="first strweb commit"
commit 931e21d084eaec3deda2421a78d5b5d609c6e34f (strweb)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:23:59 2024 +0300

    first strweb commit
USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)

```

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

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log -p
commit 9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:31:37 2024 +0300

    first strweb-LR4 commit

diff --git a/STRWEB/LR4/README.md b/STRWEB/LR4/README.md
new file mode 100644
index 0000000..8b13789
--- /dev/null
+++ b/STRWEB/LR4/README.md
@@ -0,0 +1 @@
+

commit 4129173be8a7ef598358777d717be820f9547538 (strweb-LR3)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:29:57 2024 +0300

    first strweb-LR3 commit

diff --git a/STRWEB/LR3/README.md b/STRWEB/LR3/README.md
new file mode 100644
index 0000000..8b13789
--- /dev/null
+++ b/STRWEB/LR3/README.md
@@ -0,0 +1 @@
+

commit dd55ab46a2379cc9ea6839defb9ec45521f8bd59 (strweb-LR2)
Author: lanetsvlad <lanetsvlad2809@gmail.com>

```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log --stat
commit 9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:31:37 2024 +0300

    first strweb-LR4 commit

STRWEB/LR4/README.md | 1 +
1 file changed, 1 insertion(+)

commit 4129173be8a7ef598358777d717be820f9547538 (strweb-LR3)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:29:57 2024 +0300

    first strweb-LR3 commit

STRWEB/LR3/README.md | 1 +
1 file changed, 1 insertion(+)

commit dd55ab46a2379cc9ea6839defb9ec45521f8bd59 (strweb-LR2)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:27:56 2024 +0300

    first strweb-LR2 commit

```

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log --shortstat
commit 9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:31:37 2024 +0300

    first strweb-LR4 commit

1 file changed, 1 insertion(+)

commit 4129173be8a7ef598358777d717be820f9547538 (strweb-LR3)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:29:57 2024 +0300

    first strweb-LR3 commit

1 file changed, 1 insertion(+)

commit dd55ab46a2379cc9ea6839defb9ec45521f8bd59 (strweb-LR2)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:27:56 2024 +0300

    first strweb-LR2 commit

1 file changed, 1 insertion(+)
```

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log --name-only
commit 9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:31:37 2024 +0300

    first strweb-LR4 commit

STRWEB/LR4/README.md

commit 4129173be8a7ef598358777d717be820f9547538 (strweb-LR3)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:29:57 2024 +0300

    first strweb-LR3 commit

STRWEB/LR3/README.md

commit dd55ab46a2379cc9ea6839defb9ec45521f8bd59 (strweb-LR2)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:27:56 2024 +0300

    first strweb-LR2 commit

STRWEB/LR2/README.md

commit 3e5ff589d6cbc78154e23fa04f0c1e14cd8a5f87 (strweb-LR1)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:25:56 2024 +0300

    first strweb-LR1 commit
```

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log --name-status
commit 9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:31:37 2024 +0300

    first strweb-LR4 commit

A      STRWEB/LR4/README.md

commit 4129173be8a7ef598358777d717be820f9547538 (strweb-LR3)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 00:29:57 2024 +0300

    first strweb-LR3 commit

A      STRWEB/LR3/README.md

commit dd55ab46a2379cc9ea6839defb9ec45521f8bd59 (strweb-LR2)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log --relative-date
commit 9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: 53 minutes ago

    first strweb-LR4 commit

commit 4129173be8a7ef598358777d717be820f9547538 (strweb-LR3)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: 54 minutes ago

    first strweb-LR3 commit

commit dd55ab46a2379cc9ea6839defb9ec45521f8bd59 (strweb-LR2)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: 56 minutes ago

    first strweb-LR2 commit

commit 3e5ff589d6cbc78154e23fa04f0c1e14cd8a5f87 (strweb-LR1)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: 58 minutes ago

    first strweb-LR1 commit

```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log --pretty=short
commit 9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4)
Author: lanetsvlad <lanetsvlad2809@gmail.com>

    first strweb-LR4 commit

commit 4129173be8a7ef598358777d717be820f9547538 (strweb-LR3)
Author: lanetsvlad <lanetsvlad2809@gmail.com>

    first strweb-LR3 commit

commit dd55ab46a2379cc9ea6839defb9ec45521f8bd59 (strweb-LR2)
Author: lanetsvlad <lanetsvlad2809@gmail.com>

    first strweb-LR2 commit

commit 3e5ff589d6cbc78154e23fa04f0c1e14cd8a5f87 (strweb-LR1)
Author: lanetsvlad <lanetsvlad2809@gmail.com>

    first strweb-LR1 commit

```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log --graph
* commit 9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4)
| Author: lanetsvlad <lanetsvlad2809@gmail.com>
| Date: Tue Mar 19 00:31:37 2024 +0300
|
|     first strweb-LR4 commit
|
| * commit 4129173be8a7ef598358777d717be820f9547538 (strweb-LR3)
| | Author: lanetsvlad <lanetsvlad2809@gmail.com>
| | Date: Tue Mar 19 00:29:57 2024 +0300
| |
| |     first strweb-LR3 commit
| |
| | * commit dd55ab46a2379cc9ea6839defb9ec45521f8bd59 (strweb-LR2)
| | | Author: lanetsvlad <lanetsvlad2809@gmail.com>
| | | Date: Tue Mar 19 00:27:56 2024 +0300
| | |
| | |     first strweb-LR2 commit
| | |
| | | * commit 3e5ff589d6cbc78154e23fa04f0c1e14cd8a5f87 (strweb-LR1)
| | | | Author: lanetsvlad <lanetsvlad2809@gmail.com>
| | | | Date: Tue Mar 19 00:25:56 2024 +0300
| | | |
| | | |     first strweb-LR1 commit
| | | |
| | | * commit 931e21d084eaec3deda2421a78d5b5d609c6e34f (strweb)
| | | | Author: lanetsvlad <lanetsvlad2809@gmail.com>
| | | | Date: Tue Mar 19 00:23:59 2024 +0300
| | | |
| | | |     first strweb commit
| | | |
|

```

- i. найдите разницу в изменениях для каждого коммита

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git log -2 --pretty=oneline
9e949454d6b79d333ef52aabb53fde52ea6f6893 (HEAD -> strweb-LR4) first strweb-LR4 commit
4129173be8a7ef598358777d717be820f9547538 (strweb-LR3) first strweb-LR3 commit

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb-LR4)
$ git diff 9e949454d6b79d333ef52aabb53fde52ea6f6893 4129173be8a7ef598358777d717be820f9547538
diff --git a/STRWEB/LR4/README.md b/STRWEB/LR4/README.md
deleted file mode 100644
index 8b13789..0000000
--- a/STRWEB/LR4/README.md
+++ /dev/null
@@ -1,0,0 @@
-
```

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb)
$ git log -2 --pretty=oneline
931e21d084eaec3deda2421a78d5b5d609c6e34f (HEAD -> strweb) first strweb commit
ee22f96f03824f1e86a74e3a26f8f7f751dde967 (igi-LR5) first igi-LR5 commit

USER@HOME-PC MINGW64 /d/253501_LANETS_12 (strweb)
$ git diff 931e21d084eaec3deda2421a78d5b5d609c6e34f ee22f96f03824f1e86a74e3a26f8f7f751dde967
diff --git a/STRWEB/README.md b/STRWEB/README.md
deleted file mode 100644
index 8b13789..0000000
--- a/STRWEB/README.md
+++ /dev/null
@@ -1,0,0 @@
-
```

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

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI (igi-LR1)
$ cd LR1

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ echo номер варианта > test.txt
```

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git add test.txt
warning: in the working copy of 'IGI/LR1/test.txt', LF will be replaced by CRLF
the next time Git touches it

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git status
On branch igi-LR1
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)
    geometric_lib/

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git commit -m "commit test.txt"
[igi-LR1 b2f47fd] commit test.txt
1 file changed, 1 insertion(+)
create mode 100644 IGI/LR1/test.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git log
commit b2f47fd48251accacf516f3d98a06026405effc0f (HEAD -> igi-LR1)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 02:09:00 2024 +0300

    commit test.txt

commit 56c487ea396a6085fdef29ce34c0cbef8685b5c1
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Mon Mar 18 23:58:20 2024 +0300

    first igi-LR1 commit
```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git revert b2f47fd48251accaf516f3d98a06026405effc0f
[igi-LR1 cfc05b0] Revert "commit test.txt"
1 file changed, 1 deletion(-)
delete mode 100644 IGI/LR1/test.txt

```

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

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ echo > file.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git add file.txt
warning: in the working copy of 'IGI/LR1/file.txt', LF will be replaced by CRLF
time Git touches it

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git status
On branch igi-LR1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   file.txt

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


USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git restore --staged file.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git status
On branch igi-LR1
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    file.txt
    geometric_lib/

nothing added to commit but untracked files present (use "git add" to track)
USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)

```

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

 *file.txt – Блокнот

Файл Правка Формат Вид Справка

qwertyuiop

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git status
On branch igi-LR1
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)
    geometric_lib/

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)

```



```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git restore file.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git status
On branch igi-LR1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   file.txt

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

```

5. Выполните следующие действия с удаленным репозиторием:

- создайте удаленный репозиторий (на github.com)
- просмотрите информацию о нем

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git remote add repository_for_igi_labs https://github.com/Z0rro228/IGI_LABS.git

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git remote
repository_for_igi_labs

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git remote show repository_for_igi_labs
* remote repository_for_igi_labs
Fetch URL: https://github.com/Z0rro228/IGI_LABS.git
Push URL: https://github.com/Z0rro228/IGI_LABS.git
HEAD branch: (unknown)

```

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

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git status
On branch igi-LR1
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    file.txt
    geometric_lib/

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

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git add .
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.

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git status
On branch igi-LR1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   file.txt
    new file:   geometric_lib

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
  (commit or discard the untracked or modified content in submodules)
    modified:   geometric_lib (modified content)

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git commit -m "committed another files"
[igi-LR1 a279860] committed another files
2 files changed, 2 insertions(+)
create mode 100644 IGI/LR1/file.txt
create mode 160000 IGI/LR1/geometric_lib

```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ 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)
  (commit or discard the untracked or modified content in submodules)
    modified:   geometric_lib (modified content)

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

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git push repository_for_igi_labs igi
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 4 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (9/9), 91.48 KiB | 22.87 MiB/s, done.
Total 9 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/Z0rro228/IGI_LABS.git
 * [new branch]      igi -> igi

```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git push repository_for_igi_labs igi-LR1
Enumerating objects: 17, done.
Counting objects: 100% (17/17), done.
Delta compression using up to 4 threads
Compressing objects: 100% (10/10), done.
Writing objects: 100% (14/14), 1.30 KiB | 1.30 MiB/s, done.
Total 14 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), done.
remote:
remote: Create a pull request for 'igi-LR1' on GitHub by visiting:
remote:   https://github.com/Z0rro228/IGI_LABS/pull/new/igi-LR1
remote:
To https://github.com/Z0rro228/IGI_LABS.git
 * [new branch]      igi-LR1 -> igi-LR1

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$

```

d. переименуйте свой удаленный репозиторий

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git remote rename repository_for_igi_labs labs_IGI
Renaming remote references: 100% (2/2), done.

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git remote
labs_IGI

```

e. получите данные из удаленного репозитория

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git pull labs_IGI igi-LR1
From https://github.com/Z0rro228/IGI_LABS
 * branch      igi-LR1      -> FETCH_HEAD
Already up to date.

```

f. просмотреть историю изменений


```
USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ git log
commit a279860fca89784c5c116f2a95ca7c0e8932ddca (HEAD -> igi-LR1, labs_IGI/igi-LR1)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 03:10:10 2024 +0300

    committed another files

commit cfc05b02c08753785dd551fd40abe6cf272b079c
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 02:10:44 2024 +0300

    Revert "commit test.txt"

    This reverts commit b2f47fd48251accaf516f3d98a06026405effc0f.

    Revert "commit test.txt"

commit b2f47fd48251accaf516f3d98a06026405effc0f
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Tue Mar 19 02:09:00 2024 +0300

    commit test.txt

commit 56c487ea396a6085fdef29ce34c0cbef8685b5c1
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Mon Mar 18 23:58:20 2024 +0300

    first igi-LR1 commit

commit ddfc21d6085057b7c8ac60b91977d59b1db9a8ec (labs_IGI/igi, igi)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Mon Mar 18 23:48:58 2024 +0300

    first igi commit

commit 5802cd19e644dc186a939e618556f2dbe603a280 (main)
Author: lanetsvlad <lanetsvlad2809@gmail.com>
Date: Mon Mar 4 18:30:03 2024 +0300

    Initial commit
```

Индивидуальное задание.

```
USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ mkdir bin foo

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ mkdir bin/755

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ mkdir foo/555

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ cd bin

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/bin (igi-LR1)
$ mkdir bar

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/bin (igi-LR1)
$ mkdir bar/777

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/bin (igi-LR1)
$ cd ..

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1 (igi-LR1)
$ cd foo

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo (igi-LR1)
$ mkdir baz

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo (igi-LR1)
$ mkdir baz/444

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo (igi-LR1)
$ cd baz

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo/baz (igi-LR1)
$ mkdir env example

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo/baz (igi-LR1)
$ mkdir env/767

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo/baz (igi-LR1)
$ mkdir example/277

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo/baz (igi-LR1)
$ echo 426 > readme.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo/baz (igi-LR1)
$ echo 665 > test.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo/baz (igi-LR1)
$
```

```

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo/baz (igi-LR1)
$ git add .
warning: in the working copy of 'IGI/LR1/foo/baz/readme.txt', LF will
be replaced by CRLF the next time Git touches it
warning: in the working copy of 'IGI/LR1/foo/baz/test.txt', LF will
be replaced by CRLF the next time Git touches it

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo/baz (igi-LR1)
$ git status
On branch igi-LR1
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   readme.txt
    new file:   test.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)
    (commit or discard the untracked or modified content in submodules)
        modified:   ../../geometric_lib (modified content)

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo/baz (igi-LR1)
$ git commit -m "add Individual task"
[igi-LR1 84628ff] add Individual task
2 files changed, 2 insertions(+)
create mode 100644 IGI/LR1/foo/baz/readme.txt
create mode 100644 IGI/LR1/foo/baz/test.txt

USER@HOME-PC MINGW64 /d/253501_LANETS_12/IGI/LR1/foo/baz (igi-LR1)
$ git push labs_IGI igi-LR1
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 4 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (8/8), 520 bytes | 520.00 KiB/s, done.
Total 8 (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/Z0rro228/IGI_LABS.git
a279860..84628ff igi-LR1 -> igi-LR1

```