

Лабораторная работа 1

Работа в GIT

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Цель работы

Вспомнить основы работы с системой контроля версий git.

Задание:

Выполнение задания состоит из следующих этапов:

1.1 Подготовка

- 1.1.1 Установка имени и электронной почты
- 1.1.2 Параметры установки окончаний строк
- 1.1.3 Установка отображения unicode

1.2 Создание проекта

- 1.2.1 Создайте страницу «Hello, World»
- 1.2.2 Создание репозитория
- 1.2.3 Добавление файла в репозиторий
- 1.2.4 Проверка состояние репозитория

1.3 Внесение изменений

- 1.3.1 Измените страницу «Hello, World»

1.4 Индексация изменений

- 1.4.1 Коммит изменений
- 1.4.2 Добавьте стандартные теги страницы

- 1.4.3 История
- 1.4.4 Получение старых версий
- 1.4.5 Создание тегов версий
- 1.4.6 Переключение по имени тега
- 1.4.7 Просмотр тегов с помощью команды tag

1.5 Отмена локальных изменений (до индексации)

- 1.5.1 Переключитесь на ветку master
- 1.5.2 Измените hello.html
- 1.5.3 Проверьте состояние
- 1.5.4 Отмена изменений в рабочем каталоге

1.6 Отмена проиндексированных изменений (перед коммитом)

- 1.6.1 Измените файл и проиндексируйте изменения
- 1.6.2 Проверьте состояние
- 1.6.3 Выполните сброс буферной зоны
- 1.6.4 Переключитесь на версию коммита

1.7 Отмена коммитов

- 1.7.2 Измените файл и сделайте коммит
- 1.7.3 Сделайте коммит с новыми изменениями, отменяющими предыдущие
- 1.7.4 Проверьте лог

1.8 Удаление коммитов из ветки

- 1.8.1 Команда `git reset`
- 1.8.2 Проверьте нашу историю
- 1.8.3 Для начала отметьте эту ветку
- 1.8.4 Сброс коммитов к предшествующим коммиту `Oops`

1.9 Удаление тега `oops`

- 1.9.1 Удаление тега `oops`

1.10 Внесение изменений в коммиты

- 1.10.1 Измените страницу, а затем сделайте коммит
- 1.10.2 Необходим email
- 1.10.3 Измените предыдущий коммит
- 1.10.4 Просмотр истории

1.11 Перемещение файлов

- 1.11.1 Переместите файл `hello.html` в каталог `lib`

1.12 Подробнее о структуре

- 1.12.1 Добавление `index.html`

1.13 Git внутри: Каталог `.git`

- 1.13.1 Каталог `.git`
- 1.13.2 База данных объектов
- 1.13.3 Углубляемся в базу данных объектов
- 1.13.4 Config File

- 1.13.5 Ветки и теги

- 1.13.6 Файл HEAD

1.14 Работа непосредственно с объектами git

- 1.15.1 Поиск последнего коммита
- 1.15.2 Вывод последнего коммита с помощью SHA1 хэша
- 1.15.3 Поиск дерева
- 1.15.4 Вывод каталога lib
- 1.15.5 Вывод файла hello.html
- 1.15.6 Дальнейшее исследование

1.15 Создание ветки

- 1.15.1 Создание ветки
- 1.15.2 Добавление файла стилей style.css
- 1.15.3 изменение основной страницы
- 1.15.4 Изменение index.html

1.16 Навигация по веткам

-1.16.1 Переключение на ветку master

-1.16.2 возврат к ветке style

1.17 Изменения в ветке master

- 1.17.1 Создание файла README в ветке master

1.18 Сделайте коммит изменений README.md в ветку master.

- 1.18.2 Просмотр текущих веток

1.19 Слияние

- 1.19.1 Слияние веток

1.20 Создание конфликта

- 1.20.1 Возврат в master и создание конфликта
- 1.20.2 Просмотр веток

1.21 Разрешение конфликтов

- 1.21.1 Слияние master с веткой style
- 1.21.2 Решение конфликта
- 1.21.3 коммит решения конфликта

1.22 Сброс ветки style

- 1.22.1 Сброс ветки style
- 1.22.2 Проверка ветки

1.23 Сброс ветки master

-1.23.1 Сброс ветки master

1.24 Перебазирование

1.25 Слияние в ветку master

- 1.25.1 Слияние style в master
- 1.25.2 Просмотр логов

1.26 Клонирование репозитория

-1.26.1 Переход в рабочий каталог

-1.26.2 Создание клона репозитория hello

1.27 Просмотр клонированного репозитория

- 1.27.1 Просмотр клонированного репозитория

- 1.27.2 Просмотр истории репозитория

1.28 origin

1.29 Удаленные ветки

- 1.29.1 Список удаленных веток

1.30 Изменение оригинального репозитория

- 1.30.1 Внесение в оригинальный репозиторий hello

- 1.30.2 Извлечение изменений

- 1.30.3 Проверка README.md

1.31 Слияние извлеченных изменений

- 1.31.1 Слив изменений в master

- 1.31.2 Проверка README.md

1.32 Добавление ветки наблюдения

- 1.32 добавление локальной ветки с отслеживанием удаленной ветки

1.33 Чистый репозиторий

1.34 Добавление удаленного репозитория

1.37 Отправка изменений

1.38 Извлечение общих изменений

Ход работы

1.1 Подготовка - 1.1.1 Установка имени и электронной почты(Скриншот 1, 1я и 2я строка)

- 1.1.2 Применение параметров установки окончаний строк(Скриншот 1 3я и 4я строка)
- 1.1.3 Установка отображения unicode(Скриншот 1 5я строка)

```
PS M:\projects\math_modeling> git config --global user.name "MstislavRomanovski"
PS M:\projects\math_modeling> git config --global user.email "batle.05.frog@gmail.com"
PS M:\projects\math_modeling> git config --global core.autocrlf true
PS M:\projects\math_modeling> git config --global core.safecrlf true
PS M:\projects\math_modeling> git config --global core.quotepath off
PS M:\projects\math_modeling> cd M:\projects
PS M:\projects> mkdir math_modeling
```

(Скриншот 1)

1.2 Создание проекта

- 1.2.1 Создание страницы «Hello, World» (Скриншот 2)
- 1.2.2 Создание репозитория (Скриншот 2)
- 1.2.3 Добавление файла в репозиторий (Скриншот 2)
- 1.2.4 Проверка состояние репозитория (Скриншот 2)

```

PS M:\projects\math_modeling> cd M:\projects
PS M:\projects> mkdir math_modeling

Directory: M:\projects

Mode                LastWriteTime         Length Name
----                -
d-----          08.02.2024    12:05             math_modeling

PS M:\projects> cd M:\projects\math_modeling\
PS M:\projects\math_modeling> git init
Initialized empty Git repository in M:/projects/math_modeling/.git/
PS M:\projects\math_modeling> New-Item hello.html

Directory: M:\projects\math_modeling

Mode                LastWriteTime         Length Name
----                -
-a---          08.02.2024    12:05             0 hello.html

PS M:\projects\math_modeling> git add .\hello.html
PS M:\projects\math_modeling> git commit -m "Initial Commit"
[master (root-commit) 912d6d8] Initial Commit
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 hello.html
PS M:\projects\math_modeling> git status

```

Скриншот 2)

1.3 Внесение изменений

- 1.3.1 Изменение страницы «Hello, World» Добавим кое-какие HTML-теги к нашему приветствию. Измените содержимое файла hello.html на: '''

Hello, World!

'''

1.4 Индексация изменений

```

PS M:\projects\math_modeling> git add .\hello.html
PS M:\projects\math_modeling> git status

```

(Скриншот 3

)

- 1.4.1 Коммит изменений Делаем коммит, должен открыться редактор ''' get commit
''' проверяем статус ''' get status '''

- 1.4.2 Добавьте стандартные теги страницы Добавим теги '''

Hello, World!

'''

Добавим изменение в индекс а затем изменим файл следующим образом:

'''

```
git add hello.html
```

'''

'''

```
<html>
```

```
  <head>
```

```
  <head>
```

```
  <body>
```

```
    <h1>Hello, World!</h1>
```

```
  </body>
```

```
</html>
```

'''

И проверим статус

'''

```
git status
```

'''

```

PS M:\projects\math_modeling> git add .\hello.html
PS M:\projects\math_modeling> git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   hello.html

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:   hello.html

```

(Скриншот 4)

Далее проводим коммит, проверяем состояние, вводим изменение в индекс, проверяем состояние и коммитим

'''

git commit -m "Added standard HTML page tags"

git status

git add .

git status

git commit -m "Added HTML header"

'''

```

PS M:\projects\math_modeling> git commit -m "Added standard HTML page tags"
[master b170bfc] Added standard HTML page tags
 1 file changed, 5 insertions(+), 2 deletions(-)
PS M:\projects\math_modeling> git status
On branch master
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:   hello.html

no changes added to commit (use "git add" and/or "git commit -a")
PS M:\projects\math_modeling> git add .
PS M:\projects\math_modeling> git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   hello.html

PS M:\projects\math_modeling> git commit -m "Added HTML header"
[master 75acc37] Added HTML header
 1 file changed, 2 insertions(+)

```

(Скриншот 4)

- 1.4.3 История Вводим ''' git log ''' в консоль (Скриншот 5)

```
PS M:\projects\math_modeling> git log
commit 75acc3737010c09fa16f02c30ebc1bfff23d47d53 (HEAD -> master)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:12:54 2024 +0300

    Added HTML header

commit b170bfc11f8dbc288ca0ff38ffc553541e15c3e9
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:11:02 2024 +0300

    Added standard HTML page tags

commit aa37f071e69b312ae624736192f83c5a6e1ca9c1
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:07:17 2024 +0300

    Initial Commit

commit 912d6d81f0ad2db816c465b259e2d51ea579d111
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:06:15 2024 +0300
```

(Скриншот 5) - 1.4.4 Получение старых версий

```

PS M:\projects\math_modeling> git log
commit 75acc3737010c09fa16f02c30ebc1bfff23d47d53 (HEAD -> master)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:12:54 2024 +0300

    Added HTML header

commit b170bfc11f8dbc288ca0ff38ffc553541e15c3e9
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:11:02 2024 +0300

    Added standard HTML page tags

commit aa37f071e69b312ae624736192f83c5a6e1ca9c1
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:07:17 2024 +0300

    Initial Commit

commit 912d6d81f0ad2db816c465b259e2d51ea579d111
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:06:15 2024 +0300

    Initial Commit
PS M:\projects\math_modeling> git checkout aa37f071e69b31
Note: switching to 'aa37f071e69b31'.

You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by switching back to a branch.

If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -c with the switch command. Example:

    git switch -c <new-branch-name>

Or undo this operation with:

    git switch -

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

HEAD is now at aa37f07 Initial Commit
PS M:\projects\math_modeling> cat hello.html

<h1>Hello, World!</h1>
PS M:\projects\math_modeling> git checkout master
Previous HEAD position was aa37f07 Initial Commit
Switched to branch 'master'
PS M:\projects\math_modeling> cat hello.html
<head>
</head>
<html>

```

(Скриншот 6) - 1.4.5 Создание тегов версий

```

HEAD is now at b170bfc Added standard HTML page tags
PS M:\projects\math_modeling> cat hello.html
<html>
    <body>
        <h1>Hello, World!</h1>
    </body>
</html>
PS M:\projects\math_modeling> git tage v1-beta
git: 'tage' is not a git command. See 'git --help'.

The most similar command is
    stage
PS M:\projects\math_modeling> git checkout master
Previous HEAD position was b170bfc Added standard HTML page tags
Switched to branch 'master'
PS M:\projects\math_modeling> git tag
v1
PS M:\projects\math_modeling> git checkout v1^
Note: switching to 'v1^'.

You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by switching back to a branch.

If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -c with the switch command. Example:

    git switch -c <new-branch-name>

Or undo this operation with:

    git switch -

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

HEAD is now at b170bfc Added standard HTML page tags
PS M:\projects\math_modeling> git tag v1-beta
PS M:\projects\math_modeling> git checkout master
Previous HEAD position was b170bfc Added standard HTML page tags
Switched to branch 'master'
PS M:\projects\math_modeling> git tag
v1
v1-beta

```

(Скриншот 7)

- 1.4.6 Переключение по имени тега ”” git checkout v1 git checkout v1-beta ””
- 1.4.7 Просмотр тегов с помощью команды tag


```

PS M:\projects\math_modeling> git tag v1-beta
PS M:\projects\math_modeling> git checkout master
Previous HEAD position was b170bfc Added standard HTML page tags
Switched to branch 'master'
PS M:\projects\math_modeling> git tag
v1
v1-beta
PS M:\projects\math_modeling> git log master --all
commit 75acc3737010c09fa16f02c30ebc1bffa23d47d53 (HEAD -> master, tag: v1)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:12:54 2024 +0300

    Added HTML header

commit b170bfc11f8dbc288ca0ff38ffc553541e15c3e9 (tag: v1-beta)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:11:02 2024 +0300

```

(Скриншот 8)

1.5 Отмена локальных изменений (до индексации) - 1.5.1 Переключитесь на ветку master - 1.5.2 Измените hello.html '''

Hello, World!

'''

- 1.5.3 Проверьте состояние ''' git status '''
- 1.5.4 Отмена изменений в рабочем каталоге ''' git checkout hello.html git status cat

```

Initial Commit
PS M:\projects\math_modeling> git checkout master
Already on 'master'
PS M:\projects\math_modeling> git status
On branch master
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:   hello.html

no changes added to commit (use "git add" and/or "git commit -a")
PS M:\projects\math_modeling> git checkout hello.html
Updated 1 path from the index
PS M:\projects\math_modeling> git status
On branch master
nothing to commit, working tree clean
PS M:\projects\math_modeling> cat hello.html
<head>
</head>
<html>
    <body>
        <h1>Hello, World!</h1>
    </body>
</html>
PS M:\projects\math_modeling> git add .\hello.html
PS M:\projects\math_modeling> git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   hello.html

PS M:\projects\math_modeling> git reset HEAD hello.html
Unstaged changes after reset:
M       hello.html
PS M:\projects\math_modeling> git checkout hello.html
Updated 1 path from the index
PS M:\projects\math_modeling> git status
On branch master
nothing to commit, working tree clean

```

hello.html”

(Скриншот 9)

1.6 Отмена проиндексированных изменений (перед коммитом) - 1.6.1 Измените файл и проиндексируйте изменения”

Hello, World!

”

- 1.6.2 Проверьте состояние” git status”
- 1.6.3 Выполните сброс буферной зоны” git reset HEAD hello.html”
- 1.6.4 Переключитесь на версию коммита” git checkout hello.html git status”

```
PS M:\projects\math_modeling> git reset HEAD hello.html
Unstaged changes after reset:
M      hello.html
PS M:\projects\math_modeling> git checkout hello.html
Updated 1 path from the index
PS M:\projects\math_modeling> git status
On branch master
nothing to commit, working tree clean
```

(Скриншот 10)

1.7 Отмена коммитов - 1.7.1 Измените файл и сделайте коммит '''

Hello, World!

'''

'''

```
git add hello.html
```

```
git commit -m "Oops, we didn't want this commit"
```

'''

- 1.7.2 Сделайте коммит с новыми изменениями, отменяющими предыдущие ''' git revert HEAD '''

```

PS M:\projects\math_modeling> git add hello.html
PS M:\projects\math_modeling> git commit -m "Oops,it wasn't intended to be committed"
[master c29d812] Oops,it wasn't intended to be committed
1 file changed, 5 insertions(+), 4 deletions(-)
PS M:\projects\math_modeling> git revert HEAD
[master 6cfb178] Revert "Oops,it wasn't intended to be committed"
1 file changed, 4 insertions(+), 5 deletions(-)
PS M:\projects\math_modeling> git log
commit 6cfb178dc829a816ab400c4abff2c735be684a05 (HEAD -> master)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:27:09 2024 +0300

    Revert "Oops,it wasn't intended to be committed"

    This reverts commit c29d812ad04bbd7859246920b92a9af9b1e82d4a.

commit c29d812ad04bbd7859246920b92a9af9b1e82d4a
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:26:51 2024 +0300

    Oops,it wasn't intended to be committed

commit 75acc3737010c09fa16f02c30ebc1bfff23d47d53 (tag: v1)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:12:54 2024 +0300

    Added HTML header

commit b170bfc11f8dbc288ca0ff38ffc553541e15c3e9 (tag: v1-beta)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:11:02 2024 +0300

    Added standard HTML page tags

commit aa37f071e69b312ae624736192f83c5a6e1ca9c1
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:07:17 2024 +0300

    Initial Commit

commit 912d6d81f0ad2db816c465b259e2d51ea579d111
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:06:15 2024 +0300

    Initial Commit

```

- 1.7.3 Проверьте лог ”” git log ””

(Скриншот 11)

1.8 Удаление коммитов из ветки - 1.8.1 Проверка истории ”” git log ”” - 1.8.2 Присвоим метку ветке ”” git tag oops ”” - 1.8.3 Сброс коммитов к предшествующим коммиту Oops ””

```

PS M:\projects\math_modeling> git tag oops
PS M:\projects\math_modeling> git log master --all
commit 6cfb178dc829a816ab400c4abff2c735be684a05 (HEAD -> master, tag: oops)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:27:09 2024 +0300

    Revert "Oops,it wasn't intended to be committed"

    This reverts commit c29d812ad04bbd7859246920b92a9af9b1e82d4a.

commit c29d812ad04bbd7859246920b92a9af9b1e82d4a
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:26:51 2024 +0300

    Oops,it wasn't intended to be committed

commit 75acc3737010c09fa16f02c30ebc1bfff23d47d53 (tag: v1)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:12:54 2024 +0300

    Added HTML header

commit b170bfc11f8dbc288ca0ff38ffc553541e15c3e9 (tag: v1-beta)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:11:02 2024 +0300

    Added standard HTML page tags

commit aa37f071e69b312ae624736192f83c5a6e1ca9c1
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:07:17 2024 +0300

    Initial Commit

```

git reset --hard v1 git log ""

```

PS M:\projects\math_modeling> git reset --hard v1
HEAD is now at 75acc37 Added HTML header
PS M:\projects\math_modeling> git log
commit 75acc3737010c09fa16f02c30ebc1bfff23d47d53 (HEAD -> master, tag: v1)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:12:54 2024 +0300

    Added HTML header

commit b170bfc11f8dbc288ca0ff38ffc553541e15c3e9 (tag: v1-beta)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:11:02 2024 +0300

    Added standard HTML page tags

commit aa37f071e69b312ae624736192f83c5a6e1ca9c1
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:07:17 2024 +0300

    Initial Commit

commit 912d6d81f0ad2db816c465b259e2d51ea579d111
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:06:15 2024 +0300

    Initial Commit
PS M:\projects\math_modeling>

```

(Скриншот 12)

(Скриншот 13)

1.9 Удаление тега oops - 1.9.1 Удаление тега oops

```

commit 912d6d81f0ad2db816c465b259e2d51ea579d111
PS M:\projects\math_modeling> git tag -d oops
Deleted tag 'oops' (was 6cfb178)
PS M:\projects\math_modeling> git log --all
commit 75acc3737010c09fa16f02c30ebc1bfff23d47d53 (HEAD -> master, tag: v1)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:12:54 2024 +0300

    Added HTML header

commit b170bfc11f8dbc288ca0ff38ffc553541e15c3e9 (tag: v1-beta)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:11:02 2024 +0300

    Added standard HTML page tags

commit aa37f071e69b312ae624736192f83c5a6e1ca9c1
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:07:17 2024 +0300

    Initial Commit

commit 912d6d81f0ad2db816c465b259e2d51ea579d111
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:06:15 2024 +0300

    Initial Commit
PS M:\projects\math_modeling>

```

(Скриншот 14)

1.10 Внесение изменений в коммиты - 1.10.1 Измените страницу, а затем сделайте КОММИТ ””

Hello, World!

””

””

git add hello.html

git commit -m "Add an author comment"

””

- 1.10.2 Необходим email ””

Hello, World!

””

- 1.10.3 Измените предыдущий коммит ”” git add hello.html git commit --amend -m “Add an author/email comment” ””

```

Initial Commit
PS M:\projects\math_modeling> git add .\hello.html
PS M:\projects\math_modeling> git commit -m "Add an author comment"
[master 63ed9e7] Add an author comment
1 file changed, 5 insertions(+), 4 deletions(-)
PS M:\projects\math_modeling> git add .\hello.html
PS M:\projects\math_modeling> git commit --amend -m "Add an author/email comment"
[master 6b1a91f] Add an author/email comment
Date: Thu Feb 8 12:42:17 2024 +0300
1 file changed, 5 insertions(+), 4 deletions(-)
PS M:\projects\math_modeling> git log
commit 6b1a91f3adb6564df1ff7ac0b222663937e115f1 (HEAD -> master)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:42:17 2024 +0300

    Add an author/email comment

commit 75acc3737010c09fa16f02c30ebc1bfff23d47d53 (tag: v1)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:12:54 2024 +0300

    Added HTML header

commit b170bfc11f8dbc288ca0ff38ffc553541e15c3e9 (tag: v1-beta)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:11:02 2024 +0300

    Added standard HTML page tags

commit aa37f071e69b312ae624736192f83c5a6e1ca9c1
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:07:17 2024 +0300

    Initial Commit

commit 912d6d81f0ad2db816c465b259e2d51ea579d111
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:06:15 2024 +0300

    Initial Commit
PS M:\projects\math_modeling> _

```

- 1.10.4 Просмотр истории ”” git log ””

(Скриншот 15)

1.11 Перемещение файлов - 1.11.1 Переместите файл hello.html в каталог lib

```

Initial Commit
PS M:\projects\math_modeling> mkdir lib

Directory: M:\projects\math_modeling

Mode                LastWriteTime         Length Name
----                -
d-----          08.02.2024    12:46             lib

PS M:\projects\math_modeling> git mv hello.html lib
PS M:\projects\math_modeling> git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        renamed:    hello.html -> lib/hello.html

PS M:\projects\math_modeling> git commit -m "Moved hello.html to lib"
[master 1aac232] Moved hello.html to lib
1 file changed, 0 insertions(+), 0 deletions(-)
rename hello.html => lib/hello.html (100%)
PS M:\projects\math_modeling>

```

(Скриншот 16)

1.12 Подробнее о структуре - 1.12.1 Добавление index.html

```
PS M:\projects\math_modeling> New-Item index.html

Directory: M:\projects\math_modeling

Mode                LastWriteTime         Length Name
----                -
-a---             08.02.2024    12:48             0 index.html

PS M:\projects\math_modeling> git add index.html
PS M:\projects\math_modeling> git commit -m "Added index.html"
[master 61bfc3f] Added index.html
 1 file changed, 5 insertions(+)
 create mode 100644 index.html
PS M:\projects\math_modeling> _
```

(Скриншот 17)

1.13 Git внутри: Каталог .git - 1.13.1 Каталог .git "" cd ../.git "" - 1.13.2 База данных объ-

```
PS M:\projects\math_modeling\.git\objects> ls M:\projects\math_modeling\.git\objects

Directory: M:\projects\math_modeling\.git\objects

Mode                LastWriteTime         Length Name
----                -
d-----             08.02.2024    12:06             02
d-----             08.02.2024    12:43             10
d-----             08.02.2024    12:43             18
d-----             08.02.2024    12:47             1a
d-----             08.02.2024    12:50             28
d-----             08.02.2024    12:11             39
d-----             08.02.2024    12:50             42
d-----             08.02.2024    12:07             53
d-----             08.02.2024    12:07             5b
d-----             08.02.2024    12:24             5c
d-----             08.02.2024    12:50             61
d-----             08.02.2024    12:42             63
d-----             08.02.2024    12:43             6b
d-----             08.02.2024    12:42             6c
d-----             08.02.2024    12:12             75
d-----             08.02.2024    12:26             8c
d-----             08.02.2024    12:06             91
d-----             08.02.2024    12:42             a0
d-----             08.02.2024    12:26             a4
d-----             08.02.2024    12:08             aa
d-----             08.02.2024    12:47             b1
d-----             08.02.2024    12:12             b7
d-----             08.02.2024    12:11             bd
d-----             08.02.2024    12:26             c2
d-----             08.02.2024    12:05             e6
d-----             08.02.2024    12:05             info
d-----             08.02.2024    12:05             pack

PS M:\projects\math_modeling\.git\objects> cat M:\projects\math_modeling
[core]
  repositoryformatversion = 0
  filemode = false
  bare = false
  logallrefupdates = true
  symlinks = false
  ignorecase = true
```

(Скриншот 18) - 1.13.3 Config File


```

Directory: M:\projects\math_modeling\.git\refs

Mode                LastWriteTime         Length Name
----                -
d----             08.02.2024     12:50         heads
d----             08.02.2024     12:40         tags

PS M:\projects\math_modeling\.git> ls refs/heads

Directory: M:\projects\math_modeling\.git\refs\heads

Mode                LastWriteTime         Length Name
----                -
-a---             08.02.2024     12:50         41 master

PS M:\projects\math_modeling\.git> ls refs/tags

Directory: M:\projects\math_modeling\.git\refs\tags

Mode                LastWriteTime         Length Name
----                -
-a---             08.02.2024     12:18         41 v1
-a---             08.02.2024     12:19         41 v1-beta

PS M:\projects\math_modeling\.git> ls refs/tags/v1

Directory: M:\projects\math_modeling\.git\refs\tags

Mode                LastWriteTime         Length Name
----                -
-a---             08.02.2024     12:18         41 v1

PS M:\projects\math_modeling\.git>

```

(Скриншот 19) - 1.13.4 Ветки и теги

```

PS M:\projects\math_modeling\.git> cat HEAD
ref: refs/heads/master
PS M:\projects\math_modeling\.git>

```

(Скриншот 20) - 1.13.5 Файл HEAD

(Скриншот 21)

1.14 Работа непосредственно с объектами git - 1.14.1 Поиск последнего коммита ""
git log --max-count=1 "" - 1.14.2 Вывод последнего коммита с помощью SHA1 хэша ""
git cat-file -t git cat-file -p "" - 1.14.3 Поиск дерева "" git cat-file -p "" - 1.14.4 Вывод
каталога lib "" git cat-file -p "" - 1.14.5 Вывод файла hello.html "" git cat-file -p "" - 1.14.6
Дальнейшее исследование Просто берем хэш у parent и ищем предыдущие коммиты

```

PS M:\projects\math_modeling\.git> git log --max-count=1
commit 61bfc3f852c98ef6e368b1652cc2736daaf8fa3d (HEAD -> master)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:50:18 2024 +0300

    Added index.html
PS M:\projects\math_modeling\.git> git cat-file -t <hash>
ParserError:
Line |
  1  | git cat-file -t <hash>
      | ~
      | The '<' operator is reserved for future use.
PS M:\projects\math_modeling\.git> git cat-file -t 61bfc3f852c98ef6e368b1652cc2736daaf8fa3d
commit
PS M:\projects\math_modeling\.git> git cat-file -p 61bfc3f852c98ef6e368b1652cc2736daaf8fa3d
tree 28ae32661901086a62dcfb52134345cef30521df
parent 1aac232c934f8d63a75d2fc926d9688b2747ca56
author MstislavRomanovski <batle.05.frog@gmail.com> 1707385818 +0300
committer MstislavRomanovski <batle.05.frog@gmail.com> 1707385818 +0300

Added index.html
PS M:\projects\math_modeling\.git> git cat-file -p 28ae32661901086a62dcfb52134345cef30521df
100644 blob 4259d9fadb92fd9dbf6e1d0dbfe3ac19f1a91    index.html
040000 tree 1003b008aa9a64dc160719e01f66bd814edf635d    lib
PS M:\projects\math_modeling\.git> git cat-file -p 1003b008aa9a64dc160719e01f66bd814edf635d
100644 blob 188a14643bbab8288df777414ed4380c30e7274b    hello.html
PS M:\projects\math_modeling\.git> git cat-file -p 1003b008aa9a64dc160719e01f66bd814edf635d
100644 blob 188a14643bbab8288df777414ed4380c30e7274b    hello.html
PS M:\projects\math_modeling\.git> git cat-file -p 188a14643bbab8288df777414ed4380c30e7274b
<!-- Author: Roman Malkov : batle.05.frog@gmail.com-->
<html>
<head>
</head>
<body>
<h1>Hello World!</h1>

```

```

PS M:\projects\math_modeling\.git> git cat-file -p 1aac232c934f8d63a75d2fc926d9688b2747ca56
tree b1435a41197dd56bd137a102c631df94f5ac3db4
parent 6b1a91f3adb6564df1ff7ac0b222663937e115f1
author MstislavRomanovski <batle.05.frog@gmail.com> 1707385676 +0300
committer MstislavRomanovski <batle.05.frog@gmail.com> 1707385676 +0300

Moved hello.html to lib
PS M:\projects\math_modeling\.git> git cat-file -p 6b1a91f3adb6564df1ff7ac0b222663937e115f1
tree 1003b008aa9a64dc160719e01f66bd814edf635d
parent 75acc3737010c09fa16f02c30ebc1bfff23d47d53
author MstislavRomanovski <batle.05.frog@gmail.com> 1707385337 +0300
committer MstislavRomanovski <batle.05.frog@gmail.com> 1707385431 +0300

Add an author/email comment
PS M:\projects\math_modeling\.git> git cat-file -p 75acc3737010c09fa16f02c30ebc1bfff23d47d53
tree b7d435edbae7c5ea28e63c6b2c459ee14a639c3b
parent b170bfc11f8dbc288ca0ff38ffc553541e15c3e9
author MstislavRomanovski <batle.05.frog@gmail.com> 1707383574 +0300
committer MstislavRomanovski <batle.05.frog@gmail.com> 1707383574 +0300

Added HTML header
PS M:\projects\math_modeling\.git> git cat-file -p b170bfc11f8dbc288ca0ff38ffc553541e15c3e9
tree 39244a281685d83fbfed8c43d561598030b74d64
parent aa37f071e69b312ae624736192f83c5a6e1ca9c1
author MstislavRomanovski <batle.05.frog@gmail.com> 1707383462 +0300
committer MstislavRomanovski <batle.05.frog@gmail.com> 1707383462 +0300

Added standard HTML page tags
PS M:\projects\math_modeling\.git> git log aa37f071e69b312ae624736192f83c5a6e1ca9c1
commit aa37f071e69b312ae624736192f83c5a6e1ca9c1
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:07:17 2024 +0300

Initial Commit

commit 912d6d81f0ad2db816c465b259e2d51ea579d111
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:06:15 2024 +0300

Initial Commit
PS M:\projects\math_modeling\.git> git log 39244a281685d83fbfed8c43d561598030b74d64
PS M:\projects\math_modeling\.git> git cat-file -p 39244a281685d83fbfed8c43d561598030b74d64
100644 blob 6c7ba8e1875a418341f33ee7640357855647f7c2 hello.html
PS M:\projects\math_modeling\.git> git cat-file -p 6c7ba8e1875a418341f33ee7640357855647f7c2
<html>
  <body>
    <h1>Hello, World!</h1>
  </body>
</html>
PS M:\projects\math_modeling\.git>

```

(Скриншот 22)

(Скриншот 22) 1.15 Создание ветки - 1.15.1 Создание ветки `git checkout -b style`
`git status` - 1.15.2 Добавление файла стилей `style.css` `New-Item lib/style.css`
 Содержимое `style.css` `h1 { color: red; }` `git add lib/style.css` `git commit -m "Added css stylesheet"` - 1.15.3 изменение основной страницы

Hello, World!

'''

'''

`git add lib/hello.html`

`git commit -m "Hello uses style.css"`

'''

- 1.15.4 Изменение index.html '''

'''

'''

git add index.html

git commit -m "Updated index.html"

'''

```
PS M:\projects\math_modeling\.git> git checkout master
fatal: this operation must be run in a work tree
PS M:\projects\math_modeling\.git> cd M:\projects\math_modeling
PS M:\projects\math_modeling> git checkout -b style
Switched to a new branch 'style'
PS M:\projects\math_modeling> git status
On branch style
nothing to commit, working tree clean
PS M:\projects\math_modeling> New-Item lib/style.css

Directory: M:\projects\math_modeling\lib

Mode                LastWriteTime         Length Name
----                -
-a---             08.02.2024   13:22             0 style.css

PS M:\projects\math_modeling> git add lib/style.css
PS M:\projects\math_modeling> git commit -m "Added css stylesheet"
[style e04d1c5] Added css stylesheet
1 file changed, 3 insertions(+)
create mode 100644 lib/style.css
PS M:\projects\math_modeling> git add lib/hello.html
PS M:\projects\math_modeling> git commit -m "Hello uses style.css"
[style 02ffffde] Hello uses style.css
1 file changed, 7 insertions(+), 5 deletions(-)
PS M:\projects\math_modeling> git add index.html
PS M:\projects\math_modeling> git commit -m "Updated index.html"
[style 10f9b29] Updated index.html
1 file changed, 7 insertions(+), 3 deletions(-)
PS M:\projects\math_modeling>
```

(Скриншот 23)

1.16 Навигация по веткам -1.16.1 Переключение на ветку master ''' git checkout master
cat lib/hello.html ''' - 1.16.2 возврат к ветке style ''' git checkout style cat lib/hello.html '''

```

PS M:\projects\math_modeling> git log --all
commit 10f9b296905b4adf15d345876bfdd703de1674c9 (HEAD -> style)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

commit 02ffffdef8ebfd3d6f04723eb01a64bd798ea2f89
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:26:04 2024 +0300

    Hello uses style.css

commit e04d1c516619d03b20188253eb26bdb3d3b05547
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:23:39 2024 +0300

    Added css stylesheet

commit 61bfc3f852c98ef6e368b1652cc2736daaf8fa3d (master)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:50:18 2024 +0300

    Added index.html

commit 1aac232c934f8d63a75d2fc926d9688b2747ca56
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:47:56 2024 +0300

    Moved hello.html to lib

commit 6b1a91f3adb6564df1ff7ac0b222663937e115f1
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:42:17 2024 +0300

    Add an author/email comment
PS M:\projects\math_modeling> git checkout master
Switched to branch 'master'
PS M:\projects\math_modeling> cat lib/hello.html
<!-- Author: Roman Malkov : batle.05.frog@gmail.com-->
<html>
<head>
</head>
<body>
<h1>Hello, World!</h1>
</body>
</html>
PS M:\projects\math_modeling> git checkout style
Switched to branch 'style'
PS M:\projects\math_modeling> cat lib/hello.html
<!-- Author: Roman Malkov : batle.05.frog@gmail.com-->
<html>
  <head>
    <link type="text/css" rel="stylesheet"
          media="all" href="style.css" />
  </head>
  <body>
    <h1>Hello, World!</h1>
  </body>
</html>
PS M:\projects\math_modeling>

```

(Скриншот 24)

1.17 Изменения в ветке master - 1.17.1 Создание файла README в ветке master ”” New-Item README.md ”” 1.18 Сделайте коммит изменений README.md в ветку master. ”” git add README.md git commit -m “Added README” ”” - 1.18.2 Просмотр текущих веток ””

```

PS M:\projects\math_modeling> git checkout master
Switched to branch 'master'
PS M:\projects\math_modeling> New-Item README.md

Directory: M:\projects\math_modeling

Mode                LastWriteTime         Length Name
----                -
-a---             08.02.2024   13:31              0 README.md

PS M:\projects\math_modeling> git add README.md
PS M:\projects\math_modeling> git commit -m "Added README"
[master 88df991] Added README
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 README.md
PS M:\projects\math_modeling> git log --graph --all
* commit 88df991874ce361bcf2ccec723838d3d8e8777c (HEAD -> master)
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date:   Thu Feb 8 13:31:44 2024 +0300

    Added README

* commit 10f9b296905b4adf15d345876bfd703de1674c9 (style)
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date:   Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

* commit 02ffffdef8ebfd3d6f04723eb01a64bd798ea2f89
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date:   Thu Feb 8 13:26:04 2024 +0300

    Hello uses style.css

* commit e04d1c516619d03b20188253eb26bdb3d3b05547
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date:   Thu Feb 8 13:23:39 2024 +0300

    Added css stylesheet

* commit 61bfc3f852c98ef6e368b1652cc2736daaf8fa3d
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date:   Thu Feb 8 12:50:18 2024 +0300

    Added index.html

* commit 1aac232c934f8d63a75d2fc926d9688b2747ca56
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date:   Thu Feb 8 12:47:56 2024 +0300

    Moved hello.html to lib
...skipping...
* commit 88df991874ce361bcf2ccec723838d3d8e8777c (HEAD -> master)
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date:   Thu Feb 8 13:31:44 2024 +0300

    Added README

* commit 10f9b296905b4adf15d345876bfd703de1674c9 (style)
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date:   Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

* commit 02ffffdef8ebfd3d6f04723eb01a64bd798ea2f89

```

git log --graph --all ""

(Скриншот 25) 1.19 Слияние - 1.19.1 Слияние веток "" git checkout style git merge master

git log --graph --all ""

```

Moved hello.html to lib
PS M:\projects\math_modeling> git checkout master
Already on 'master'
PS M:\projects\math_modeling> git checkout style
Switched to branch 'style'
PS M:\projects\math_modeling> git merge master
Merge made by the 'ort' strategy.
 README.md | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 README.md
PS M:\projects\math_modeling> git log --graph --all
*   commit a53f6be4f8270bc47a9e3a187ab78638de1295bb (HEAD -> style)
Merge: 10f9b29 88df991
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:33:48 2024 +0300

    Merge branch 'master' into style

*   commit 88df991874ce361bcf2ccec723838d3d8e8777c (master)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:31:44 2024 +0300

    Added README

*   commit 10f9b296985b4adf15d345876bfd703de1674c9
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

*   commit 02ffffef8ebfd3d6f04723eb01a64bd798ea2f89
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:26:04 2024 +0300

    Hello uses style.css

*   commit e04d1c516619d03b30180253eb26db3d3005547
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:23:39 2024 +0300

    Added css stylesheet

*   commit 61bfc3f852c98ef6e368b1652cc2736daaf8fa3d
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:58:18 2024 +0300

...skipping...
*   commit a53f6be4f8270bc47a9e3a187ab78638de1295bb (HEAD -> style)
Merge: 10f9b29 88df991
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:33:48 2024 +0300

    Merge branch 'master' into style

*   commit 88df991874ce361bcf2ccec723838d3d8e8777c (master)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:31:44 2024 +0300

    Added README

*   commit 10f9b296985b4adf15d345876bfd703de1674c9
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

```

(Скриншот 26)

1.20 Создание конфликта - 1.20.1 Возврат в master и создание конфликта ”” git checkout master ”” ””

Hello, World! Life is great!

””

””

git add lib/hello.html

git commit -m 'Life is great'

””

- 1.20.2 Просмотр веток ”” git log --graph --all ””

```

PS M:\projects\math_modeling> git checkout master
Switched to branch 'master'
PS M:\projects\math_modeling> git add lib/hello.html
PS M:\projects\math_modeling> git commit -m "Life is Pain"
[master 4e34d52] Life is Pain
1 file changed, 3 insertions(+), 2 deletions(-)
PS M:\projects\math_modeling> git log --graph --all
fatal: unrecognized argument: --al
PS M:\projects\math_modeling> git log --graph --all
* commit 4e34d52f630d9f8a3debefc9ee6e0b27d35bd3a6 (HEAD -> master)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:39:23 2024 +0300

    Life is Pain

* commit a53f6be4f8270bc47a9e3a187ab78638de1295bb (style)
Merge: 10f9b29 88df991
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:33:48 2024 +0300

    Merge branch 'master' into style

* commit 88df991874ce361bcf2ccec723838d3d8e8777c
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:31:44 2024 +0300

    Added README

* commit 10f9b296905b4adf15d345876bfdd703de1674c9
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

* commit 02ffffdef8ebfd3d6f04723eb01a64bd798ea2f89
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:26:04 2024 +0300

    Hello uses style.css

```

(Скриншот 27)

1.21 Разрешение конфликтов - 1.21.1 Слияние master с веткой style - 1.21.2 Решение конфликта - 1.21.3 коммит решения конфликта

```

    Added standard HTML page tags
PS M:\projects\math_modeling> git checkout style
Switched to branch 'style'
PS M:\projects\math_modeling> git merge master
Auto-merging lib/hello.html
CONFLICT (content): Merge conflict in lib/hello.html
Automatic merge failed; fix conflicts and then commit the result.
PS M:\projects\math_modeling> git add .\lib\hello.html
PS M:\projects\math_modeling> git vommit -m "Merge conflict solution"
git: 'vommit' is not a git command. See 'git --help'.

The most similar command is
    commit
PS M:\projects\math_modeling> git commit -m "Merge conflict solution"
[style 10446c1] Merge conflict solution
PS M:\projects\math_modeling>

```

(Скриншот 28)

1.22 Сброс ветки style - 1.22.1 Сброс ветки style - 1.22.2 Проверка ветки

```
PS M:\projects\math_modeling> git checkout style
Already on 'style'
PS M:\projects\math_modeling> git log --graph
* commit 10446c12d349e95215b62e22d781475629044b01 (HEAD -> style)
Merge: a53f6be 4e34d52
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:46:27 2024 +0300

    Merge conflict solution

* commit 4e34d52f630d9f8a3debefc9ee6e0b27d35bd3a6 (master)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:39:23 2024 +0300

    Life is Pain

* commit a53f6be4f8270bc47a9e3a187ab78638de1295bb
Merge: 10f9b29 88df991
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:33:48 2024 +0300

    Merge branch 'master' into style

* commit 88df991874ce361bcf2cceec723838d3d8e8777c
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:31:44 2024 +0300

    Added README

* commit 10f9b296905b4adf15d345876bfdd703de1674c9
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

* commit 02ffffdef8ebfd3d6f04723eb01a64bd798ea2f89
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:26:04 2024 +0300

    Hello uses style.css
PS M:\projects\math_modeling> git checkout master
Switched to branch 'master'
PS M:\projects\math_modeling> git checkout style
Switched to branch 'style'
PS M:\projects\math_modeling> git reset --hard 10f9b296905b4adf15d345876bfdd703de1674c9
HEAD is now at 10f9b29 Updated index.html
PS M:\projects\math_modeling> git log --graph --all
* commit 4e34d52f630d9f8a3debefc9ee6e0b27d35bd3a6 (master)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:39:23 2024 +0300

    Life is Pain

* commit 88df991874ce361bcf2cceec723838d3d8e8777c
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:31:44 2024 +0300

    Added README

* commit 10f9b296905b4adf15d345876bfdd703de1674c9 (HEAD -> style)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:27:26 2024 +0300

    Updated index.html
```

(Скриншот 29)

1.23 Сброс ветки master

-1.23.1 Сброс ветки master

```
PS M:\projects\math_modeling> git checkout master
Switched to branch 'master'
PS M:\projects\math_modeling> git log --graph
* commit 4e34d52f630d9f8a3debefc9ee6e0b27d35bd3a6 (HEAD -> master)
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 13:39:23 2024 +0300

    Life is Pain

* commit 88df991874ce361bcf2cceec723838d3d8e8777c
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 13:31:44 2024 +0300

    Added README

* commit 61bfc3f852c98ef6e368b1652cc2736daaf8fa3d
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 12:50:18 2024 +0300

    Added index.html

* commit 1aac232c934f8d63a75d2fc926d9688b2747ca56
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 12:47:56 2024 +0300

    Moved hello.html to lib

* commit 6b1a91f3adb6564df1ff7ac0b222663937e115f1
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 12:42:17 2024 +0300

    Add an author/email comment

* commit 75acc3737010c09fa16f02c30ebc1bff23d47d53 (tag: v1)
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 12:12:54 2024 +0300

    Added HTML header

* commit b170bfc11f8dbc288ca0ff38ffc553541e15c3e9 (tag: v1-beta)
PS M:\projects\math_modeling> git reset --hard 88df991874ce361bcf2cceec723838d3d8e8777c
HEAD is now at 88df991 Added README
PS M:\projects\math_modeling> git log -graph --all
fatal: unrecognized argument: -graph
PS M:\projects\math_modeling> git log --graph --all
* commit 88df991874ce361bcf2cceec723838d3d8e8777c (HEAD -> master)
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 13:31:44 2024 +0300

    Added README

* commit 10f9b296905b4adf15d345876bfdd703de1674c9 (style)
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

* commit 02ffffdef8ebfd3d6f04723eb01a64bd798ea2f89
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 13:26:04 2024 +0300
```

(Скриншот 29)

1.24 Перебазирование

```

* commit 6b1a91f3adb6564df1ff7ac0b222663937e115f1
PS M:\projects\math_modeling> git checkout style
Switched to branch 'style'
PS M:\projects\math_modeling> git rebase master
Successfully rebased and updated refs/heads/style.
PS M:\projects\math_modeling> git log --graph --all
* commit 644d4d6b7b5efb3bc3b4486174778d1054dd0cd5 (HEAD -> style)
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

* commit e0c9a12973bfc370a31c35a8a79faf5e1d729a7
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 13:26:04 2024 +0300

    Hello uses style.css

* commit 1093debb34652e76947dab7db91848d54b368a88
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 13:23:39 2024 +0300

    Added css stylesheet

* commit 88df991874ce361bcf2cceec723838d3d8e8777c (master)
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 13:31:44 2024 +0300

    Added README

* commit 61bfc3f852c98ef6e368b1652cc2736daaf8fa3d
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 12:50:18 2024 +0300

    Added index.html

* commit 1aac232c934f8d63a75d2fc926d9688b2747ca56
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 12:47:56 2024 +0300

    Moved hello.html to lib

* commit 6b1a91f3adb6564df1ff7ac0b222663937e115f1
...skipping...
* commit 644d4d6b7b5efb3bc3b4486174778d1054dd0cd5 (HEAD -> style)
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

* commit e0c9a12973bfc370a31c35a8a79faf5e1d729a7
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 13:26:04 2024 +0300

    Hello uses style.css

* commit 1093debb34652e76947dab7db91848d54b368a88
  Author: MstislavRomanovski <batle.05.frog@gmail.com>
  Date: Thu Feb 8 13:23:39 2024 +0300

    Added css stylesheet

```

-1.23.1 Сброс ветки master

1.25 Слияние в ветку master

- 1.25.1 Слияние style в master

```
* commit 6b1a91f3adb6564df1ff7ac0b222663937e115f1
PS M:\projects\math_modeling> git checkout master
Switched to branch 'master'
PS M:\projects\math_modeling> git merge style
Updating 88df991..644d4d6
Fast-forward
 index.html      | 10 ++++++---
 lib/hello.html  | 12 ++++++-----
 lib/style.css   | 3 +++
 3 files changed, 17 insertions(+), 8 deletions(-)
 create mode 100644 lib/style.css
PS M:\projects\math_modeling> git log
commit 644d4d6b7b5efb3bc3b4486174778d1054dd0cd5 (HEAD -> master, style)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

commit e0c9a12973bfc370a31c35a8a79faf5e1d729a7
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:26:04 2024 +0300

    Hello uses style.css

commit 1093debb34652e76947dab7db91848d54b368a88
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:23:39 2024 +0300

    Added css stylesheet

commit 88df991874ce361bcf2cceec723838d3d8e8777c
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:31:44 2024 +0300

    Added README

commit 61bfc3f852c98ef6e368b1652cc2736daaf8fa3d
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 12:50:18 2024 +0300

    Added index.html
```

- 1.25.2 Просмотр логов

(Скриншот 30)

1.26 Клонирование репозитория - 1.26.1 Переход в рабочий каталог - 1.26.2 Создание клона репозитория hello

```

commit 6b1a91f3adb6564df1ff7ac0b222663937e115f1
PS M:\projects\math_modeling> cd M:\projects
PS M:\projects> git clone math_modeling cloned
Cloning into 'cloned'...
done.
PS M:\projects> cd cloned
PS M:\projects\cloned> ls

Directory: M:\projects\cloned

Mode                LastWriteTime         Length Name
----                -
d-----          08.02.2024      14:05             lib
-g-----          08.02.2024      14:05        197 index.html
-a-----          08.02.2024      14:05           0 README.md

PS M:\projects\cloned> git log --all
commit 644d4d6b7b5efb3bc3b4486174778d1054dd0cd5 (HEAD -> master, origin/style, origin/master, origin/HEAD)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date:   Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

commit e0c9a12973bfc370a31c35a8a79faf5e1d729a7
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date:   Thu Feb 8 13:26:04 2024 +0300

    Hello uses style.css

commit 1093debb34652e76947dab7db91848d54b368a88
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date:   Thu Feb 8 13:23:39 2024 +0300

    Added css stylesheet

commit 88df991874ce361bcf2ccec723838d3d8e8777c
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date:   Thu Feb 8 13:31:44 2024 +0300

    Added README

commit 61bfc3f852c98ef6e368b1652cc2736daaf8fa3d
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date:   Thu Feb 8 12:50:18 2024 +0300

    Added index.html

commit 1aac232c934f8d63a75d2fc926d9688b2747ca56
Author: MstislavRomanovski <batle.05.frog@gmail.com>

```

(Скриншот 31)

1.27 Просмотр клонированного репозитория - 1.27.1 Просмотр клонированного репозитория - 1.27.2 Просмотр истории репозитория

```

commit 6b1a91f3adb6564df1ff7ac0b222663937e115f1
PS M:\projects\math_modeling> cd M:\projects
PS M:\projects> git clone math_modeling cloned
Cloning into 'cloned'...
done.
PS M:\projects> cd cloned
PS M:\projects\cloned> ls

Directory: M:\projects\cloned

Mode                LastWriteTime         Length Name
----                -
d-----          08.02.2024    14:05             lib
-a-----          08.02.2024    14:05        197 index.html
-a-----          08.02.2024    14:05           0 README.md

PS M:\projects\cloned> git log --all
commit 644d4d6b7b5efb3bc3b4486174778d1054dd0cd5 (HEAD -> master, origin/style, origin/master, origin/HEAD)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date:   Thu Feb 8 13:27:26 2024 +0300

    Updated index.html

commit e0c9a12973bfc370a31c35a8a79faf5e1d729a7
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date:   Thu Feb 8 13:26:04 2024 +0300

    Hello uses style.css

commit 1093debb34652e76947dab7db91848d54b368a88
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date:   Thu Feb 8 13:23:39 2024 +0300

    Added css stylesheet

commit 88df991074ce361bcf2ccec723838d3d8e8777c
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date:   Thu Feb 8 13:31:44 2024 +0300

    Added README

commit 61bfc3f852c98ef6e368b1652cc2736daaf8fa3d
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date:   Thu Feb 8 12:50:18 2024 +0300

    Added index.html

commit 1aac232c934f8d63a75d2fc926d9688b2747ca56
Author: MstislavRomanovski <batle.05.frog@gmail.com>

```

(Скриншот 32)

1.28 origin

```

Initial Commit
~
PS M:\projects\cloned> git remote
origin
PS M:\projects\cloned> git remote show origin
* remote origin
  Fetch URL: M:/projects/math_modeling
  Push URL: M:/projects/math_modeling
  HEAD branch: master
  Remote branches:
    master tracked
    style tracked
  Local branch configured for 'git pull':
    master merges with remote master
  Local ref configured for 'git push':
    master pushes to master (up to date)
PS M:\projects\cloned> git branch
* master
PS M:\projects\cloned> git branch -a
* master
  remotes/origin/HEAD -> origin/master
  remotes/origin/master
  remotes/origin/style
PS M:\projects\cloned>

```

(Скриншот 33)

1.29 Удаленные ветки - 1.29.1 Список удаленных веток

```
PS M:\projects\cloned> cd M:\projects\math_modeling\  
PS M:\projects\math_modeling> git add README  
fatal: pathspec 'README' did not match any files  
PS M:\projects\math_modeling> git add README.md  
PS M:\projects\math_modeling> git commit -m "Changed README in origin repo"  
[master 5ecd808] Changed README in origin repo  
1 file changed, 1 insertion(+)  
PS M:\projects\math_modeling> cd M:\projects\clone  
Set-Location: Cannot find path 'M:\projects\clone' because it does not exist.  
PS M:\projects\math_modeling> cd M:\projects\cloned  
PS M:\projects\cloned> git fetch  
remote: Enumerating objects: 5, done.  
remote: Counting objects: 100% (5/5), done.  
remote: Compressing objects: 100% (3/3), done.  
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0  
Unpacking objects: 100% (3/3), 365 bytes | 4.00 KiB/s, done.  
From M:/projects/math_modeling  
644d4d6..5ecd808 master -> origin/master  
PS M:\projects\cloned> git log --all  
commit 5ecd808e7dacc4116009bf36615b5416cd2d975e (origin/master, origin/HEAD)  
Author: MstislavRomanovski <batle.05.frog@gmail.com>  
Date: Thu Feb 8 14:11:06 2024 +0300  
  
    Changed README in origin repo  
  
commit 644d4d6b7b5efb3bc3b4486174778d1054dd0cd5 (HEAD -> master, origin/style)  
Author: MstislavRomanovski <batle.05.frog@gmail.com>  
Date: Thu Feb 8 13:27:26 2024 +0300  
  
    Updated index.html  
  
commit e0c9a12973bfc370a31c35a8a79faf5e1d729a7  
Author: MstislavRomanovski <batle.05.frog@gmail.com>  
Date: Thu Feb 8 13:26:04 2024 +0300  
  
    Hello uses style.css  
  
commit 1093debb34652e76947dab7db91848d54b368a88  
Author: MstislavRomanovski <batle.05.frog@gmail.com>  
Date: Thu Feb 8 13:23:39 2024 +0300  
  
    Added css stylesheet  
  
commit 88df991874ce361bcf2ccec723838d3d8e8777c  
Author: MstislavRomanovski <batle.05.frog@gmail.com>  
Date: Thu Feb 8 13:31:44 2024 +0300  
  
    Added README  
  
commit 61bfc3f852c98ef6e368b1652cc2736daaf8fa3d  
Author: MstislavRomanovski <batle.05.frog@gmail.com>  
Date: Thu Feb 8 12:50:18 2024 +0300  
  
    Added index.html  
  
commit 1aac232c934f8d63a75d2fc926d9688b2747ca56  
PS M:\projects\cloned> cat README.md
```

(Скриншот 34)

1.30 Изменение оригинального репозитория - 1.30.1 Внесение в оригинальный репозиторий hello - 1.30.2 Извлечение изменений - 1.30.3 Проверка README.md

```

PS M:\projects\cloned> cat README.md
PS M:\projects\cloned> git merge origin/master
Updating 644d4d6..5ecd808
Fast-forward
 README.md | 1 +
 1 file changed, 1 insertion(+)
PS M:\projects\cloned> cat README.md
This is the Hello World example from the git tutorial.
PS M:\projects\cloned> git branch --track style origin/style
branch 'style' set up to track 'origin/style'.
PS M:\projects\cloned> git branch -a
* master
  style
remotes/origin/HEAD -> origin/master
remotes/origin/master
remotes/origin/style
PS M:\projects\cloned> git log --max-count=2
commit 5ecd808e7dacc4116009bf36615b5416cd2d975e (HEAD -> master, origin/master, origin/HEAD)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 14:11:06 2024 +0300

    Changed README in origin repo

commit 644d4d6b7b5efb3bc3b4486174778d1054dd0cd5 (origin/style, style)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:27:26 2024 +0300

```

(Скриншот 35)

1.31 Слияние извлеченных изменений - 1.31.1 Слив изменений в master - 1.31.1 Про-
верка README.md

```

PS M:\projects\cloned> cat README.md
PS M:\projects\cloned> git merge origin/master
Updating 644d4d6..5ecd808
Fast-forward
 README.md | 1 +
 1 file changed, 1 insertion(+)
PS M:\projects\cloned> cat README.md
This is the Hello World example from the git tutorial.
PS M:\projects\cloned> git branch --track style origin/style
branch 'style' set up to track 'origin/style'.
PS M:\projects\cloned> git branch -a
* master
  style
remotes/origin/HEAD -> origin/master
remotes/origin/master
remotes/origin/style
PS M:\projects\cloned> git log --max-count=2
commit 5ecd808e7dacc4116009bf36615b5416cd2d975e (HEAD -> master, origin/master, origin/HEAD)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 14:11:06 2024 +0300

    Changed README in origin repo

commit 644d4d6b7b5efb3bc3b4486174778d1054dd0cd5 (origin/style, style)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:27:26 2024 +0300

```

(Скриншот 36)

1.32 Добавление ветки наблюдения - 1.32 добавление локальной ветки с отслежива-
нием удаленной ветки


```

PS M:\projects\cloned> cat README.md
PS M:\projects\cloned> git merge origin/master
Updating 644d4d6..5ecd808
Fast-forward
 README.md | 1 +
 1 file changed, 1 insertion(+)
PS M:\projects\cloned> cat README.md
This is the Hello World example from the git tutorial.
PS M:\projects\cloned> git branch --track style origin/style
branch 'style' set up to track 'origin/style'.
PS M:\projects\cloned> git branch -a
* master
  style
remotes/origin/HEAD -> origin/master
remotes/origin/master
remotes/origin/style
PS M:\projects\cloned> git log --max-count=2
commit 5ecd808e7dacc4116009bf36615b5416cd2d975e (HEAD -> master, origin/master, origin/HEAD)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 14:11:06 2024 +0300

    Changed README in origin repo

commit 644d4d6b7b5efb3bc3b4486174778d1054dd0cd5 (origin/style, style)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:27:26 2024 +0300

```

(Скриншот 37)

1.33 Чистый репозиторий

```

PS M:\projects\cloned> cd M:\projects\
PS M:\projects> git clone --bare math_modeling math_modeling.git
Cloning into bare repository 'math_modeling.git'...
done.
PS M:\projects> cd .\math_modeling\
PS M:\projects\math_modeling> git remote add shared ../hello.git
PS M:\projects\math_modeling> git checkout master
Already on 'master'
M
 README.md
PS M:\projects\math_modeling> git add README.md
PS M:\projects\math_modeling> git commit -m "Added shared comment to readme"
[master 048f10e] Added shared comment to readme
 1 file changed, 2 insertions(+), 1 deletion(-)

```

(Скриншот 38)

1.34 Добавление удаленного репозитория

```

PS M:\projects\cloned> cat README.md
PS M:\projects\cloned> git merge origin/master
Updating 644d4d6..5ecd808
Fast-forward
 README.md | 1 +
 1 file changed, 1 insertion(+)
PS M:\projects\cloned> cat README.md
This is the Hello World example from the git tutorial.
PS M:\projects\cloned> git branch --track style origin/style
branch 'style' set up to track 'origin/style'.
PS M:\projects\cloned> git branch -a
* master
  style
remotes/origin/HEAD -> origin/master
remotes/origin/master
remotes/origin/style
PS M:\projects\cloned> git log --max-count=2
commit 5ecd808e7dacc4116009bf36615b5416cd2d975e (HEAD -> master, origin/master, origin/HEAD)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 14:11:06 2024 +0300

    Changed README in origin repo

commit 644d4d6b7b5efb3bc3b4486174778d1054dd0cd5 (origin/style, style)
Author: MstislavRomanovski <batle.05.frog@gmail.com>
Date: Thu Feb 8 13:27:26 2024 +0300

```

(Скриншот 39)

1.37 Отправка изменений

```

PS M:\projects\math_modeling> git remote remove shared
PS M:\projects\math_modeling> git remote -d shared ../math_modeling.git
error: unknown switch 'd'
usage: git remote [-v | --verbose]
or: git remote add [-t <branch>] [-m <master>] [-f] [--tags | --no-tags] [--mirror=<fetch|push>] <name> <url>
or: git remote rename [--[no-]progress] <old> <new>
or: git remote remove <name>
or: git remote set-head <name> (-a | --auto | -d | --delete | <branch>)
or: git remote [-v | --verbose] show [-n] <name>
or: git remote prune [-n | --dry-run] <name>
or: git remote [-v | --verbose] update [-p | --prune] [(<group> | <remote>)...]
or: git remote set-branches [--add] <name> <branch>...
or: git remote get-url [--push] [--all] <name>
or: git remote set-url [--push] <name> <newurl> [<oldurl>]
or: git remote set-url --add <name> <newurl>
or: git remote set-url --delete <name> <url>

    -v, --verbose            be verbose; must be placed before a subcommand

PS M:\projects\math_modeling> git remote add shared ../math_modeling.git
PS M:\projects\math_modeling> git push shared master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 423 bytes | 423.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To ../math_modeling.git
 5ecd808..048f10e master -> master
PS M:\projects\math_modeling>

```

(Скриншот 40)

1.38 Извлечение общих изменений

```
Please make sure you have the correct access rights
and the repository exists.
PS M:\projects\cloned> git remote add shared ../math_modeling.git
PS M:\projects\cloned> git pull shared master
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 403 bytes | 2.00 KiB/s, done.
From ../math_modeling
 * branch          master      -> FETCH_HEAD
 * [new branch]     master      -> shared/master
Updating 5ecd808..048f10e
Fast-forward
 README.md | 3 ++-
 1 file changed, 2 insertions(+), 1 deletion(-)
PS M:\projects\cloned> cat README.md
This is the Hello World example from the git tutorial.
(CHANGED IN ORIGINAL AND PUSHED TO SHARED)
PS M:\projects\cloned> █
```

(Скриншот 41)