Министерство науки и высшего образования Российской Федерации Федеральное государственное бюджетное образовательное учреждение высшего образования «Рязанский государственный радиотехнический университет имени В.Ф. Уткина»

Рязанский станкостроительный колледж

Отчёт о практической работе №6 Git Bash

МДК

«02. 02»

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#### Основная часть

**Цель работы:** Полная готовность к работе с Git.

## Ход выполнения работы:

Задачи:

- 1. Финальные приготовления
- 1.1. Установка имени и почты

```
исп-32@lab30-04 MINGW64 ~
$ git config --global user.name "JuliaSherstneva"
исп-32@lab30-04 MINGW64 ~
$ git config --global user.email "emili.dan528@gmail.com"
```

1.2. Имя ветки по умолчанию

```
исп-32@lab30-04 MINGW64 ~
$ git config --global init.defaultBranch main
```

1.3. Корректная обработка окончаний строк

```
исп-32@lab30-04 MINGW64 ~
$ git config --global core.autocrlf true
исп-32@lab30-04 MINGW64 ~
$ git config --global core.safecrlf warn
```

- 2. Создание проекта
- 2.1. Создайте страницу «Hello, World»

```
исп-32@lab30-04 MINGW64 ~

$ mkdir work

исп-32@lab30-04 MINGW64 ~

$ cd work

исп-32@lab30-04 MINGW64 ~/work

$ touch hello.html
```

2.2. Создайте репозиторий

```
исп-32@lab30-04 MINGW64 ~/work
$ git init
Initialized empty Git repository in C:/Users/исп-32/work/.git/
```

2.3. Добавьте страницу в репозиторий

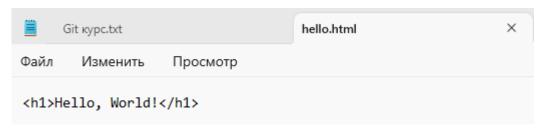
```
wcn-32@lab30-04 MINGW64 ~/work (main)
$ git add hello.html

wcn-32@lab30-04 MINGW64 ~/work (main)
$ git commit -m "Initial Commit"
[main (root-commit) 910c122] Initial Commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 hello.html
```

- 3. Проверка состояния
- 3.1. Проверьте состояние репозитория

```
ucn-32@lab30-04 MINGW64 ~/work (main)
$ git status
On branch main
nothing to commit, working tree clean
```

- 4. Внесение изменений
- 4.1. Измените страницу «Hello, World»



4.2. Проверьте состояние

```
ucn-32@lab30-04 MINGW64 ~/work (main)

$ git status
On branch main
Changes not staged for commit:
   (use "git add <file>..." to update what will be committed)
   (use "git restore <file>..." to discard changes in working directory)
        modified: hello.html

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

- 5. Индексация изменений
- 5.1. Добавьте изменения

- 6. Индексация и коммит
- 6.1. Создаем новые файлы

```
исп-32@lab30-04 MINGW64 ~/work (main)
$ touch a.html

исп-32@lab30-04 MINGW64 ~/work (main)
$ touch b.html

исп-32@lab30-04 MINGW64 ~/work (main)
$ touch c.html
```

## 6.2. Индексируем файлы

```
ucn-32@lab30-04 MINGW64 ~/work (main)

$ git add a.html

ucn-32@lab30-04 MINGW64 ~/work (main)

$ git add b.html

ucn-32@lab30-04 MINGW64 ~/work (main)

$ git commit -m "Changes for a and b"

[main 2bb643a] Changes for a and b

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

create mode 100644 a.html

create mode 100644 b.html

ucn-32@lab30-04 MINGW64 ~/work (main)

$ git add c.html

ucn-32@lab30-04 MINGW64 ~/work (main)

$ git commit -m "Unrelated change to c"

[main e0fbf2d] Unrelated change to c

1 file changed, 0 insertions(+), 0 deletions(-)

create mode 100644 c.html
```

#### 7. Коммит изменений

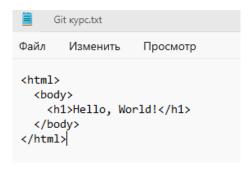
#### 7.1. Закоммитьте изменения

```
исп-32@lab30-04 MINGW64 ~/work (main)
$ git commit
On branch main
nothing to commit, working tree clean
```

## 7.2. Проверьте состояние

```
исп-32@lab30-04 MINGW64 ~/work (main)
$ git status
On branch main
nothing to commit, working tree clean
```

- 8. Изменения, а не файлы
- 8.1. Первое изменение: Добавьте стандартные теги страницы



# 8.2. Добавьте это изменение

```
ИСп-32@lab30-04 MINGW64 ~/work (main)
$ git add hello.html
```

8.3. Второе изменение: Добавьте заголовки HTML

```
Git курс.txt

Файл Изменить Просмотр

<html>
    <head>
    </head>
    <body>
        <h1>Hello, World!</h1>
      </body>
    </html>
```

## 8.4. Проверьте текущий статус

```
WCn-32@lab30-04 MINGW64 ~/work (main)
$ git status
On branch main
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
```

#### 8.5. Коммит

# 8.6. Добавьте второе изменение

## 8.7. Сделайте коммит второго изменения

```
MCn-32@lab30-04 MINGW64 ~/work (main)
$ git commit -m "Added HTML header"
[main 5ca2275] Added HTML header
1 file changed, 2 insertions(+)
```

## 9. История

## 9.1. Получение списка произведенных изменений

```
MCn-32@lab30-04 MINGW64 ~/work (main)
$ git add .
ИСп-32@lab30-04 MINGW64 ~/work (main)
commit 5ca2275d7ea9497dc95e7340069f2eda8d9563d6 (HEAD -> main)
Author: JuliaSherstneva <emili.dan528@gmail.com>
       Mon Oct 20 17:28:22 2025 +0300
    Added HTML header
commit 35ccf3e4e77436c6a53429d5460fa1b1ecf19506
commit 5ca2275d7ea9497dc95e7340069f2eda8d9563d6 (HEAD -> main)
Author: JuliaSherstneva <emili.dan528@gmail.com>
Date: Mon Oct 20 17:28:22 2025 +0300
   Added HTML header
commit 35ccf3e4e77436c6a53429d5460fa1b1ecf19506
Author: JuliaSherstneva <emili.dan528@gmail.com>
Date: Mon Oct 20 17:26:56 2025 +0300
    Added standard HTML page tags
  nmit eOfbf2d5f8a1647b00f23585f9a5f416e03d9c6b
Author: JuliaSherstneva <emili.dan528@gmail.com>
Date: Fri Oct 10 16:17:07 2025 +0300
   Unrelated change to c
   mit 2bb643a56c73d7f6d7c519a215f48a3c7c887679
Author: JuliaSherstneva <emili.dan528@gmail.com>
Date: Fri Oct 10 16:16:52 2025 +0300
   Changes for a and b
commit 6fd4339dc4cf3db98f335e92f32e6e5cd7bac74f
Author: JuliaSherstneva <emili.dan528@gmail.com>
       Fri Oct 10 16:12:39 2025 +0300
Date:
   Changes for a and b
commit 910c1220cc37d6866004c49e5208f0fd0e43ac8b
Author: JuliaSherstneva <emili.dan528@gmail.com>
Date: Fri Oct 10 16:00:31 2025 +0300
   Initial Commit
```

#### 9.2. Однострочная история

```
MCn-32@lab30-04 MINGW64 ~/work (main)

$ git log --pretty=oneline
5ca2275d7ea9497dc95e7340069f2eda8d9563d6 (HEAD -> main) Added HTML header
35ccf3e4e77436c6a53429d5460falb1ecf19506 Added standard HTML page tags
e0fbf2d5f8a1647b00f23585f9a5f416e03d9c6b Unrelated change to c
2bb643a56c73d7f6d7c519a215f48a3c7c887679 Changes for a and b
6fd4339dc4cf3db98f335e92f32e6e5cd7bac74f Changes for a and b
910c1220cc37d6866004c49e5208f0fd0e43ac8b Initial Commit
```

#### 9.3. Изощряемся

```
MCn-32@lab30-04 MINGW64 ~/work (main)

$ git log --all --pretty=format:"%h %cd %s (%an)" --since="7 days ago"

5ca2275 Mon Oct 20 17:28:22 2025 +0300 Added HTML header (JuliaSherstneva)

35ccf3e Mon Oct 20 17:26:56 2025 +0300 Added standard HTML page tags (JuliaSherstneva)
```

## 9.4. Конечный формат лога

```
MCn-32@lab30-04 MINGW64 ~/work (main)
$ git log --pretty=format:"%h %ad | %s%d [%an]" --date=short
5ca2275 2025-10-20 | Added HTML header (HEAD -> main) [JuliaSherstneva]
35ccf3e 2025-10-20 | Added standard HTML page tags [JuliaSherstneva]
e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]
2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]
6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

# 9.5. Настройка формата вывода истории по умолчанию

```
MCn-32@lab30-04 MINGW64 ~/work (main)
$ git config --global format.pretty '%h %ad | %s%d [%an]'

MCn-32@lab30-04 MINGW64 ~/work (main)
$ git config --global log.date short
```

## 10. Получение старых версий

#### 10.1. Получите хеши предыдущих коммитов

```
VCn-32@lab30-04 MINGW64 ~/work (main)

$ git log

5ca2275 2025-10-20 | Added HTML header (HEAD -> main) [JuliaSherstneva]

35ccf3e 2025-10-20 | Added standard HTML page tags [JuliaSherstneva]

e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]

2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]

6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]

910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

## 10.2. Проверьте содержимое файла

```
MCn-32@lab30-04 MINGW64 ~/work (main)

$ git checkout ^C

MCn-32@lab30-04 MINGW64 ~/work (main)

$ git checkout 910c122

Note: switching to '910c122'.

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 910c122 Initial Commit

MCn-32@lab30-04 MINGW64 ~/work ((910c122...))

$ cat hello.html
```

## 10.3. Вернитесь к последней версии в ветке main

```
MCn-32@lab30-04 MINGW64 ~/work ((910c122...))
$ git switch main
Previous HEAD position was 910c122 Initial Commit
Switched to branch 'main'

MCn-32@lab30-04 MINGW64 ~/work (main)
$ cat hello.html
<html>
    <head>
        </head>
        </body>
        <h1>Hello, World!</h1>
        </body>
        </html>
```

### 11. Создание тегов версий

## 11.1. Создайте тег первой версии

```
NCTT-32@lab30-04 MINGW64 ~/work (main)
$ git tag v1

NCTT-32@lab30-04 MINGW64 ~/work (main)
$ git log
$ ca2275 2025-10-20 | Added HTML header (HEAD -> main, tag: v1) [JuliaSherstneva]
35ccf3e 2025-10-20 | Added standard HTML page tags [JuliaSherstneva]
e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]
2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]
6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

#### 11.2. Теги для предыдущих версий

```
ИСП-32@lab30-04 MINGW64 ~/work (main)
$ 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 35ccf3e Added standard HTML page tags
/СП-32@lab30-04 MINGW64 ~/work ((35ccf3e...))
$ cat hello.html
<html>
  <body>
    <h1>Hello, World!</h1>
  </body>
</html>
```

### 11.3. Сделаем ее версией v1-beta.

```
WCN-32@lab30-04 MINGW64 ~/work ((35ccf3e...))
$ git tag v1-beta

WCN-32@lab30-04 MINGW64 ~/work ((v1-beta))
$

WCN-32@lab30-04 MINGW64 ~/work ((v1-beta))
$ git log
35ccf3e 2025-10-20 | Added standard HTML page tags (HEAD, tag: v1-beta) [JuliaSherstneva] e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva] 2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva] 6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva] 910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

#### 11.4. Переключение по имени тега

```
MCN-32@lab30-04 MINGW64 ~/work ((v1-beta))

$ git checkout v1
Previous HEAD position was 35ccf3e Added standard HTML page tags
HEAD is now at 5ca2275 Added HTML header

MCN-32@lab30-04 MINGW64 ~/work ((v1))

$ git checkout v1-beta
Previous HEAD position was 5ca2275 Added HTML header
HEAD is now at 35ccf3e Added standard HTML page tags
```

#### Просмотр тегов с помощью команды tag

```
MCΠ-32@lab30-04 MINGW64 ~/work ((v1-beta))
$ git tag
v1
v1-beta
```

### 11.6. Просмотр Тегов в логах

```
MCN-32@lab30-04 MINGW64 ~/work ((v1-beta))

$ git log main --all

5ca2275 2025-10-20 | Added HTML header (tag: v1, main) [JuliaSherstneva]

35ccf3e 2025-10-20 | Added standard HTML page tags (HEAD, tag: v1-beta) [JuliaSherstneva]

e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]

2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]

6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]

910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

#### 12.Отмена локальных изменений (до индексации)

#### 12.1. Переключитесь на ветку main

```
MCN-32@lab30-04 MINGW64 ~/work ((v1-beta))
$ git switch main
Previous HEAD position was 35ccf3e Added standard HTML page tags
Switched to branch 'main'
```

#### 12.2. Измените hello.html

```
Файл Изменить Просмотр

<html>
    <head>
    </head>
    <body>
        <h1>Hello, World!</h1>
        <!-- This is a bad comment. We want to revert it. -->
        </body>
    </html>
```

12.3. Проверьте состояние

```
VCN-32@lab30-04 MINGW64 ~/work (main)

$ git status
On branch main
Changes not staged for commit:
   (use "git add <file>..." to update what will be committed)
   (use "git restore <file>..." to discard changes in working directory)
        modified: hello.html

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

12.4. Отмена изменений в рабочем каталоге

```
MCN-32@lab30-04 MINGW64 ~/work (main)
$ git restore hello.html

MCN-32@lab30-04 MINGW64 ~/work (main)
$ git status
On branch main
nothing to commit, working tree clean

MCN-32@lab30-04 MINGW64 ~/work (main)
$ cat hello.html
<html>
    <head>
    </head>
    <head>
    <head>
```

- 13. Отмена проиндексированных изменений (перед коммитом)
  - 13.1. Измените файл и проиндексируйте изменения

```
(3)
 Файл
                      Просмотр
         Изменить
 <html>
   <head>
      <!-- This is an unwanted but staged comment -->
   <body>
      <h1>Hello, World!</h1>
   </body>
 </html>
Строка 8, столбец 8 131 символ
                              100%
                                      Windows (CR UTF-8
 СП-32@lab30-04 MINGW64 ~/work (main)
$ git add hello.html
```

## 13.2. Проверьте состояние

### 13.3. Восстановление индекса

```
NCN-32@lab30-04 MINGW64 ~/work (main)
$ git restore --staged hello.html
```

# 13.4. Восстановление рабочего каталога

```
MCN-32@lab30-04 MINGW64 ~/work (main)
$ git restore hello.html

MCN-32@lab30-04 MINGW64 ~/work (main)
$ git status
On branch main
nothing to commit, working tree clean
```

### 14. Отмена коммитов

# 14.1. Измените файл и сделайте коммит

```
Файл
            Изменить
                             Просмотр
  <html>
    <head>
    </head>
    <body>
       <h1>Hello, World!</h1>
       <!-- This is an unwanted but committed
  change -->
    </body>
  </html>
Строка 9. столбец 1 134 символа 100%
                                                  Windows (CR
$ git add hello.html
ИСП-32@lab30-04 MINGW64 <mark>~/work (main)</mark>
$ git commit -m "Oops, we didn't want this commit'
 main bc16679] Oops, we didn't want this commit
1 file changed, 2 insertions(+), 1 deletion(-)
```

14.2. Сделайте коммит с новыми изменениями, отменяющими предыдущие

```
[main ad604fb] Revert "Oops, we didn't want this commit"
1 file changed, 1 insertion(+), 2 deletions(-)
```

14.3. Проверьте лог

```
VCN-32@lab30-04 MINGW64 ~/work (main)

$ git log
ad604fb 2025-10-21 | Revert "Oops, we didn't want this commit" (HEAD -> main) [JuliaSherstneva]
bc16679 2025-10-21 | Oops, we didn't want this commit [JuliaSherstneva]
5ca2275 2025-10-20 | Added HTML header (tag: v1) [JuliaSherstneva]
35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]
2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]
6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

- 15. Удаление коммитов из ветки
  - 15.1. Проверьте нашу историю

```
VCN-32@lab30-04 MINGW64 ~/work (main)

$ git log
ad604fb 2025-10-21 | Revert "Oops, we didn't want this commit" (HEAD -> main) [JuliaSherstneva]
bc16679 2025-10-21 | Oops, we didn't want this commit [JuliaSherstneva]
5ca2275 2025-10-20 | Added HTML header (tag: v1) [JuliaSherstneva]
35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]
2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]
6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

15.2. Для начала отметьте эту ветку

```
WCN-32@lab30-04 MINGW64 ~/work (main)
$ git tag oops

WCN-32@lab30-04 MINGW64 ~/work (main)
$ git log
ad604fb 2025-10-21 | Revert "Oops, we didn't want this commit" (HEAD -> main, tag: oops) [JuliaSherstneva]
bc16679 2025-10-21 | Oops, we didn't want this commit [JuliaSherstneva]
5ca2275 2025-10-20 | Added HTML header (tag: v1) [JuliaSherstneva]
35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]
2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]
6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

## 15.3. Сброс к коммиту, предшествующему оорѕ

```
WCN-32@lab30-04 MINGW64 ~/work (main)
$ git reset --hard v1
HEAD is now at 5ca2275 Added HTML header

WCN-32@lab30-04 MINGW64 ~/work (main)
$ git log
5ca2275 2025-10-20 | Added HTML header (HEAD -> main, tag: v1) [JuliaSherstneva]
35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]
2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]
6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

### 15.4. Ничего никогда не теряется

```
WCN-32@lab30-04 MINGW64 ~/work (main)
$ git log --all
ad604fb 2025-10-21 | Revert "Oops, we didn't want this commit" (tag: oops) [JuliaSherstneva]
bc16679 2025-10-21 | Oops, we didn't want this commit [JuliaSherstneva]
5ca2275 2025-10-20 | Added HTML header (HEAD -> main, tag: v1) [JuliaSherstneva]
35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]
2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]
6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

#### 16. Удаление тега оорѕ

#### 16.1. Удаление тега оорѕ

```
WCN-32@lab30-04 MINGW64 ~/work (main)
$ git tag -d oops
Deleted tag 'oops' (was ad604fb)

WCN-32@lab30-04 MINGW64 ~/work (main)
$ git log --all
$ca2275 2025-10-20 | Added HTML header (HEAD -> main, tag: v1) [JuliaSherstneva]
35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]
2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]
6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

#### 17. Внесение изменений в коммиты

#### 17.1. Измените страницу, а затем сделайте коммит

```
Файл
            Изменить
                             Просмотр
  <!-- Author: Julia -->
  <html>
     <head>
     </head>
     <body>
                                                                              JuliaSherstneva]
        <h1>Hello, World!</h1>
                                                                              eva]
                                                                              a) [JuliaSherstneva]
     </body>
  </html>
Строка 1, столбец 15 102 символа 100% Windows (CF UTF-8
  git add hello.html
MCN-32@lab30-04 MINGW64 ~/work (main)
$ git commit -m "Added copyright statement"
[main Odceaa4] Added copyright statement
 1 file changed, 1 insertion(+), 1 deletion(-)
ИСП-32@lab30-04 MINGW64 ~/work (main)
$ git log
Odceaa4 2025-10-21 | Added copyright statement (HEAD -> main) [JuliaSherstneva]
                         Added copyright statement [JuliaSherstneva]

Added HTML header (tag: v1) [JuliaSherstneva]

Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]

Unrelated change to c [JuliaSherstneva]
93365e3 2025-10-21 |
5ca2275 2025-10-20
35ccf3e 2025-10-20
e0fbf2d 2025-10-10
2bb643a 2025-10-10
                         Changes for a and b [JuliaSherstneva]
                         Changes for a and b [JuliaSherstneva]
6fd4339 2025-10-10 |
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

## 17.2. Ой... необходим email

```
<!-- Author: Julia (emili.dan528@gmail.com) -->
<html>
   <head>
   </head>
   <body>
        <h1>Hello, World!</h1>
   </body>
   </html>
```

## 17.3. Измените предыдущий коммит

```
NCN-32@lab30-04 MINGW64 ~/work (main)

$ git add hello.html

NCN-32@lab30-04 MINGW64 ~/work (main)

$ git commit --amend -m "Added copyright statement with email"

[main 920dc15] Added copyright statement with email

Date: Tue Oct 21 15:44:22 2025 +0300

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

#### 17.4. Просмотр истории

```
MCN-32@lab30-04 MINGW64 ~/work (main)

$ git log

920dc15 2025-10-21 | Added copyright statement with email (HEAD -> main) [JuliaSherstneva]

93365e3 2025-10-21 | Added copyright statement [JuliaSherstneva]

5ca2275 2025-10-20 | Added HTML header (tag: v1) [JuliaSherstneva]

35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]

e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]

2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]

6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]

910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

#### 18. Создание ветки

#### 18.1. Создайте ветку

```
MCN-32@lab30-04 MINGW64 ~/work (style)
$ git switch -c style
fatal: a branch named 'style' already exists

MCN-32@lab30-04 MINGW64 ~/work (style)
$ git status
On branch style
nothing to commit, working tree clean
```

# 18.2. Добавьте файл стилей style.css

```
VCN-32@lab30-04 MINGW64 ~/work (style)
$ touch style.css

VCN-32@lab30-04 MINGW64 ~/work (style)
$ git add style.css

VCN-32@lab30-04 MINGW64 ~/work (style)
$ git commit -m "Added css stylesheet"
[style 871bd3b] Added css stylesheet
1 file changed, 3 insertions(+)
create mode 100644 style.css
```

18.3. Измените hello.html, чтобы он использовал style.css.

```
<!-- Author: Julia (emili.dan528@gmail.com) -->
 <html>
    <head>
       <link type="text/css" rel="stylesheet" media="all" href="style.css" />
    </head>
    <body>
       <h1>Hello, World!</h1>
    </body>
 </html>
  Строка 9, столбец 8 202 символа
                                                                            100%
                                                                                        Windows (CRLF)
 ICN-32@lab30-04 MINGW64 ~/work (style)
$ git add hello.html
MCN-32@lab30-04 MINGW64 ~/work (style)
$ git commit -m "Included stylesheet into hello.html"
[style 04f2d2c] Included stylesheet into hello.html
1 file changed, 1 insertion(+)
```

#### 19. Переключение веток

19.1. Теперь в вашем проекте есть две ветки:

```
WCN-32@lab30-04 MINGW64 ~/work (style)
$ git log --all
04f2d2c 2025-10-21 | Included stylesheet into hello.html (HEAD -> style) [JuliaSherstneva]
871bd3b 2025-10-21 | Added css stylesheet [JuliaSherstneva]
920dc15 2025-10-21 | Added copyright statement with email (main) [JuliaSherstneva]
93365e3 2025-10-21 | Added copyright statement [JuliaSherstneva]
5ca2275 2025-10-20 | Added HTML header (tag: v1) [JuliaSherstneva]
35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]
2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]
6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

### 19.2. Переключение на ветку таіп

## 19.3. Вернемся к ветке style

## 20. Перемещение файлов

20.1. Просмотр истории изменений в конкретном файле

```
MCNT-32@lab30-04 MINGW64 ~/work (style)
$ git log hello.html
04f2d2c 2025-10-21 | Included stylesheet into hello.html (HEAD -> style) [JuliaSherstneva]
920dc15 2025-10-21 | Added copyright statement with email (main) [JuliaSherstneva]
93365e3 2025-10-21 | Added copyright statement [JuliaSherstneva]
5ca2275 2025-10-20 | Added HTML header (tag: v1) [JuliaSherstneva]
35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]

MCNT-32@lab30-04 MINGW64 ~/work (style)
$ git log style.css
871bd3b 2025-10-21 | Added css stylesheet [JuliaSherstneva]
```

20.2. Просмотр различий для конкретного файла

```
MCN-32@lab30-04 MINGW64 ~/work (style)
$ git show v1
5ca2275 2025-10-20 | Added HTML header (tag: v1) [JuliaSherstneva]

diff --git a/hello.html b/hello.html
index 103d1db..807ed91 100644
---- a/hello.html
+++ b/hello.html
@@ -1,4 +1,6 @@
<html>
+ </head>
+ </head>
+ </head>
<ht>> + </head>
<ht>> + </head>
<ht>> </body>
</ht>
</hul>
```

20.3. Переименуйте файл hello.html

```
WCN-32@lab30-04 MINGW64 ~/work (style)
$ mv hello.html index.html

WCN-32@lab30-04 MINGW64 ~/work (style)
$ git status
On branch style
Changes not staged for commit:
   (use "git add/rm <file>..." to update what will be committed)
   (use "git restore <file>..." to discard changes in working directory)
        deleted: hello.html

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

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

#### 20.4. Добавим его в индекс:

## 20.5. Переместите style.css безопасным способом

```
MCN-32@lab30-04 MINGW64 ~/work (style)
$ mkdir css

MCN-32@lab30-04 MINGW64 ~/work (style)
$ git mv style.css css/style.css

MCN-32@lab30-04 MINGW64 ~/work (style)
$ git status
On branch style
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        renamed: style.css -> css/style.css
        renamed: hello.html -> index.html
```

#### 20.6. Просмотр истории файла до его перемещения

```
NCN-32@lab30-04 MINGW64 ~/work (style)
$ git commit -m "Renamed hello.html; moved style.css"
[style efd85c8] Renamed hello.html; moved style.css
2 files changed, 0 insertions(+), 0 deletions(-)
rename style.css => css/style.css (100%)
rename hello.html => index.html (100%)

NCN-32@lab30-04 MINGW64 ~/work (style)
$ git log css/style.css
efd85c8 2025-10-21 | Renamed hello.html; moved style.css (HEAD -> style) [JuliaSherstneva]

NCN-32@lab30-04 MINGW64 ~/work (style)
$ git log --follow css/style.css
efd85c8 2025-10-21 | Renamed hello.html; moved style.css (HEAD -> style) [JuliaSherstneva]
87lbd3b 2025-10-21 | Added css stylesheet [JuliaSherstneva]
```

#### 21. Изменения в ветке main

### 21.1. Создайте файл README



#### 21.2. Сделайте коммит файла README в ветку main

```
MCN-32@lab30-04 MINGW64 ~/work (style)
$ git switch main
Switched to branch 'main'

MCN-32@lab30-04 MINGW64 ~/work (main)
$ git add README
fatal: pathspec 'README' did not match any files

MCN-32@lab30-04 MINGW64 ~/work (main)
$ git add .

MCN-32@lab30-04 MINGW64 ~/work (main)
$ git add README.cs

MCN-32@lab30-04 MINGW64 ~/work (main)
$ git commit -m "Added README"
[main 4785e98] Added README
1 file changed, 1 insertion(+)
create mode 100644 README.cs
```

#### 22. Просмотр отличающихся веток

## 22.1. Просмотрите текущие ветки

```
MCII-32@lab30-04 MINGW64 ~/work (main)
$ git log --all --graph
* 4785e98 2025-10-21 | Added README (HEAD -> main) [JuliaSherstneva]
| * efd85c8 2025-10-21 | Renamed hello.html; moved style.css (style) [JuliaSherstneva]
| * 04f2d2c 2025-10-21 | Included stylesheet into hello.html [JuliaSherstneva]
| * 871bd3b 2025-10-21 | Added css stylesheet [JuliaSherstneva]

* 920dc15 2025-10-21 | Added copyright statement with email [JuliaSherstneva]

* 93365e3 2025-10-21 | Added copyright statement [JuliaSherstneva]

* 5ca2275 2025-10-20 | Added HTML header (tag: v1) [JuliaSherstneva]

* 35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]

* e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]

* 2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]

* 6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]

* 910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

#### 23. Слияние

#### 23.1. Слияние веток

```
MCN-32@lab30-04 MINGW64 ~/work (main)

$ git commit -m "Added README"

[main 4785e98] Added README

1 file changed, 1 insertion(+)

create mode 100644 README.cs
```

```
Merge made by the 'ort' strategy.

README.cs | 1 +

1 file changed, 1 insertion(+)
create mode 100644 README.cs

WCN-32@lab30-04 MINGW64 ~/work (style)

$ git log --all --graph

* d678a16 2025-10-21 | Merge branch 'main' into style (HEAD -> style) [JuliaSherstneva]

| * 4785e98 2025-10-21 | Added README (main) [JuliaSherstneva]

* | efd85c8 2025-10-21 | Renamed hello.html; moved style.css [JuliaSherstneva]

* | o4f2d2c 2025-10-21 | Included stylesheet into hello.html [JuliaSherstneva]

* | 871bd3b 2025-10-21 | Added cosyright statement with email [JuliaSherstneva]

* 920dc15 2025-10-21 | Added copyright statement [JuliaSherstneva]

* 93365e3 2025-10-21 | Added copyright statement [JuliaSherstneva]

* 5ca2275 2025-10-20 | Added HTML header (tag: v1) [JuliaSherstneva]

* 35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]

* e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]

* 2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]

* 6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]

* 6fd4339 2025-10-10 | Initial Commit [JuliaSherstneva]
```

#### 24. Создание конфликта

## 24.1. Вернитесь в таіп и создайте конфликт

```
<!-- Author: Julia (emili.dan528@gmail.com) -->
  <html>
    <head>
      <title>Hello World Page</title>
    </head>
    <body>
      <h1>Hello, World!</h1>
      Let's learn Git together.
    </body>
  </html>
   Строка 10, столбец 8 200 символов
       lab30-04 MINGW64 ~/work (main)
$ git add hello.html
ИСП-32@lab30-04 MINGW64 ~/work (main)
$ git commit -m "Added meta title"
[main 9aacd5a] Added meta title
1 file changed, 2 insertions(+)
```

#### 24.2. Просмотр веток

#### 25. Разрешение конфликтов

#### 25.1. Слияние main в ветку style

```
MCN-32@lab30-04 MINGW64 ~/work (main)
$ git switch style
Switched to branch 'style'

MCN-32@lab30-04 MINGW64 ~/work (style)
$ git merge main
Auto-merging index.html
CONFLICT (content): Merge conflict in index.html
Automatic merge failed; fix conflicts and then commit the result.
```

## 25.2. Посмотрим, что скажет по этому поводу Git:

```
README.cs
                             hello.html
                                                      index.html
                   Просмотр
Файл
        Изменить
k!-- Author: Julia (emili.dan528@gmail.com) -->
<html>
  <head>
<<<<<< HEAD:index.html
    <link type="text/css" rel="stylesheet" media="all" href="style.css" />
    <title>Hello World Page</title>
>>>>> main:hello.html
  </head>
  <body>
    <h1>Hello, World!</h1>
    \text{p}\Let's learn Git together.
  </body>
</html>
```

#### 25.3. Отмена слияния

```
MCN-32@lab30-04 MINGW64 ~/work (style|MERGING)
$ git merge --abort

MCN-32@lab30-04 MINGW64 ~/work (style)
$ git status
On branch style
nothing to commit, working tree clean
```

#### 25.4. Решение конфликта

```
NCN-32@lab30-04 MINGW64 ~/work (style)
$ git merge main
Auto-merging index.html
CONFLICT (content): Merge conflict in index.html
Automatic merge failed; fix conflicts and then commit the result.
```

# 25.5. Отредактируем файл до следующего состояния:

## 25.6. Закоммитьте разрешенный конфликт

```
MCN-32@lab30-04 MINGW64 ~/work (style)
$ git add index.html
MCN-32@lab30-04 MINGW64 ~/work (style)
$ git commit -m "Resolved merge conflict"
[style 3eb565c] Resolved merge conflict
1 file changed, 2 insertions(+)
 ИСП-32@lab30-04 MINGW64 ~/work (style)
$ git status
On branch style
nothing to commit, working tree clean
$ git log --all --graph
   3eb565c 2025-10-24 | Resolved merge conflict (HEAD -> style) [JuliaSherstneva]
d678a16 2025-10-21 | Merge branch 'main' into style [JuliaSherstneva]
      efd85c8 2025-10-21 | Renamed hello.html; moved style.css [JuliaSherstneva] 04f2d2c 2025-10-21 | Included stylesheet into hello.html [JuliaSherstneva] 871bd3b 2025-10-21 | Added css stylesheet [JuliaSherstneva]
       * 9aacd5a 2025-10-21 | Added meta title (main) [JuliaSherstneva]
      4785e98 2025-10-21 | Added README [JuliaSherstneva]
   920dc15 2025-10-21 | Added copyright statement with email [JuliaSherstneva] 93365e3 2025-10-21 | Added copyright statement [JuliaSherstneva]
   5ca2275 2025-10-20
                                     Added HTML header (tag: v1) [JuliaSherstneva]
                                     Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
Unrelated change to c [JuliaSherstneva]
Changes for a and b [JuliaSherstneva]
Changes for a and b [JuliaSherstneva]
   35ccf3e 2025-10-20
e0fbf2d 2025-10-10
   2bb643a 2025-10-10 |
   6fd4339 2025-10-10 | Changes for a and b [JuliaSherst
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

## 26. rebase против merge

#### 27. Сброс ветки style

#### 27.1. Сбросьте ветку style

```
NCN-32@lab30-04 MINGW64 ~/work (style)
$ git switch style
Already on 'style'

MCN-32@lab30-04 MINGW64 ~/work (style)
$ git log --graph
* 3eb565c 2025-10-24 | Resolved merge conflict (HEAD -> style) [JuliaSherstneva]
* d678a16 2025-10-21 | Merge branch 'main' into style [JuliaSherstneva]
| * 4785e98 2025-10-21 | Added README [JuliaSherstneva]
* | efd85c8 2025-10-21 | Renamed hello.html; moved style.css [JuliaSherstneva]
* | 04f2d2c 2025-10-21 | Included stylesheet into hello.html [JuliaSherstneva]
* | 87lbd3b 2025-10-21 | Added css stylesheet [JuliaSherstneva]

* 920dc15 2025-10-21 | Added copyright statement with email [JuliaSherstneva]
* 93365e3 2025-10-21 | Added copyright statement [JuliaSherstneva]
* 55ca2275 2025-10-20 | Added HTML header (tag: v1) [JuliaSherstneva]
* 35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
* 20b643a 2025-10-10 | Unrelated change to c [JuliaSherstneva]
* 2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]
* 6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
* 910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

# 27.2. Давайте сбросим ветку style к этому коммиту

```
MCN-32@lab30-04 MINGW64 ~/work (style)
$ git reset --hard HEAD~2
HEAD is now at efd85c8 Renamed hello.html; moved style.css
```

## 27.3. Проверьте ветку

```
GW64 ~/work (style)
$ git log --graph
  efd85c8 2025-10-21 |
                                 Renamed hello.html; moved style.css (HEAD -> style) [JuliaSherstneva]
  04f2d2c 2025-10-21
                                 Included stylesheet into hello.html [JuliaSherstneva]
                                Added css stylesheet [JuliaSherstneva]
Added copyright statement with email [JuliaSherstneva]
Added copyright statement [JuliaSherstneva]
Added HTML header (tag: v1) [JuliaSherstneva]
  871bd3b 2025-10-21
  920dc15 2025-10-21
93365e3 2025-10-21
  5ca2275 2025-10-20
                                 Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
Unrelated change to c [JuliaSherstneva]
  35ccf3e 2025-10-20
  e0fbf2d 2025-10-10 |
                                Changes for a and b [JuliaSherstneva]
Changes for a and b [JuliaSherstneva]
Initial Commit [JuliaSherstneva]
  2bb643a 2025-10-10 |
  6fd4339 2025-10-10 |
  910c122 2025-10-10
```

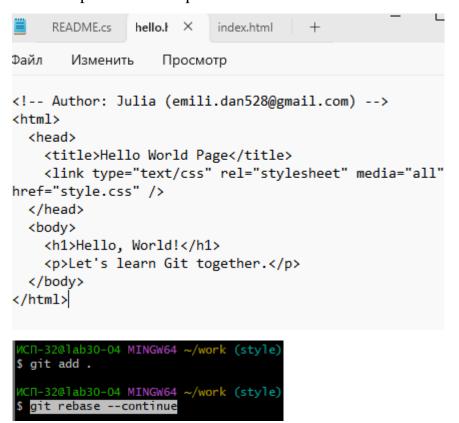
# 28. Перебазирование

#### 28.1. Перебазируем ветку style на ветку main

```
CN-32@lab30-04 MINGW64 ~/work (style)
$ git switch style
Already on 'style'
 ИСП-32@lab30-04 MINGW64 ~/work (style)
$ git rebase main
Auto-merging hello.html
CONFLICT (content): Merge conflict in hello.html
error: could not apply 04f2d2c... Included stylesheet into hello.html
hint: Resolve all conflicts manually, mark them as resolved with
hint: "git add/rm <conflicted_files>", then run "git rebase --continue".
hint: You can instead skip this commit: run "git rebase --skip".
hint: To abort and get back to the state before "git rebase", run "git rebase --abort".
hint: Disable this message with "git config set advice.mergeConflict false"
Could not apply 04f2d2c... # Included stylesheet into hello.html
 MCN-32@lab30-04 MINGW64 ~/work (style|REBASE 2/3)
$ git status
interactive rebase in progress; onto 9aacd5a
Last commands done (2 commands done):
     pick 871bd3b # Added css stylesheet
     pick O4f2d2c # Included stylesheet into hello.html
Next command to do (1 remaining command):
     pick efd85c8 # Renamed hello.html; moved style.css
    (use "git rebase --edit-todo" to view and edit)
 You are currently rebasing branch 'style' on '9aacd5a'.
   (fix conflicts and then run "git rebase --continue")
(use "git rebase --skip" to skip this patch)
(use "git rebase --abort" to check out the original branch)
Unmerged paths:
    (use "git restore --staged <file>..." to unstage)
   (use "git add <file>..." to mark resolution)
both modified: hello.html
no changes added to commit (use "git add" and/or "git commit -a")
```

```
Файл
       Изменить
                   Просмотр
<!-- Author: Julia (emili.dan528@gmail.com) -->
<html>
  <head>
<<<<<< HEAD
    <title>Hello World Page</title>
    <link type="text/css" rel="stylesheet" media="all"</pre>
href="style.css" />
>>>>>> 04f2d2c (Included stylesheet into hello.html)
  </head>
  <body>
    <h1>Hello, World!</h1>
    Let's learn Git together.
  </body>
</html>
```

### 28.2. Разрешение конфликта



[detached HEAD aa4ac6c] Included stylesheet into hello.html 1 file changed, 1 insertion(+) Successfully rebased and updated refs/heads/style.

```
-32@lab30-04 MINGW64 ~/work (style)
$ git status
On branch style
nothing to commit, working tree clean
 MCП-32@lab30-04 MINGW64 ~/work (style)
$ git log --all --graph
  28f90cc 2025-10-21 | Renamed hello.html; moved style.css (HEAD -> style) [JuliaSherstneva]
  aa4ac6c 2025-10-21 | Included stylesheet into hello.html [JuliaSherstneva]
  dda4fe2 2025-10-21 | Added css stylesheet [JuliaSherstneva]
9aacd5a 2025-10-21 | Added meta title (main) [JuliaSherstne
  9aacd5a 2025-10-21 | Added meta title (main) [JuliaSherstneva]
4785e98 2025-10-21 | Added README [JuliaSherstneva]
  920dc15 2025-10-21
                               | Added copyright statement with email [JuliaSherstneva]
                                Added copyright statement [JuliaSherstneva]

Added copyright statement [JuliaSherstneva]

Added HTML header (tag: v1) [JuliaSherstneva]

Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]

Unrelated change to c [JuliaSherstneva]

Changes for a and b [JuliaSherstneva]
  93365e3 2025-10-21
  5ca2275 2025-10-20
35ccf3e 2025-10-20
  e0fbf2d 2025-10-10
  2bb643a 2025-10-10
  6fd4339 2025-10-10
                                 Changes for a and b [JuliaSherstneva]
  910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

## 28.3. Слияние VS перебазирование

#### 29. Слияние в ветку main

## 29.1. Слейте style в main

```
VCTI-32@lab30-04 MINGW64 ~/work (style)
$ git switch main
Switched to branch 'main'

VCTI-32@lab30-04 MINGW64 ~/work (main)
$ git merge style
Updating 9aacd5a..28f90cc
Fast-forward
css/style.css | 3 ++++
hello.html => index.html | 1 +
2 files changed, 4 insertions(+)
create mode 100644 css/style.css
rename hello.html => index.html (72%)
```

### 29.2. Просмотрите логи

```
WCN-32@lab30-04 MINGW64 ~/work (main)
$ git log --all --graph
* 28f90cc 2025-10-21 | Renamed hello.html; moved style.css (HEAD -> main, style) [JuliaSherstneva]
* aa4ac6c 2025-10-21 | Included stylesheet into hello.html [JuliaSherstneva]
* dda4fe2 2025-10-21 | Added css stylesheet [JuliaSherstneva]
* 9aacd5a 2025-10-21 | Added meta title [JuliaSherstneva]
* 4785e98 2025-10-21 | Added README [JuliaSherstneva]
* 920dc15 2025-10-21 | Added copyright statement with email [JuliaSherstneva]
* 93365e3 2025-10-21 | Added copyright statement [JuliaSherstneva]
* 5ca2275 2025-10-21 | Added tTML header (tag: v1) [JuliaSherstneva]
* 35ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
* e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]
* 2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]
* 6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
* 910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

# 30. Клонирование репозиториев

## 30.1. Перейдите в директорию repositories

```
MCП-32@lab30-04 MINGW64 ~/repositories/work (main)
$ cd ..

MCП-32@lab30-04 MINGW64 ~/repositories
$ pwd
/c/Users/исп-32/repositories

MCП-32@lab30-04 MINGW64 ~/repositories
$ ls
work/
```

30.2. Создайте клон репозитория work

```
VCΠ-32@lab30-04 MINGW64 ~/repositories
$ git clone work home
Cloning into 'home'...
done.

VCΠ-32@lab30-04 MINGW64 ~/repositories
$ ls
home/ work/
```

- 31. Просмотр клонированного репозитория
  - 31.1. Посмотрите на клонированный репозиторий

```
NCN-32@lab30-04 MINGW64 ~
$ cd home

NCN-32@lab30-04 MINGW64 ~/home (main)
$ ls
README.cs a.html b.html c.html css/ index.html
```

31.2. Просмотрите историю репозитория

```
WCN-32@lab30-04 MINGW64 ~/home (main)
$ git log --all
28f90cc 2025-10-21 | Renamed hello.html; moved style.css (HEAD -> main, origin/style, origin/main, origin/HEAD) [JuliaSherstneva]
aa4ac6c 2025-10-21 | Included stylesheet into hello.html [JuliaSherstneva]
dda4fe2 2025-10-21 | Added css stylesheet [JuliaSherstneva]
9aacd5a 2025-10-21 | Added meta title [JuliaSherstneva]
4785-e98 2025-10-21 | Added README [JuliaSherstneva]
920dc15 2025-10-21 | Added copyright statement with email [JuliaSherstneva]
93365e3 2025-10-21 | Added copyright statement [JuliaSherstneva]
5ca2275 2025-10-20 | Added HTML header (tag: v1) [JuliaSherstneva]
85ccf3e 2025-10-20 | Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
e0fbf2d 2025-10-10 | Unrelated change to c [JuliaSherstneva]
2bb643a 2025-10-10 | Changes for a and b [JuliaSherstneva]
6fd4339 2025-10-10 | Changes for a and b [JuliaSherstneva]
910c122 2025-10-10 | Initial Commit [JuliaSherstneva]
```

- 32. Что такое origin?
  - 32.1. git remote

```
MCΠ-32@lab30-04 MINGW64 ~/home (main)
$ git remote
origin

MCΠ-32@lab30-04 MINGW64 ~/home (main)
$ git remote show origin
* remote origin
Fetch URL: C:/Users/μcπ-32/work
Push URL: C:/Users/μcπ-32/work
HEAD branch: main
Remote branches:
  main tracked
  style tracked
Local branch configured for 'git pull':
  main merges with remote main
Local ref configured for 'git push':
  main pushes to main (up to date)
```

### 33. Удаленные ветки

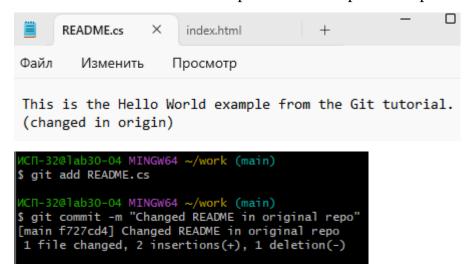
```
ИСП-32@lab30-04 MINGW64 ~/home (main)
$ git branch
* main
```

## 33.1. Список удаленных веток

```
MCП-32@lab30-04 MINGW64 ~/home (main)
$ git branch -a
* main
  remotes/origin/HEAD -> origin/main
  remotes/origin/main
  remotes/origin/style
```

## 34. Изменение оригинального репозитория

# 34.1. Внесите изменения в оригинальный репозиторий work



# 35. Подтягивание изменений

```
$ cd ../home
 ИСП-32@lab30-04 MINGW64 ~/home (main)
$ git fetch
 emote: Enumerating objects: 5, done.
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 353 bytes | 50.00 KiB/s, done.
 From C:/Users/исп-32/work
     28f90cc..f727cd4 main
                                                            -> origin/main
 MCП-32@lab30-04 MINGW64 ~/home (main)
$ git log --all
f727cd4 2025-10-24 | Changed README in original repo (origin/main, origin/HEAD) [JuliaSherstneva]
                                       Renamed hello.html; moved style.css (HEAD -> main, origin/style) [JuliaSherstneva]
Included stylesheet into hello.html [JuliaSherstneva]
28f90cc 2025-10-21
aa4ac6c 2025-10-21
                                      Added css stylesheet [JuliaSherstneva]
Added meta title [JuliaSherstneva]
Added README [JuliaSherstneva]
dda4fe2 2025-10-21
9aacd5a 2025-10-21
4785e98 2025-10-21
                                      Added README [JuliaSherstneva]
Added copyright statement with email [JuliaSherstneva]
Added copyright statement [JuliaSherstneva]
Added HTML header (tag: v1) [JuliaSherstneva]
Added standard HTML page tags (tag: v1-beta) [JuliaSherstneva]
Unrelated change to c [JuliaSherstneva]
Changes for a and b [JuliaSherstneva]
Changes for a and b [JuliaSherstneva]
Initial Commit [JuliaSherstneva]
920dc15 2025-10-21
93365e3 2025-10-21
5ca2275 2025-10-20
35ccf3e 2025-10-20
e0fbf2d 2025-10-10
2bb643a 2025-10-10
6fd4339 2025-10-10
910c122 2025-10-10
```

## 35.1. Проверьте README

```
MCN-32@lab30-04 MINGW64 ~/home (main)
$ cat README.cs
This is the Hello World example from the GitHowTo tutorial.
```

- 36. Слияние подтянутых изменений
  - 36.1. Слейте подтянутые изменения в локальную ветку main

```
MCN-32@lab30-04 MINGW64 ~/home (main)
$ git merge origin/main
Updating 28f90cc..f727cd4
Fast-forward
README.cs | 3 ++-
1 file changed, 2 insertions(+), 1 deletion(-)
```

36.2. Еще раз проверьте файл README

```
MCN-32@lab30-04 MINGW64 ~/home (main)
$ cat README.cs
This is the Hello World example from the Git tutorial.
(changed in origin)
```

36.3. Команда pull (подтянуть)

```
NCN-32@lab30-04 MINGW64 ~/home (main)
$ git pull
Already up to date.
```

- 37. Добавление ветки наблюдения
  - 37.1. Добавьте локальную ветку, которая отслеживает удаленную ветку

```
WCN-32@lab30-04 MINGW64 ~/home (main)
$ git branch --track style origin/style
branch 'style' set up to track 'origin/style'.

WCN-32@lab30-04 MINGW64 ~/home (main)
$ git branch -a
* main
    style
    remotes/origin/HEAD -> origin/main
    remotes/origin/main
    remotes/origin/style

WCN-32@lab30-04 MINGW64 ~/home (main)
$ git log --max-count=2
f727cd4 2025-10-24 | Changed README in original repo (HEAD -> main, origin/main, origin/HEAD) [JuliaSherstneva]
28f90cc 2025-10-21 | Renamed hello.html; moved style.css (origin/style, style) [JuliaSherstneva]
```

## 38. Чистые репозитории

#### 38.1. Создайте чистый репозиторий

```
NCN-32@lab30-04 MINGW64 ~/home (main)
$ cd ..

NCN-32@lab30-04 MINGW64 ~
$ git clone --bare work work.git
Cloning into bare repository 'work.git'...
done.

NCN-32@lab30-04 MINGW64 ~
$ ls work.git
HEAD config description hooks/ info/ objects/ packed-refs refs/
```

## 39. Добавление удаленного репозитория

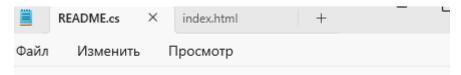
```
MCN-32@lab30-04 MINGW64 ~

$ cd work

MCN-32@lab30-04 MINGW64 ~/work (main)

$ git remote add shared ../work.git
```

#### 40. Отправка изменений



This is the Hello World example from the Git tutorial. (changed in the origin and pushed to shared)

40.1. Теперь отправьте изменения в общий репозиторий.

```
VCTI-32@lab30-04 MINGW64 ~/work (main)

$ git push shared main

Enumerating objects: 5, done.

Counting objects: 100% (5/5), done.

Delta compression using up to 12 threads

Compressing objects: 100% (3/3), done.

Writing objects: 100% (3/3), 379 bytes | 379.00 KiB/s, done.

Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)

To ../work.git

f727cd4..3d67721 main -> main
```

41. Подтягивание общих изменений

```
МINGW64:/c/Users/исп-32/home
ИСП-32@lab30-04 MINGW64 ~/work (main)
$ cd ../home
ИСП-32@lab30-04 MINGW64 ~/home (main)
$ git remote add shared ../work.git
ИСП-32@lab30-04 MINGW64 ~/home (main)
$ git branch --track shared main
branch 'shared' set up to track 'main'.
ИСП-32@lab30-04 MINGW64 ~/home (main)
$ git pull shared main
 remote: Enumerating objects: 5, done.
 remote: Counting objects: 100% (5/5), done.
remote: Countring Objects: 100% (3/3), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 359 bytes | 59.00 KiB/s, done.
From ../work
 * branch
                         main
                                      -> FETCH_HEAD
 * [new branch]
                         main
                                      -> shared/main
Updating f727cd4..3d67721
Fast-forward
 README.cs | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)
ИСП-32@lab30-04 MINGW64 ~/home (main)
$ cat README.cs
This is the Hello World example from the Git tutorial.
(changed in the origin and pushed to shared)
   1-32@lab30-04 MINGW64 ~/home (main)
```

- 42. Размещение ваших Git-репозиториев
  - 42.1. Запуск Git-сервера
  - 42.2. Отправка изменений в Git Daemon

# Заключение

Таким образом, в ходе выполнения работы была проведена полная готовность к работе c Git.

git config --global user.name "JuliaSherstneva"

git config --global user.email "emili.dan528@gmail.com"

cd work