

Лабораторная работа №1

Работа с git

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1 Цель работы

Научиться работать с git.

2 Выполнение лабораторной работы

Установка имени и электронной почты

```
pamatyukhin@pashka-VirtualBox:~$ git config --global user.name Irgulbic
pamatyukhin@pashka-VirtualBox:~$ git config --global user.email pashok228123@gmail.com
pamatyukhin@pashka-VirtualBox:~$ git config --global core.autocrlf input
pamatyukhin@pashka-VirtualBox:~$ git config --global core.safecrlf true
pamatyukhin@pashka-VirtualBox:~$ git config --global core.quotepath off
```

Создание проекта

```
pamatyukhin@pashka-VirtualBox:~$ ls
Desktop Documents Downloads Music Pictures Public snap Templates Videos
pamatyukhin@pashka-VirtualBox:~$ mkdir study
pamatyukhin@pashka-VirtualBox:~$ cd study/
pamatyukhin@pashka-VirtualBox:~/study$ mkdir hello
pamatyukhin@pashka-VirtualBox:~/study$ touch /hello/hello.html
touch: cannot touch '/hello/hello.html': No such file or directory
pamatyukhin@pashka-VirtualBox:~/study$ touch hello/hello.html
pamatyukhin@pashka-VirtualBox:~/study$ echo "Hello, worlf!" > hello/hello.html
pamatyukhin@pashka-VirtualBox:~/study$ echo "Hello, world!" > hello/hello.html
pamatyukhin@pashka-VirtualBox:~/study$ cd hello/
pamatyukhin@pashka-VirtualBox:~/study/hello$ git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /home/pamatyukhin/study/hello/.git/
pamatyukhin@pashka-VirtualBox:~/study/hello$ git add hello.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ git commit -m "Initial Commit"
[master (root-commit) 7465d52] Initial Commit
 1 file changed, 1 insertion(+)
```

Внесение изменений

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ nano hello.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ 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")
```

Индексация изменений



```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git log --pretty=oneline
db35f0240475a4821e82369a47b14d56203668e6 (HEAD -> master) Added standard HTML page tags
ba13cea5e13f71768ad80131b3e17f8261695df9 Added standard HTML page tags
pamatyukhin@pashka-VirtualBox:~/study/hello$ git log --pretty=oneline
db35f0240475a4821e82369a47b14d56203668e6 (HEAD -> master) Added standard HTML page tags
ba13cea5e13f71768ad80131b3e17f8261695df9 Added standard HTML page tags
b4745cbb91f27e4eb3de071aa7f475b3d4c92cc4 added h2 tag
pamatyukhin@pashka-VirtualBox:~/study/hello$ git log --pretty=oneline --max-count=3
db35f0240475a4821e82369a47b14d56203668e6 (HEAD -> master) Added HTML header
ba13cea5e13f71768ad80131b3e17f8261695df9 Added standard HTML page tags
b4745cbb91f27e4eb3de071aa7f475b3d4c92cc4 added h2 tag
pamatyukhin@pashka-VirtualBox:~/study/hello$ git log --pretty=oneline --max-count=3man git-log
fatal: ambiguous argument 'git-log': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>...] -- [<file>...]'
pamatyukhin@pashka-VirtualBox:~/study/hello$ man git-log

[1]+  Stopped                  man git-log
pamatyukhin@pashka-VirtualBox:~/study/hello$ git log
git log
commit db35f0240475a4821e82369a47b14d56203668e6 (HEAD -> master)
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 20:23:15 2025 +0300

        Added HTML header

commit ba13cea5e13f71768ad80131b3e17f8261695df9
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 20:22:05 2025 +0300

        Added standard HTML page tags

commit b4745cbb91f27e4eb3de071aa7f475b3d4c92cc4
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 20:18:34 2025 +0300

        added h2 tag
```

```

pamatyukhin@pashka-VirtualBox:~/study/hello$ git tag v1-beta
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout v1
Previous HEAD position was ba13cea Added standard HTML page tags
HEAD is now at db35f02 Added HTML header
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout v1-beta
Previous HEAD position was db35f02 Added HTML header
HEAD is now at ba13cea Added standard HTML page tags
pamatyukhin@pashka-VirtualBox:~/study/hello$ git tag
v1
v1-beta
pamatyukhin@pashka-VirtualBox:~/study/hello$ git log master --all
commit db35f0240475a4821e82369a47b14d56203668e6 (tag: v1, master)
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 20:23:15 2025 +0300

    Added HTML header

commit ba13cea5e13f71768ad80131b3e17f8261695df9 (HEAD, tag: v1-beta)
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 20:22:05 2025 +0300

    Added standard HTML page tags

commit b4745cbb91f27e4eb3de071aa7f475b3d4c92cc4
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 20:18:34 2025 +0300

    added h2 tag

commit 7465d52b373ae163952f912274234445f2e31a40

```

Отмена локальных изменений (до индексации)

```

pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout master
Previous HEAD position was ba13cea Added standard HTML page tags
Switched to branch 'master'
pamatyukhin@pashka-VirtualBox:~/study/hello$ nano hello.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ 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")
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout hello.html

```

Отмена проиндексированных изменений (перед коммитом)

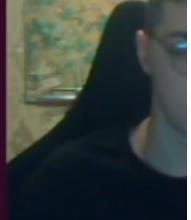
```
GNU nano 7.2
<html>
    <head>
        <!-esddcvvasd-->
    </head>
    <body>
        <h1>Hello, world!</h1>
    </body>
</html>
```

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ nano hello.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ git add hello.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   hello.html

pamatyukhin@pashka-VirtualBox:~/study/hello$ git reset HEAD hello.html
Unstaged changes after reset:
M       hello.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout hello.html
Updated 1 path from the index
pamatyukhin@pashka-VirtualBox:~/study/hello$ git status
On branch master
```

Отмена коммитов

```
"  
[master 4e84011] OOps, we didnt want this commit  
 1 file changed, 1 insertion(+)  
pamatyukhin@pashka-VirtualBox:~/study/hello$ git revert HEAD  
[master 0bee4a3] Revert "OOps, we didnt want this commit"  
 1 file changed, 1 deletion(-)  
pamatyukhin@pashka-VirtualBox:~/study/hello$ git log  
commit 0bee4a33d447202c7454cd2253ac08b59b87254c (HEAD -> master)  
Author: Irgulbic <pashok228123@gmail.com>  
Date: Thu Feb 20 20:44:38 2025 +0300  
  
    Revert "OOps, we didnt want this commit"  
  
    This reverts commit 4e84011fc83e02d3b4d4c648511346f247455d18.  
  
commit 4e84011fc83e02d3b4d4c648511346f247455d18  
Author: Irgulbic <pashok228123@gmail.com>  
Date: Thu Feb 20 20:44:25 2025 +0300  
  
    OOps, we didnt want this commit  
  
commit db35f0240475a4821e82369a47b14d56203668e6 (tag: v1)  
Author: Irgulbic <pashok228123@gmail.com>  
Date: Thu Feb 20 20:23:15 2025 +0300  
  
    Added HTML header  
  
commit ba13cea5e13f71768ad80131b3e17f8261695df9 (tag: v1-beta)  
Author: Irgulbic <pashok228123@gmail.com>  
Date: Thu Feb 20 20:22:05 2025 +0300  
  
    Added standard HTML page tags  
  
commit b4745cbb91f27e4eb3de071aa7f475b3d4c92cc4  
Author: Irgulbic <pashok228123@gmail.com>
```



Удаление коммиттов из ветки

```
commit 7465d52b373ae163952f912274234445f2e31a40
author: Irgulbic <pashok228123@gmail.com>
date: Thu Feb 20 20:15:13 2025 +0300

    Initial Commit
amatyukhin@pashka-VirtualBox:~/study/hello$ git log --all
commit 0bee4a33d447202c7454cd2253ac08b59b87254c (tag: oops)
author: Irgulbic <pashok228123@gmail.com>
date: Thu Feb 20 20:44:38 2025 +0300

    Revert "Ooops, we didnt want this commit"

    This reverts commit 4e84011fc83e02d3b4d4c648511346f247455d18.

commit 4e84011fc83e02d3b4d4c648511346f247455d18
author: Irgulbic <pashok228123@gmail.com>
date: Thu Feb 20 20:44:25 2025 +0300

    Ooops, we didnt want this commit

commit db35f0240475a4821e82369a47b14d56203668e6 (HEAD -> master, tag: v1)
author: Irgulbic <pashok228123@gmail.com>
date: Thu Feb 20 20:23:15 2025 +0300

    Added HTML header

commit ba13cea5e13f71768ad80131b3e17f8261695df9 (tag: v1-beta)
author: Irgulbic <pashok228123@gmail.com>
date: Thu Feb 20 20:22:05 2025 +0300

    Added standard HTML page tags

commit b4745cbb91f27e4eb3de071aa7f475b3d4c92cc4
author: Irgulbic <pashok228123@gmail.com>
date: Thu Feb 20 20:18:34 2025 +0300

    added h2 tag

commit 7465d52b373ae163952f912274234445f2e31a40
author: Irgulbic <pashok228123@gmail.com>
```



Удаление тега oops

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git tag -d oops
Deleted tag 'oops' (was 0bee4a3)
pamatyukhin@pashka-VirtualBox:~/study/hello$ git log --all
commit db35f0240475a4821e82369a47b14d56203668e6 (HEAD -> master, tag: v1)
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 20:23:15 2025 +0300

    Added HTML header

commit ba13cea5e13f71768ad80131b3e17f8261695df9 (tag: v1-beta)
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 20:22:05 2025 +0300

    Added standard HTML page tags

commit b4745cbb91f27e4eb3de071aa7f475b3d4c92cc4
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 20:18:34 2025 +0300

    added h2 tag

commit 7465d52b373ae163952f912274234445f2e31a40
```

Внесение изменений в коммиты

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ nano hello.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ git add hello.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ git commit -m "add an author comment"
[master cd33fef] add an author comment
 1 file changed, 1 insertion(+)
pamatyukhin@pashka-VirtualBox:~/study/hello$ nano
.git/      hello.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ nano hello.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ git add hello.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ git commit --amend -m "add an author comment/email comment"
[master 94e105b] add an author comment/email comment
 Date: Thu Feb 20 20:50:54 2025 +0300
 1 file changed, 1 insertion(+)
pamatyukhin@pashka-VirtualBox:~/study/hello$
```

Перемещение файлов

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ pwd  
/home/pamatyukhin/study/hello  
pamatyukhin@pashka-VirtualBox:~/study/hello$ cd ..  
pamatyukhin@pashka-VirtualBox:~/study$ mkdir lib  
pamatyukhin@pashka-VirtualBox:~/study$ mv hello/hello.html lib  
pamatyukhin@pashka-VirtualBox:~/study$ lsd  
Command 'lsd' not found, but can be installed with:  
sudo snap install lsd # version 0.16.0, or  
sudo apt install lsd # version 0.23.1-8  
See 'snap info lsd' for additional versions.  
pamatyukhin@pashka-VirtualBox:~/study$ ls  
hello lib  
pamatyukhin@pashka-VirtualBox:~/study$ ls lib  
hello.html  
pamatyukhin@pashka-VirtualBox:~/study$ git add lib/hello.html  
fatal: not a git repository (or any of the parent directories): .git  
pamatyukhin@pashka-VirtualBox:~/study$ mkdir -p hello/lib  
pamatyukhin@pashka-VirtualBox:~/study$ mv lib/hello.html hello/lib/  
pamatyukhin@pashka-VirtualBox:~/study$ ls hello/lib/  
hello.html  
pamatyukhin@pashka-VirtualBox:~/study$ cd hello/  
pamatyukhin@pashka-VirtualBox:~/study/hello$ git add lib/hello.html  
pamatyukhin@pashka-VirtualBox:~/study/hello$ git rm hello.html  
rm 'hello.html'
```

Второй способ перемещения файлов

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git commit -m "Moved hello.html to lib"  
[master c2d4377] Moved hello.html to lib  
 1 file changed, 0 insertions(+), 0 deletions(-)  
 rename hello.html => lib/hello.html (100%)
```

Подробнее о структуре

```
GNU nano 7.2
```

| | |
|---|------------------|
| <pre><html> <body> <iframe src="lib/hello.html" width="200" height="200" /> </body> </html></pre> | lib/index.html * |
|---|------------------|

Git внутри: Каталог .git

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ ls -C .git  
branches config HEAD index logs ORIG_HEAD  
COMMIT_EDITMSG description hooks info objects packed-refs  
pamatyukhin@pashka-VirtualBox:~/study/hello$ ls -C .git/objects  
0b 2a 3e 4e 5c 7b 8c 9f af b7 c0 cd d6 db fb pack  
20 3a 4b 57 74 7f 94 aa b4 ba c2 cf d9 f6 info  
pamatyukhin@pashka-VirtualBox:~/study/hello$ ls -C .git/objects/<dir>  
bash: syntax error near unexpected token `newline'  
pamatyukhin@pashka-VirtualBox:~/study/hello$ ls -C .git/objects/  
0b/ 3a/ 4e/ 74/ 8c/ aa/ b7/ c2/ d6/ f6/ pack/  
20/ 3e/ 57/ 7b/ 94/ af/ ba/ cd/ d9/ fb/  
2a/ 4b/ 5c/ 7f/ 9f/ b4/ c0/ cf/ db/ info/  
pamatyukhin@pashka-VirtualBox:~/study/hello$ ls -C .git/objects/  
0b/ 3a/ 4e/ 74/ 8c/ aa/ b7/ c2/ d6/ f6/ pack/  
20/ 3e/ 57/ 7b/ 94/ af/ ba/ cd/ d9/ fb/  
2a/ 4b/ 5c/ 7f/ 9f/ b4/ c0/ cf/ db/ info/  
pamatyukhin@pashka-VirtualBox:~/study/hello$ ls -C .git/objects/  
0b/ 3a/ 4e/ 74/ 8c/ aa/ b7/ c2/ d6/ f6/ pack/  
20/ 3e/ 57/ 7b/ 94/ af/ ba/ cd/ d9/ fb/  
2a/ 4b/ 5c/ 7f/ 9f/ b4/ c0/ cf/ db/ info/  
pamatyukhin@pashka-VirtualBox:~/study/hello$ ls -C .git/objects/0b/  
ee4a33d447202c7454cd2253ac08b59b87254c  
pamatyukhin@pashka-VirtualBox:~/study/hello$ ls .git/refs/  
heads tags  
pamatyukhin@pashka-VirtualBox:~/study/hello$ ls .git/refs/heads/  
master  
pamatyukhin@pashka-VirtualBox:~/study/hello$ ls .git/refs/tags/  
v1 v1-beta  
pamatyukhin@pashka-VirtualBox:~/study/hello$ ls .git/refs/tags/v1  
.git/refs/tags/v1  
pamatyukhin@pashka-VirtualBox:~/study/hello$ cat .git/HEAD  
ref: refs/heads/master  
pamatyukhin@pashka-VirtualBox:~/study/hello$ git log --max-count=1  
commit 3a8995a4b86724a0dc863b634cf625a51beb287b (HEAD -> master)
```

Работа непосредственно с объектами git

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git log --max-count=1
commit 3a8995a4b86724a0dc863b634cf625a51beb287b (HEAD -> master)
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 21:15:19 2025 +0300

    moved index from lib
pamatyukhin@pashka-VirtualBox:~/study/hello$ git cat-file -t 3a8995a4b86724a0dc863b634cf625
a51beb287b
commit
pamatyukhin@pashka-VirtualBox:~/study/hello$ git cat-file -p 3a8995a4b86724a0dc863b634cf625
a51beb287b
tree 2028a3ba591b8c70711e1ffebdbafa0ed4c863d5
parent ba2e71337a4ff1352e6e624e6ea824d068edbfb8b
author Irgulbic <pashok228123@gmail.com> 1740075319 +0300
committer Irgulbic <pashok228123@gmail.com> 1740075319 +0300

moved index from lib
pamatyukhin@pashka-VirtualBox:~/study/hello$ git cat-file -p 2028a3ba591b8c70711e1ffebdbafa
0ed4c863d5
100644 blob cf5bc0ea78289c0be141b578ca407f1159bd25bc    index.html
040000 tree 579aadd516e2e44eeb791971c38edca4d86884    lib
pamatyukhin@pashka-VirtualBox:~/study/hello$ git cat-file -p 579aadd516e2e44eeb791971c38e
dca4d86884
100644 blob d6f50250f42d562841b878c2ae3a8b3b4c36b9b0    hello.html
100644 blob cf5bc0ea78289c0be141b578ca407f1159bd25bc    index.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ git cat-file -p d6f50250f42d562841b878c2ae3a8b
3b4c36b9b0
<!--Autor: Matyukhin Pavel (1132226527@rudn.ru)-->
<html>
    <head>
    </head>
    <body>
        <h1>Hello, world!</h1>
    </body>
</html>
```

Создание ветки

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout -b style
Switched to a new branch 'style'
pamatyukhin@pashka-VirtualBox:~/study/hello$ git staus
git: 'staus' is not a git command. See 'git --help'.

The most similar command is
    status
pamatyukhin@pashka-VirtualBox:~/study/hello$ 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:    lib/index.html

no changes added to commit (use "git add" and/or "git commit -a")
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout master
D      lib/index.html
Switched to branch 'master'
pamatyukhin@pashka-VirtualBox:~/study/hello$ git add .
pamatyukhin@pashka-VirtualBox:~/study/hello$ git commit -m "deleted wrong file"
[master 4d92952] deleted wrong file
 1 file changed, 5 deletions(-)
 delete mode 100644 lib/index.html
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout style
Switched to branch 'style'
pamatyukhin@pashka-VirtualBox:~/study/hello$ git status
On branch style
nothing to commit, working tree clean
pamatyukhin@pashka-VirtualBox:~/study/hello$ touch lib/style.css
pamatyukhin@pashka-VirtualBox:~/study/hello$ nano lib/style.css
pamatyukhin@pashka-VirtualBox:~/study/hello$ git add lib/style.css
pamatyukhin@pashka-VirtualBox:~/study/hello$ git commit -m "added css stylesheet"
[style a6a5118] added css stylesheet
 1 file changed, 3 insertions(+)
 create mode 100644 lib/style.css
```

Навигация по веткам

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout master
git checkout master
Switched to branch 'master'
pamatyukhin@pashka-VirtualBox:~/study/hello$ cat lib/hello.html
<!--Autor: Matyukhin Pavel (1132226527@rudn.ru)-->
<html>
    <head>
    </head>
    <body>
        <h1>Hello, world!</h1>
    </body>
</html>
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout style
Switched to branch 'style'
pamatyukhin@pashka-VirtualBox:~/study/hello$ cat lib/hello.html
<!--Autor: Matyukhin Pavel (1132226527@rudn.ru)-->
<html>
    <head>
        <link type="text/css" rel ="stylesheet" media="all" href="style.css" />
    </head>
    <body>
        <h1>Hello, world!</h1>
    </body>
</html>
```

Изменения в ветке master

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout master
Switched to branch 'master'
pamatyukhin@pashka-VirtualBox:~/study/hello$ touch README.md
pamatyukhin@pashka-VirtualBox:~/study/hello$ echo "This is the Hello World example from git
tutorial." > README.md
```

Сделайте коммит изменений README.md в ветку master.

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git add README.md
pamatyukhin@pashka-VirtualBox:~/study/hello$ git commmit -m "added README"
git: 'commmit' is not a git command. See 'git --help'.

The most similar command is
    commit
pamatyukhin@pashka-VirtualBox:~/study/hello$ git commit -m "added README"
[master c156538] added README
 1 file changed, 1 insertion(+)
 create mode 100644 README.md
```

Слияние

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout style
Switched to branch 'style'
pamatyukhin@pashka-VirtualBox:~/study/hello$ git merge master
Merge made by the 'ort' strategy.
 README.md      | 1 +
 lib/index.html | 5 -
 2 files changed, 1 insertion(+), 5 deletions(-)
 create mode 100644 README.md
 30 let| mo 100644 lib/index.html
pamatyukhin@pashka-VirtualBox:~/study/hello$
```

Создание конфликта

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git log --graph --
* commit 7616a3b97a979759f336aeb7d917ac7ac0c70d75 (HEAD -> master)
| Author: Irgulbic <pashok228123@gmail.com>
| Date:   Thu Feb 20 21:40:54 2025 +0300
|
|       Life is great
|
* commit 2bd8f8f113d70e7b0c2624e2e1d7a246ccb4a1d8 (style)
|\ Merge: d187104 c156538
| | Author: Irgulbic <pashok228123@gmail.com>
| | Date:   Thu Feb 20 21:38:14 2025 +0300
|
|       Merge branch 'master' into style
|
* commit c156538abab248e8012c09edc50bb68e3a10199b
| Author: Irgulbic <pashok228123@gmail.com>
| Date:   Thu Feb 20 21:37:05 2025 +0300
|
|       added README
|
* commit 4d92952eaf4d7fc8bd6e8c48f962efa58cf12aef
| Author: Irgulbic <pashok228123@gmail.com>
| Date:   Thu Feb 20 21:27:24 2025 +0300
|
|       deleted wrong file
|
* commit d1871043095fd1953a6a23d25e53fdb78d02bdc1
| Author: Irgulbic <pashok228123@gmail.com>
```

Разрешение конфликтов

```
GNU nano 7.2                                lib/hello.html
<!--Autor: Matyukhin Pavel (1132226527@rudn.ru)-->
<html>
    <head>
<<<<< HEAD
        <link type="text/css" rel ="stylesheet" media="
=====
        <!-- no style -->
>>>>> master
    </head>
    <body>
        <h1>Hello, world! Life if great!</h1>
    </body>
</html>
```



Сброс ветки style

```
* commit abc17b2acfbeced2f9f568343c7cc7280537aff (HEAD -> style)
| Merge: 2bd8f8f 7616a3b
| Author: Irgulbic <pashok228123@gmail.com>
| Date: Thu Feb 20 21:43:14 2025 +0300
|
|     Merged master fixed conflict
|
* commit 7616a3b97a979759f336aeb7d917ac7ac0c70d75 (master)
| Merge: d187104 c156538
| Author: Irgulbic <pashok228123@gmail.com>
| Date: Thu Feb 20 21:40:54 2025 +0300
|
|     Life is great
|
* commit 2bd8f8f113d70e7b0c2624e2e1d7a246ccb4a1d8
| Merge: d187104 c156538
| Author: Irgulbic <pashok228123@gmail.com>
| Date: Thu Feb 20 21:38:14 2025 +0300
|
|     Merge branch 'master' into style
|
* commit c156538abab248e8012c09edc50bb68e3a10199b
| Author: Irgulbic <pashok228123@gmail.com>
| Date: Thu Feb 20 21:37:05 2025 +0300
|
|     added README
|
* commit 4d92952eaf4d7fc8bd6e8c48f962efa58cf12aef
| Author: Irgulbic <pashok228123@gmail.com>
| Date: Thu Feb 20 21:27:24 2025 +0300
|
|     deleted wrong file
|
* commit d1871043095fd1953a6a23d25e53fdb78d02bdc1
| Author: Irgulbic <pashok228123@gmail.com>
| Date: Thu Feb 20 21:33:37 2025 +0300
|
|     Updated index.html
|
* commit 23002906c3ec3eb1ff538ac602fd151fdfe82df0fe
```

Сброс ветки master

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git reset --hard c156538abab248e8012c09edc50bb68e3a10199b
HEAD is now at c156538 added README
```

Перебазирование

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout style
switched to branch 'style'
pamatyukhin@pashka-VirtualBox:~/study/hello$ git rebase master
[30] successful rebase and updated refs/heads/style.
pamatyukhin@pashka-VirtualBox:~/study/hello$
```

Слияние в ветку master

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout master
Switched to branch 'master'
pamatyukhin@pashka-VirtualBox:~/study/hello$ git merge style
Updating c156538..5b823dc
Fast-forward
 index.html      | 3 +++
 lib/hello.html  | 1 +
 lib/style.css   | 3 +++
 3 files changed, 7 insertions(+)
 [30] created new file lib/style.css
pamatyukhin@pashka-VirtualBox:~/study/hello$
```

Клонирование репозиториев

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ cd ..
pamatyukhin@pashka-VirtualBox:~/study$ pwd
/home/pamatyukhin/study
pamatyukhin@pashka-VirtualBox:~/study$ ls
hello
pamatyukhin@pashka-VirtualBox:~/study$ git clone hello cloned_hello
Cloning into 'cloned_hello'
[30] done.
pamatyukhin@pashka-VirtualBox:~/study$ ls
cloned_hello  hello
```

Просмотр клонированного репозитория

```
pamatyukhin@pashka-VirtualBox:~/study$ cd cloned_hello/
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ ls
index.html  lib  README.md
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git log --all
commit 5b823dc15c471c9523c3e5aef9e763244aa06ef9 (HEAD -> master)
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 21:33:37 2025 +0300

    Updated index.html

commit c696027c67517983823b47cd017201c8ffc2ab51
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 21:31:14 2025 +0300

    Hello uses style.css

commit a2dd69f50eda94d3d718706447739fddad261123
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 21:29:05 2025 +0300

    added css stylesheet
```



Что такое origin?

```
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git remote
origin
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git remote show origin
* remote origin
  Fetch URL: /home/pamatyukhin/study/hello
  Push  URL: /home/pamatyukhin/study/hello
  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)
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git branch
* master
```

Удаленные ветки

```
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git branch -a
* master
  remotes/origin/HEAD -> origin/master
  remotes/origin/master
  remotes/origin/style
```

Изменение оригинального репозитория



```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git commit -m "Chenged README in original repo"
"
[master 552279b] Chenged README in original repo
 1 file changed, 1 insertion(+), 1 deletion(-)
pamatyukhin@pashka-VirtualBox:~/study/hello$ cd ../cloned_hello
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ 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), 361 bytes | 361.00 KiB/s, done.
From /home/pamatyukhin/study/hello
 5b823dc..552279b master      -> origin/master
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git log --all
commit 552279b14140ba450723d7c2bf86a06872972fdb (origin/master, origin/HEAD)
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 22:00:15 2025 +0300

    Chenged README in original repo

commit 5b823dc15c471c9523c3e5aef9e763244aa06ef9 (HEAD -> master, origin/style)
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 21:33:37 2025 +0300

    Updated index.html

commit c696027c67517983823b47cd017201c8ffc2ab51
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 21:31:14 2025 +0300

    Hello uses style.css
```

Слияние извлеченных изменений

```
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git merge origin/master
Updating 5b823dc..552279b
Fast-forward
 README.md | 2 ++
 1 file changed, 1 insertion(+), 1 deletion(-)
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ cat README.md
This is the Hello World example from the git tutorial.
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git pull
A       [to update]  No date.
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$
```

Добавление ветки наблюдения

```
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git branch --track style origin/style
branch 'style' set up to track 'origin/style'.
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git branch -a
* master
  style
    remotes/origin/HEAD -> origin/master
    remotes/origin/master
    remotes/origin/style
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ \git log --max-count=2
commit 552279b14140ba450723d7c2bf86a06872972fdb (HEAD -> master, origin/master, origin/HEAD)
)
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 22:00:15 2025 +0300

    Chenged README in original repo

commit 5b823dc15c471c9523c3e5aef9e763244aa06ef9 (origin/style, style)
Author: Irgulbic <pashok228123@gmail.com>
Date:   Thu Feb 20 21:33:37 2025 +0300

  ↗ Update index.html
```

Добавление удаленного репозитория

```
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ cd ..
pamatyukhin@pashka-VirtualBox:~/study$ git clone --bare hello hello.git
Cloning into bare repository 'hello.git'
done.
```

```
pamatyukhin@pashka-VirtualBox:~/study$ ls hello.git
pamatyukhin@pashka-VirtualBox:~/study$ cd hello
pamatyukhin@pashka-VirtualBox:~/study/hello$ git remote add shared .....
```

Отправка изменений

Извлечение общих изменений

```
pamatyukhin@pashka-VirtualBox:~/study/hello$ git checkout master
M      README.md
Already on 'master'
pamatyukhin@pashka-VirtualBox:~/study/hello$ git add README.md
pamatyukhin@pashka-VirtualBox:~/study/hello$ git commit -m "Added shared comment to readme"
[master 7b1e9d5] Added shared comment to readme
 1 file changed, 1 insertion(+)
pamatyukhin@pashka-VirtualBox:~/study/hello$ git push shared master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 6 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 408 bytes | 204.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To ../hello.git
  552279b..7b1e9d5  master -> master
```

Добавление ветки наблюденияя

```
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git remote add shared ..../hello.git
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git branch --track shared master
branch 'shared' set up to track 'master'.
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ git pull shared master
fatal: couldn't find remote ref master
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ cat README.md
This is the Hello World example from the git tutorial.
pamatyukhin@pashka-VirtualBox:~/study/cloned_hello$ 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), 388 bytes | 388.00 KiB/s, done.
From ..../hello
 * branch           master      -> FETCH_HEAD
 * [new branch]     master      -> shared/master
Updating 552279b..7b1e9d5
Fast-forward
 README.md | 1 +

```

3 Вывод

Научился работать с git с каталогами ветками.