

Лабораторная работа 1

работа с git

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1

Подготовка

```
(base) hobo@MSI:~$ git config --global core.autocrlf input  
(base) hobo@MSI:~$ git config --global core.safecrlf true  
(base) hobo@MSI:~$  
(base) hobo@MSI:~$ git config --global core.quotepath off  
(base) hobo@MSI:~$
```

2 создание проекта

```
(base) hobo@MSI:~/hello$ echo "Hello, World!" > hello.html
(base) hobo@MSI:~/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/hobo/hello/.git/
(base) hobo@MSI:~/hello$ git add hello.html
(base) hobo@MSI:~/hello$ git commit -m "Initial Commit"
[master (root-commit) ff69a54] Initial Commit
1 file changed, 1 insertion(+)
create mode 100644 hello.html
(base) hobo@MSI:~/hello$
```

```
(base) hobo@MSI:~$ mkdir hello
(base) hobo@MSI:~$ cd hello
(base) hobo@MSI:~/hello$ touch hello.html
(base) hobo@MSI:~/hello$ echo "Hello, World!" > hello.html
(base) hobo@MSI:~/hello$
```

```
(base) hobo@MSI:~/hello$ git status
On branch master
nothing to commit, working tree clean
(base) hobo@MSI:~/hello$
```

3 внесение изменений

```
(base) hobo@MSI:~/hello$ vi hello.html
(base) hobo@MSI:~/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")
(base) hobo@MSI:~/hello$ git add hello.html
(base) hobo@MSI:~/hello$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   hello.html

(base) hobo@MSI:~/hello$
```

4 индексация изменений

```
no changes added to commit (use "git add" and/or "git commit -a")
(base) hobo@MSI:~/hello$ git add .
(base) hobo@MSI:~/hello$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   hello.html

(base) hobo@MSI:~/hello$
```

```
(base) hobo@MSI:~/hello$ git commit -m "Added HTML header"
[master 9ac09de] Added HTML header
 1 file changed, 6 insertions(+)
(base) hobo@MSI:~/hello$
```

```
base) hobo@MSI:~/hello$ git commit
[master 347e069] «Added h1 tag»
 1 file changed, 2 insertions(+), 1 deletion(-)
base) hobo@MSI:~/hello$ git commit
On branch master
nothing to commit, working tree clean
base) hobo@MSI:~/hello$ git status
On branch master
nothing to commit, working tree clean
base) hobo@MSI:~/hello$
```

```
nothing to commit, working tree clean
(base) hobo@MSI:~/hello$ vi hello.html
(base) hobo@MSI:~/hello$ git add hello.html
(base) hobo@MSI:~/hello$ vi hello.html
(base) hobo@MSI:~/hello$ 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
```

```
(base) hobo@MSI:~/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")
(base) hobo@MSI:~/hello$
```

4 индексация изменений

```
commit 9ac09deec9459a8978e8d9b0b2a38401377348da (HEAD -> master)
```

```
Author: PetrushovDmitry <petrushov39@bk.ru>
```

```
Date: Sat Apr 13 04:31:39 2024 +0300
```

```
Added HTML header
```

```
commit b31ced7939a9528c3e46e256fc755f85cbd39fd4
```

```
Author: PetrushovDmitry <petrushov39@bk.ru>
```

```
Date: Sat Apr 13 04:29:45 2024 +0300
```

```
Added standard HTML page tags
```

```
commit 347e069778ee86efe43ca9e512e6f373e37aed6d
```

```
Author: PetrushovDmitry <petrushov39@bk.ru>
```

```
Date: Sat Apr 13 04:21:16 2024 +0300
```

```
«Added h1 tag»
```

```
commit ff69a540b38e858ea00fb627db33d3ad7803623f
```

```
Author: PetrushovDmitry <petrushov39@bk.ru>
```

```
Date: Sat Apr 13 04:16:03 2024 +0300
```

```
Initial Commit
```

```
(base) hobo@MSI:~/hello$ git log --pretty=oneline
9ac09deec9459a8978e8d9b0b2a38401377348da (HEAD -> master) Added HTML header
b31ced7939a9528c3e46e256fc755f85cbd39fd4 Added standard HTML page tags
347e069778ee86efe43ca9e512e6f373e37aed6d «Added h1 tag»
ff69a540b38e858ea00fb627db33d3ad7803623f Initial Commit
(base) hobo@MSI:~/hello$
```

GIT-LOG(1)

Git Manual

GIT-LOG(1)

NAME

git-log - Show commit logs

SYNOPSIS

git log [<options>] [<revision-range>] [--] <path>...

DESCRIPTION

Shows the commit logs.

List commits that are reachable by following the **parent** links from the given commit(s), but exclude commits that are reachable from the one(s) given with a **^** in front of them. The output is given in reverse chronological order by default.

You can think of this as a set operation. Commits reachable from any of the commits given on the command line form a set, and then commits reachable from any of the ones given with **^** in front are subtracted from that set. The remaining commits are what comes out in the command's output. Various other options and paths parameters can be used to further limit the result.

Manual page git-log(1) line 1 (press h for help or q to quit)

4

ИНДЕКСАЦИЯ ИЗМЕНЕНИЙ

```
bash: syntax error near unexpected token `newline'
(base) hobo@MSI:~/hello$ git tag v1
(base) hobo@MSI:~/hello$ 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 b31ced7 Added standard HTML page tags
(base) hobo@MSI:~/hello$
```

```
HEAD is now at b31ced7 Added standard HTML page tags
(base) hobo@MSI:~/hello$ cat hello.html
<html>
<body>
<h1>Hello, World!</h1>
</body>
</html>
(base) hobo@MSI:~/hello$
```

```
</html>
(base) hobo@MSI:~/hello$ git tag v1-beta
(base) hobo@MSI:~/hello$
```

```
(base) hobo@MSI:~/hello$ git tag v1-beta
(base) hobo@MSI:~/hello$ git checkout v1
Previous HEAD position was b31ced7 Added standard HTML page tags
HEAD is now at 9ac09de Added HTML header
(base) hobo@MSI:~/hello$ git checkout v1-beta
Previous HEAD position was 9ac09de Added HTML header
HEAD is now at b31ced7 Added standard HTML page tags
(base) hobo@MSI:~/hello$
```

4

ИНДЕКСАЦИЯ ИЗМЕНЕНИЙ

```
(base) hobo@MSI:~/hello$ git tag
v1
v1-beta
(base) hobo@MSI:~/hello$ git log master --all
commit 9ac09deec9459a8978e8d9b0b2a38401377348da (tag: v1, master)
Author: PetrushovDmitry <petrushov39@bk.ru>
Date: Sat Apr 13 04:31:39 2024 +0300

    Added HTML header

commit b31ced7939a9528c3e46e256fc755f85cbd39fd4 (HEAD, tag: v1-beta)
Author: PetrushovDmitry <petrushov39@bk.ru>
Date: Sat Apr 13 04:29:45 2024 +0300

    Added standard HTML page tags
```


5 отмена локальных изменений

```
(base) hobo@MSI:~/hello$ git checkout hello.html
Updated 1 path from the index
(base) hobo@MSI:~/hello$ git status
On branch master
nothing to commit, working tree clean
(base) hobo@MSI:~/hello$ cat hello.html
```

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

```
(base) hobo@MSI:~/hello$ vi hello.html
(base) hobo@MSI:~/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")
(base) hobo@MSI:~/hello$
```

6 отмена
проиндексированных
изменений

```
</html>
(base) hobo@MSI:~/hello$ vi hello.html
(base) hobo@MSI:~/hello$ git add hello.html
(base) hobo@MSI:~/hello$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   hello.html

(base) hobo@MSI:~/hello$
```

```
(base) hobo@MSI:~/hello$ git reset HEAD hello.html
Unstaged changes after reset:
M       hello.html
(base) hobo@MSI:~/hello$
```

```
(base) hobo@MSI:~/hello$ git checkout hello.html
Updated 1 path from the index
(base) hobo@MSI:~/hello$ git status
On branch master
nothing to commit, working tree clean
(base) hobo@MSI:~/hello$
```

7 отмена КОММИТОВ

```
(base) hobo@MSI:~/hello$ vi hello.html
(base) hobo@MSI:~/hello$ git add hello.html
(base) hobo@MSI:~/hello$ git commit -m "Oops, we didn't want this commit"
[master 798a5ec] Oops, we didn't want this commit
1 file changed, 12 insertions(+), 5 deletions(-)
(base) hobo@MSI:~/hello$ git revert HEAD
[master 908ecc2] Revert "Oops, we didn't want this commit"
1 file changed, 5 insertions(+), 12 deletions(-)
(base) hobo@MSI:~/hello$
```

```
(base) hobo@MSI:~/hello$ git log
commit 908ecc2fd9e020f5ef62ca55ealbc51de2b16480 (HEAD -> master)
Author: PetrushovDmitry <petrushov39@bk.ru>
Date: Sat Apr 13 04:51:15 2024 +0300

    Revert "Oops, we didn't want this commit"

    This reverts commit 798a5ec64c5f1c85b35a80ad92882bf819fb0720.

commit 798a5ec64c5f1c85b35a80ad92882bf819fb0720
Author: PetrushovDmitry <petrushov39@bk.ru>
Date: Sat Apr 13 04:51:04 2024 +0300

    Oops, we didn't want this commit

commit 9ac09deec9459a8978e8d9b0b2a38401377348da (tag: v1)
Author: PetrushovDmitry <petrushov39@bk.ru>
Date: Sat Apr 13 04:31:39 2024 +0300
```

10 внесение изменений в коммиты

```
1 file changed, 1 insertion(+), 1 deletion(-)
(base) hobo@MSI:~/hello$ vi hello.html
(base) hobo@MSI:~/hello$ git add hello.html
(base) hobo@MSI:~/hello$ git commit --amend -m "Add an author/email comment"
[master 7a4cd24] Add an author/email comment
Date: Sat Apr 13 04:56:27 2024 +0300
1 file changed, 1 insertion(+), 1 deletion(-)
(base) hobo@MSI:~/hello$ git log
commit 7a4cd24042d1a7822b2f9699ae1aee03b3a01cea (HEAD -> master)
Author: PetrushovDmitry <petrushov39@bk.ru>
Date: Sat Apr 13 04:56:27 2024 +0300

    Add an author/email comment
```

11 перемещение файлов

```
Date: Sat Apr 13 04:31:39 2024 +0300
(base) hobo@MSI:~/hello$ mkdir lib
(base) hobo@MSI:~/hello$ git mv hello.html lib
(base) hobo@MSI:~/hello$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        renamed:    hello.html -> lib/hello.html

(base) hobo@MSI:~/hello$
```

13
подробнее
о структуре

```
(base) hobo@MSI:~/hello$ touch index.html
(base) hobo@MSI:~/hello$ vi index.html
(base) hobo@MSI:~/hello$ git add index.html
(base) hobo@MSI:~/hello$ git commit -m "Added index.html."
[master abe50f4] Added index.html.
2 files changed, 5 insertions(+)
create mode 100644 index.html
rename hello.html => lib/hello.html (100%)
(base) hobo@MSI:~/hello$
```

14 git
внутри:
каталог .git

```
(base) hobo@MSI:~/hello$ ls -C .git/objects/<ab>
bash: syntax error near unexpected token `newline'
(base) hobo@MSI:~/hello$ git log --max-count=1
commit abe50f419ce724f33134e46e39d880585c232a61 (HEAD -> master)
Author: PetrushovDmitry <petrushov39@bk.ru>
Date: Sat Apr 13 05:02:11 2024 +0300

    Added index.html.
(base) hobo@MSI:~/hello$
```