ЛАБОРАТОРНАЯ РАБОТА 1

Математическое моделирование Скандарова Полина Юрьевна

Цель работы

■ Научиться полному взаимодействию с git и разобрать основные его особенности.

```
[pyskandarova@server.pyskandarova.net ~]$ git config --global core.autocrlf
input
[pyskandarova@server.pyskandarova.net ~]$ git config --global core.safecrlf
true
```

Рис. 1: Параметры установки окончаний строк

```
[pyskandarova@server.pyskandarova.net ~]$ git config --global core.quotepat h off
```

Рис. 2: Установка отображения unicode

```
[pyskandarova@server.pyskandarova.net ~]$ mkdir hello
cd hello
touch hello.html
echo "Hello, World!" > hello.html
```

Рис. 3: Создание страницы «Hello, World»

```
[pyskandarova@server.pyskandarova.net hello]$ git init
hint: Using 'master' as the name for the initial branch. This default branch
h 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 comman
d:
hint:
hint:
git branch -m <name>
Initialized empty Git repository in /home/pyskandarova/hello/.git/
```

Рис. 4: Создание репозитория

```
[pyskandarova@server.pyskandarova.net hello]$ git add hello.html
git commit -m "Initial Commit"
[master (root-commit) b8e53aa] Initial Commit
1 file changed, 1 insertion(+)
create mode 100644 hello.html
```

Рис. 5: Добавление файла в репозиторий

```
[pyskandarova@server.pyskandarova.net hello]$ git status
On branch master
nothing to commit, working tree clean
```

Рис. 6: Проверка состояние репозитория



Рис. 7: Изменение содержимого файла hello.html

Рис. 8: Проверка состояния рабочего каталога

Рис. 9: Индексация изменений

```
•
                  pyskandarova@server:~/hello — git commit
Added h2 tag
 Please enter the commit message for your changes. Lines starting
 with '#' will be ignored, and an empty message aborts the commit.
 On branch master
 Changes to be committed:
       modified:
                   hello.html
 Рис. 10: Добавление комментария, сохранение файла и выход из редактора
[pyskandarova@server.pyskandarova.net hello]$ git commit
 [master 216f339] Added h2 tag
 1 file changed, 1 insertion(+), 1 deletion(-)
Рис. 11: Повторная проверка состояния
 1 <<html>
           <body>
                  <h1>Hello, World!</h1>
           /body
 5 </html>
Рис. 12: Изменение страницы «Hello, World»
[pyskandarova@server.pyskandarova.net hello]$ git add hello.html
Рис. 13: Добавление изменения в индекс git
```

```
1 <<html>
                <head>
                 /head
                <body>
                </body>
  7 </html>
Рис. 14: Добавление заголовков HTML к странице «Hello, World»
       [pyskandarova@server.pyskandarova.net hello]$ git commit -m "Added HTML hea
        [master d241150] Added HTML header
         L file changed, 2 insertions(+)
        pyskandarova@server.pyskandarova.net hello]$ git log
         uthor: pyskandarova <1132221815@pfur.ru>
       Date: Thu Feb 20 18:19:05 2025 +0000
           Added HTML header
        uthor: pyskandarova <1132221815@pfur.ru>
        Date: Thu Feb 20 18:18:11 2025 +0000
           Added standard HTML page tags
        Author: pyskandarova <1132221815@pfur.ru>
       Date: Thu Feb 20 07:34:19 2825 +8008
           Added h2 tag
       Author: pyskandarova <1132221815@pfur.ru>
       Date: Thu Feb 20 07:32:56 2025 +0000
        Author: pyskandarova <1132221815@pfur.ru>
       Date: Thu Feb 20 07:26:48 2025 +0000
```

```
Рис. 15: Добавление стандартных тегов страницы
```

Initial Commit

<h1>Hello, World!</h1>

```
[pyskandarova@server.pyskandarova.net hello]$ git commit -m "Added HTML hea
                                                                                       Added standard HTML page tags
[master d241150] Added HTML header
                                                                                    Author: pyskandarova <11322218159pfur.ru>
1 file changed, 2 insertions(+)
                                                                                   Date: Thu Feb 28 87:34:19 2825 +8868
[pyskandarova@server.pyskandarova.net hello]$ git log
                                                                                       Added h2 tag
Author: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 18:19:05 2025 *0000
                                                                                     uthor: pyskandarova <1132221815@pfur.ru>
                                                                                    Date: Thu Feb 20 07:32:56 2025 *0000
   Added HTML header
Author: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 18:18:11 2025 +0000
                                                                                    Author: pyskandarova <1132221815@pfur.ru>
                                                                                   Date: Thu Feb 28 87:26:48 2825 +8888
    Added standard HTML page tags
                                                                                    [pyskandarova@server.pyskandarova.met hello]$ gft checkout <hash>
                                                                                    at hello.html
Author: pyskandarova <11322218150pfur.ru>
                                                                                    ash: syntax error near unexpected token 'newline'
Date: Thu Feb 20 07:34:19 2025 +0000
                                                                                       shead:
                                                                                       </head>
   Added h2 tag
                                                                                          <h1>Hello, World:</h1>
Author: pyskandarova <1132221815@pfur.ru>
                                                                                    [pyskandarova@server.pyskandarova.net hello]$ git checkout master
Date: Thu Feb 20 07:32:56 2025 +0000
                                                                                    cat hello.html
                                                                                    Already on 'master'
   gedit
                                                                                     chtml>
Author: pyskandarova <1132221815@pfur.ru>
                                                                                          <h1>Hello, World:</h1>
Date: Thu Feb 20 07:26:48 2025 +0000
                                                                                      </body>
  Initial Commit
                                                                                    pyskandarova@server.pyskandarova.net hello]$
```

Рис. 16: История

```
pyskandarova@server.pyskandarova.net hello]s git tag
pyskandarova@server.pyskandarova.net hello]$ git log master --all
uthor: pyskandarova <1132221815@pfur.nu>
late: Yhu Feb 20 18:19:05 2025 +0000
   Added HTML header
uthor: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 18:18:11 2025 +0000
   Added standard HTML page tags
withor: pyskandarova <11322218150pfur.ru>
Date: Thu Feb 20 07:34:19 2025 +0000
  Added h2 teg
 thor: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 07:32:56 2025 +0000
uthor: pyskandarova <1132271815@pfur.ru>
Date: Thu Feb 20 07:26:48 2025 +0000
```

Рис. 17: Получение старых версий

[pyskandarova@server.pyskandarova.net hello]\$ git checkout master Previous HEAD position was be2b93f Added standard HTML page tags Switched to branch 'master'

Puc. 21: Переключитесь на ветку master

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

Puc. 22: Изменение hello.html

```
[pyskandarova@server.pyskandarova.net hello]$ git checkout master
cat hello.html
Already on 'master'
<<html>
    <head>
    </head>
    <body>
         <h1>Hello, World!</h1>
    </body>
</html>
[pyskandarova@server.pyskandarova.net hello]$ git tag v1
Рис. 18: Создание тегов версий
[pyskandarova@server.pyskandarova.net 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 fals
HEAD is now at be2b93f Added standard HTML page tags
[pyskandarova@server.pyskandarova.net hello]$ cat hello.html
<<html>
   <body>
       <h1>Hello, World!</h1>
   </body>
[pyskandarova@server.pyskandarova.net hello]$ git tag v1-beta
Рис. 19: Переключение по имени тега
[pyskandarova@server.pyskandarova.net 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)
no changes added to commit (use "git add" and/or "git commit -a")
Рис. 23: Проверка состояния
```

Рис. 20: Просмотр тегов с помощью команды tag

Рис. 26: Индексация изменения

Рис. 27: Проверка состояния

```
[pyskandarova@server.pyskandarova.net hello]$ git reset HEAD hello.html
Unstaged changes after reset:
M hello.html
```

Рис. 28: Выполнение сброса буферной зоны

[pyskandarova@server.pyskandarova.net hello]\$ git checkout hello.html

Puc. 30: Изменение файла hello.html

Рис. 31: Коммит

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

This reverts commit d0845a9bea6596715f0d0f4f07d6c294ed70f7d5.

# Please enter the commit message for your changes. Lines starting # with '#' will be ignored, and an empty message aborts the commit.

# On branch master
# Changes to be committed:
# modified: hello.html
```

Puc. 32: Создание коммита с новыми изменениями, отменяющими предыдущие [pyskandarova@server.pyskandarova.net hello]\$ git tag -d oops

```
Рис. 35: Отметка этой ветки для начала
```

```
skandarova@server.pyskandarova.met hello)$ git log
Author: pyskamdarova <1132221815gpfur.ru>
     Thu Feb 26 28:51:02 2025 +0008
   dops, we didn't want this commit
coult usalisaatsiat6mand1000770000005c3mis79 (tagt wi)
uthor: pyskandarova <11322218359pfur.ru>
      Thu Feb 20 18:19:05 2025 +0008
   Added HTML header
 thor: pyskandarova <2132221815gpfur.ru>
      Thu Feb 26 18:18:11 2625 +6666
   Added standard HTML page tags-
     Thu Feb 20 07:34:19 2025 +0000
   Added h2 tag
wthor: pyskandarova <1132221815@pfur.ru>
rate: Thu Feb 28 87:32:56 2025 +0000
 thor: pyskandarova <1132221815@pfur.ru>
MTH: Thu Feb 20 87:25:48 2025 +0080
  Initial Commit
```

Рис. 33: Проверка лога

```
pyskandarova@server.pyskandarova.net hello)$ git log
uthor: pyskandarova <21%2221825gpfur.ru>
ate: Thu Feb 25 28:51:02 2025 +0000
   dops, we didn't want this commit
uthor: pyskandarova <2132221815@pfur.ru>
     Thu Feb 20 18:19:05 2025 +0008
   Added HTML header
Withor: pyskandarova <2132221515@pfur.ru>
Date: Thu Feb 20 18:18:11 2025 +0088
  Added standard HTML page tags
uthor: pyskanderova <1132221815@pfur.ru>
     Thu Feb 20 87:34:19 2025 +0088
   Added h2 tag
uthor: pyskandarova <2132221815@pfur.ru≻
rate: Thu Feb 28 87:32:56 2825 +8888
withor: pyskandarova <1132221815@pfur.ru>
MTH: Thu Feb 20 67:26:48 2025 +0000
```

Рис. 34: Проверка нашей истории

```
git log -all
                                                                  git log --all
Deleted tag 'oops' (was d0845a9)
                                                                  Deleted tag 'oops' (was d0845a9)
Author: pyskandarova <1132221815@pfur.ru>
                                                                  Author: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 18:19:05 2025 +0000
                                                                 Date: Thu Feb 20 18:19:05 2025 +0000
   Added HTML header
                                                                     Added HTML header
  mmit be2b93f13b47b3fb528ba2592028bf59a1b6c8d2 (tag: v1-beta)
                                                                   mmit be2b93f13b47b3fb528ba2592828bf59a1b6c8d2 (tag: v1-beta)
Author: pyskandarova <1132221815@pfur.ru>
                                                                  Author: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 18:18:11 2025 +0000
                                                                 Date: Thu Feb 20 18:18:11 2025 +0000
    Added standard HTML page tags
                                                                     Added standard HTML page tags
Author: pyskandarova <1132221815@pfur.ru>
                                                                  Author: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 07:34:19 2025 +0000
                                                                 Date: Thu Feb 20 07:34:19 2025 +0000
   Added h2 tag-
                                                                     Added h2 tag-
Author: pyskandarova <1132221815@pfur.ru>
                                                                  Author: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 07:32:56 2025 +0000
                                                                 Date: Thu Feb 20 07:32:56 2025 +0000
   gedit
                                                                     gedit
 Author: pyskandarova <1132221815@pfur.ru>
                                                                  Author: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 07:26:48 2025 +0000
                                                                 Date: Thu Feb 20 07:26:48 2025 +0000
                                                                     Initial Commit
   Initial Commit
Рис. 36: Сброс коммитов к предшествующим коммиту Оорѕ
                                                                  Рис. 37: Просмотр всех коммитов
                                                                  1 <!-- Author: pyskandarova | 1132221815@pfur.ru -->
 1 <!-- Author: pyskandarova -->
                                                                  2 <html>
 2 <html>
                                                                         <head>
                                                                         </head>
            <head>
                                                                         <body>
           </head>
                                                                             <h1>Hello, World!</h1>
                                                                         </body>
           <body>
                                                                  8 </html>
                   <h1>Hello, World!</h1>
                                                                 Рис. 41: Добавление email
                                                                 [pyskandarova@server.pyskandarova.net hello]$ git add hello.html
           </body>
                                                                 git commit --amend -m "Add an author/email comment"
 8 </html>
                                                                 Рис. 42: Изменение предыдущего коммита
                                                                 [pyskandarova@server.pyskandarova.net hello]$ mkdir lib
                                                                 git mv hello.html lib
Рис. 39: Добавление в страницу комментария автора
                                                                 git status
[pyskandarova@server.pyskandarova.net hello]$ git add hello.html
git commit -m "Add an author comment"
                                                                 On branch master
[master 53e22fa] Add an author comment
                                                                  Changes to be committed:
 1 file changed, 2 insertions(+), 1 deletion(-)
                                                                    (use "git restore --staged <file>..." to unstage)
Рис. 40: Коммит
```

Рис. 44: Перемещение файла hello.html в каталог lib

Deleted tag 'oops' (was d0845a9) Author: pyskandarova <1132221815@pfur.ru> Date: Thu Feb 20 18:19:05 2025 +0000 Added HTML header mit be2b93f13b47b3fb528ba2592038bf59a1b6c8d2 (tag: v1-beta) Author: pyskandarova <1132221815@pfur.ru> Date: Thu Feb 20 18:18:11 2025 +0000 Added standard HTML page tags Author: pyskandarova <1132221815@pfur.ru> Date: Thu Feb 20 07:34:19 2025 +0000 Added h2 tag-Author: pyskandarova <1132221815@pfur.ru> Date: Thu Feb 20 07:32:56 2025 +0000 gedit Author: pyskandarova <1132221815@pfur.ru> Date: Thu Feb 20 07:26:48 2025 +0000 Initial Commit Рис. 38: Удаление тега оорѕ

```
[pyskandarova@server.pyskandarova.net hello]$ git log
uthor: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 28:56:58 2025 +0000
   Add an author/email comment
  enit d2A12588758875560ad7880775ea0b02c36c92f0 (tag: v1)
uthor: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 28 18:19:85 2825 +8808
   Added HTML header
uthor: pyskandarova <1132221815@pfur.ru>
ate: Thu Feb 28 18:18:11 2825 +8888
   Added standard HTML page tags
kuthor: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 28 07:34:19 2025 +0808
   Added h2 tag
uthor: pyskandarova <1132221815@pfur.ru>
ate: Thu Feb 28 87:32:56 2825 +8888
kuthor: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 28 07:26:48 2025 +0000
```

Рис. 43: Просмотр истории

```
[pyskandarova@server.pyskandarova.net hello]$ git add index.html [pyskandarova@server.pyskandarova.net hello]$ git cat-file -t <hash>
 1 <html>
                                                                                                                                                          git cat-file -p <hash>
                                                                                git commit -m "Added index.html."
       <body>
                                                                                                                                                          bash: syntax error near unexpected token "newline'
                                                                                fatal: pathspec 'index.html' did not match any files
                                                                                                                                                           bash: syntax error near unexpected token 'newline'
           <iframe src="lib/hello.html" width="200" height="200" />
                                                                                                                                                          [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <treehash>
                                                                                [master 059e557] Added index.html.
      /body
                                                                                                                                                          bash: syntax error near unexpected token 'newline'
                                                                                 1 file changed, 0 insertions(+), 0 deletions(-)
                                                                                                                                                          [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <libhash>
 5 </html>
                                                                                                                                                          bash: syntax error near unexpected token 'newline'
                                                                                 rename hello.html => lib/hello.html (100%)
                                                                                                                                                          [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <hellohash>
                                                                                                                                                           bash: syntax error near unexpected token 'newline'
Рис. 45: Коммит в новом каталоге
                                                                               Puc. 46: Добавление index.html
                                                                                                                                                          [pyskandarova@server.pyskandarova.net hello]$ git checkout -b style
[pyskandarova@server.pyskandarova.net hello]$ ls -C .git
                                                                                [pyskandarova@server.pyskandarova.net hello]$ ls -C .git/objects
                                                                                                                                                          Switched to a new branch 'style'
                 config
                                      Index
                                                         ORIG_HEAD
                                                                                                                                                          On branch style
COMMIT_EDITMSG description hopks
                                                         packed-refs
                                                                                                                                                          Untracked files:
                                                                                                                                                           (use "git add <file>..." to include in what will be committed)
Puc. 47: Каталог .git
                                                                               Рис. 48: Просмотр базы данных объектов
[pyskandarova@server.pyskandarova.net hello]$ ls -C .git/objects/<dir>
                                                                               [pyskandarova@server.pyskandarova.net hello]$ ls .git/refs
                                                                                                                                                           othing added to commit but untracked files present (use "git add" to track
bash: syntax error near unexpected token 'newline'
                                                                               ls .git/refs/heads
Рис. 49: Углубление в базу данных объектов
                                                                                                                                                          Рис. 55: Поиск дерева
                                                                               ls .git/refs/tags
                                                                                                                                                          [pyskandarova@server.pyskandarova.net hello]$ git cat-file -t <hash>
                                                                               cat .git/refs/tags/v1
[pyskandarova@server.pyskandarova.net hello]$ ls .git/refs
                                                                                                                                                          git cat-file -p <hash>
                                                                                                                                                          bash: syntax error near unexpected token "newline'
ls .git/refs/heads
                                                                                                                                                          bash: syntax error near unexpected token 'newline'
                                                                               master
ls .git/refs/tags
                                                                                                                                                          [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <treehash>
                                                                                                                                                          bash: syntax error near unexpected token 'newline'
                                                                               v1 v1-beta
cat .git/refs/tags/v1
                                                                                                                                                          [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <libhash>
                                                                               d2411508758af5569ad7086776ea6b92c36c92f9
                                                                                                                                                          bash: syntax error near unexpected token 'newline'
                                                                               [pyskandarova@server.pyskandarova.net hellols [
                                                                                                                                                          [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <hellohash>
                                                                                                                                                           ash: syntax error near unexpected token 'newline'
master
                                                                                Puc. 50: Просмотр Config File
                                                                                                                                                           pyskandarova@server.pyskandarova.net hello]$ git checkout -b style
v1 v1-beta
                                                                                [pyskandarova@server.pyskandarova.net hello]$ cat .git/HEAD
                                                                                                                                                           witched to a new branch 'style'
d2411508758af5569ad7086776ea6b92c36c92f9
                                                                                ref: refs/heads/master
                                                                                                                                                           on branch style
[pyskandarova@server.pyskandarova.net hellols ]
                                                                                                                                                           ntracked files:
                                                                               Рис. 52: Файл НЕАD
                                                                                                                                                            (use "git add <file>..." to include in what will be committed)
Рис. 51: Изучение веток и тегов
                                                                                [pyskandarova@server.pyskandarova.net hello]$ git cat-file -t <hash>
[pyskandarova@server.pyskandarova.net hello]$ git log --max-count=1
                                                                                git cat-file -p <hash>
                                                                                                                                                          nothing added to commit but untracked files present (use "git add" to track
                                                                                bash: syntax error near unexpected token 'newline'
Author: pyskandarova <1132221815@pfur.ru>
                                                                                                                                                          Рис. 56: Вывод каталога lib
                                                                                bash: syntax error near unexpected token 'newline'
Date: Thu Feb 20 21:00:44 2025 +0000
                                                                                [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <treehash>
                                                                                                                                                          [pyskandarova@server.pyskandarova.net hello]$ git add lib/hello.html
                                                                                                                                                          git commit -m "Hello uses style.css"
                                                                                bash: syntax error near unexpected token 'newline'
    Added index.html.
                                                                                [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <libhash>
                                                                                                                                                          Untracked files:
                                                                                bash: syntax error near unexpected token 'newline'
                                                                                                                                                           (use "git add <file>..." to include in what will be committed)
Рис. 53: Поиск последнего коммита
                                                                                [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <hellohash>
                                                                                bash: syntax error near unexpected token 'newline'
1 <!-- Author: Dmitry S. Kulyabov (kulyabov-ds@rudn.ru) -->
                                                                                [pyskandarova@server.pyskandarova.net hello]$ git checkout -b style
2 <html>
                                                                                                                                                          nothing added to commit but untracked files present (use "git add" to track
3 <head>
                                                                                Switched to a new branch 'style'
                                                                                                                                                          Рис. 58: Создание ветки
4 4 klink type="text/css" rel="stylesheet" media="all" href="style.css" />
                                                                                On branch style
                                                                                                                                                           1 <!-- Author: pyskandarova -->
5 </head>
                                                                                Untracked files:
6 (body>
                                                                                  (use "git add <file>..." to include in what will be committed)
                                                                                                                                                           2 <html>
7 <h1>Hello, World!</h1>
8 </body>
                                                                                                                                                                     <head>
                                                                                nothing added to commit but untracked files present (use "git add" to track
9 </html>
                                                                                                                                                                    </head>
Puc.57:Вывод файла hello.html
[pyskandarova@server.pyskandarova.net hello]$ git add README.md
                                                                               .Puc. 54: Вывод последнего коммита с помощью SHA1 хэша
                                                                                [pyskandarova@server.pyskandarova.net hello]$ git add README.md
                                                                                                                                                                     <body>
git commit -m "Added README"
                                                                               git commit -m "Added README"
                                                                                                                                                                           <h1>Hello, World!</h1>
[master 4b4ec66] Added README
                                                                               [master 4b4ec66] Added README
1 file changed, 1 insertion(+)
                                                                                                                                                                     </body>
                                                                                1 file changed, 1 insertion(+)
create mode 100644 README.md
                                                                                create mode 100644 README.md
Рис. 59: Создание файла css
                                                                               Рис. 61: Коммит
                                                                                                                                                           Рис. 60: Добавление содержимого в файл
```

```
[pyskandarova@server.pyskandarova.net hello]$ git log
                                                                                                                                                       [pyskandarova@server.pyskandarova.net hello]$ git checkout hello.html
1<!-- Author: Dmitry 5. Kulyabov (kulyabov-ds@rudn.ru) -->
                                                                                                                                                       git status
2 <html>
                                                                                                                                                       cat hello.html
                                                                              Author: pyskandarova <1132221815@pfur.ru>
3 <head>
                                                                                                                                                       Updated 1 path from the index
                                                                              Date: Thu Feb 20 20:56:58 2025 +0000
4 4 4 type="text/css" rel="stylesheet" media="all" href="style.css" />
                                                                                                                                                       On branch master
                                                                                                                                                       nothing to commit, working tree clean
5 </head>
                                                                                  Add an author/email comment
                                                                                                                                                       <<html>
6 <body>
                                                                                                                                                          <head>
7 <h1>Hello, World!</h1>
                                                                                                                                                          </head>
8 </body>
                                                                              Author: pyskandarova <1132221815@pfur.ru>
                                                                                                                                                          <body>
9 </html>
                                                                                                                                                              <h1>Hello, World!</h1>
                                                                              Date: Thu Feb 20 18:19:05 2025 +0000
Puc. 62: Обновление файла hello.html
                                                                                                                                                       </html>
                                                                                  Added HTML header
[pyskandarova@server.pyskandarova.net hello]$ git add README.md
                                                                                                                                                       Puc. 68: Переключение на ветку style
git commit -m "Added README"
                                                                                                                                                       [pyskandarova@server.pyskandarova.net hello]$ git add hello.html
                                                                              commit be2b93f13b47b3fb520ba2592028bf59a1b6c8d2 (tag: v1-beta)
[master 4b4ec66] Added README
                                                                                                                                                       git commit --amend -m "Add an author/email comment"
                                                                              Author: pyskandarova <1132221815@pfur.ru>
1 file changed, 1 insertion(+)
                                                                              Date: Thu Feb 20 18:18:11 2025 +0000
                                                                                                                                                       Рис. 69: Создание файла README.md
create mode 100644 README.md
                                                                                                                                                        [pyskandarova@server.pyskandarova.net hello]$ git add README.md
                                                                                  Added standard HTML page tags
Рис. 63: Коммит
                                                                                                                                                       git commit -m "Added README"
                                                                                                                                                        [master 4b4ec66] Added README
1<!-- Author: Dmitry S. Kulyabov (kulyabov-ds@rudn.ru) -->
                                                                                                                                                        1 file changed, 1 insertion(+)
2 <html>
                                                                              Author: pyskandarova <1132221815@pfur.ru>
                                                                                                                                                        create mode 100644 README.md
3 <head>
                                                                              Date: Thu Feb 20 07:34:19 2025 +0000
4 4 k type="text/css" rel="stylesheet" media="all" href="style.css" />
                                                                                                                                                       Puc. 70: Коммит изменений README.md в ветку master
5 </head>
                                                                                  Added h2 tag
                                                                                                                                                       [pyskandarova@server.pyskandarova.net hello]$ git log
6 <body>
                                                                                                                                                       Author: pyskandarova <1132221815@pfur.ru>
7 <h1>Hello, World!</h1>
                                                                               Author: pyskandarova <1132221815@pfur.ru>
                                                                                                                                                       Date: Thu Feb 20 20:56:58 2025 +0000
8 </body>
                                                                               Date: Thu Feb 20 07:32:56 2025 +0000
9 </html>
                                                                                                                                                          Add an author/email comment
Puc. 64: Обновление файла index.html
                                                                                  gedit
[pyskandarova@server.pyskandarova.net hello]$ git add README.md
                                                                                                                                                       Author: pyskandarova <1132221815@pfur.ru>
git commit -m "Added README"
                                                                                                                                                       Date: Thu Feb 20 18:19:05 2025 +0000
                                                                              Author: pyskandarova <1132221815@pfur.ru>
[master 4b4ec66] Added README
                                                                              Date: Thu Feb 20 07:26:48 2025 +0000
                                                                                                                                                          Added HTML header
1 file changed, 1 insertion(+)
create mode 100644 README.md
                                                                                  Initial Commit
                                                                                                                                                       commit be2b93f13b47b3fb520ba2592028bf59a1b6c8d2 (tag: v1-beta)
Рис. 65: Коммит
                                                                              Рис. 66: Навигация по веткам
                                                                                                                                                       Author: pyskandarova <1132221815@pfur.ru>
                                                                                                                                                       Date: Thu Feb 20 18:18:11 2025 +0000
[pyskandarova@server.pyskandarova.net hello]$ git checkout hello.html
                                                                                                   thor: pyskandarova <1132221815@pfur.ru>
te: Thu Feb 20 20:56:58 2025 +0000
git status
                                                                                                                                                           Added standard HTML page tags
cat hello.html
                                                                                                    Add an author/email comment
Updated 1 path from the index
On branch master
                                                                                                   thor: pyskandarova <1132221815@pfur.ru>
te: Thu Feb 20 18:19:05 2025 +0000
                                                                                                                                                       Author: pyskandarova <1132221815@pfur.ru>
nothing to commit, working tree clean
                                                                                                                                                       Date: Thu Feb 20 07:34:19 2025 +0000
                                                                                                    Added HTML header
<<html>
                                                                                                                                                           Added h2 tag
    <head>
                                                                                                      Thu Feb 20 18:18:11 2025 +0000
    </head>
                                                                                                    Added standard HTML page tags
    <body>
                                                                                                                                                       Author: pyskandarova <1132221815@pfur.ru>
         <h1>Hello, World!</h1>
                                                                                                   hor: pyskandarova <1132221815@pfur.ru>
                                                                                                                                                       Date: Thu Feb 20 07:32:56 2025 +0000
                                                                                                    Added h2 tag
</html>
                                                                                                                                                          gedit
Рис. 67: Переключение на ветку master
                                                                                                   hor: pyskandarova <1132221815@pfur.ru>
                                                                                                                                                       Author: pyskandarova <1132221815@pfur.ru>
                                                                                                                                                       Date: Thu Feb 20 07:26:48 2025 +0000
                                                                                                   hor: pyskandarova <1132221815@pfur.ru>
                                                                                                                                                          Initial Commit
                                                                                                      Рис. 72: Слияние веток
```

Рис. 71: Просмотр текущих веток

```
[pyskandarova@server.pyskandarova.net hello]$ git add README.md
                                                                           [pyskandarova@server.pyskandarova.net hello]$ git add hello.html
git commit -m "Added README"
                                                                           git commit --amend -m "Add an author/email comment"
[master 4b4ec66] Added README
                                                                           Рис. 77: Попытка объединения
1 file changed, 1 insertion(+)
 create mode 100644 README.md
                                                                            1 <!-- Author: Dmitry 5. Kulyabov (kulyabov-ds@rudn.ru) -->
                                                                           2 <html>
Рис. 73: Возвращение в ветку master
                                                                           3 <head>
                                                                           4 4 4 type="text/css" rel="stylesheet" media="all" href="style.css" />
1 <!-- Author: Dmitry S. Kulyabov (kulyabov-ds@rudn.ru) -->
                                                                           5 </head>
2 <html>
                                                                           6 <body>
                                                                           7 <hi>Hello, World! </hi>
3 <head>
4 Klink type="text/css" rel="stylesheet" media="all" href="style.css" />
                                                                           8 </body>
                                                                           9 </html>
6 <body>
                                                                           Рис. 78: Решение конфликта
7 <h1>Hello, World!</h1>
8 </body>
                                                                           [pyskandarova@server.pyskandarova.net hello]$ git add README.md
9 </html>
                                                                           git commit -m "Added README"
                                                                           [master 4b4ec66] Added README
Рис. 74: Внесение изменений в файл
                                                                           1 file changed, 1 insertion(+)
[pyskandarova@server.pyskandarova.net hello]$ git add README.md
                                                                           create mode 100644 README.md
git commit -m "Added README"
                                                                           Рис. 79: Коммит решения конфликта
[master 4b4ec66] Added README
1 file changed, 1 insertion(+)
                                                                           [pyskandarova@server.pyskandarova.net hello]$ git log
create mode 100644 README.md
                                                                           Author: pyskandarova <1132221815@pfur.ru>
Рис. 75: Коммит
                                                                           Date: Thu Feb 20 20:56:58 2025 +0000
[pyskandarova@server.pyskandarova.net hello]$ git log
                                                                              Add an author/email comment
Author: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 20:56:58 2025 +0000
                                                                           Author: pyskandarova <1132221815@pfur.ru>
   Add an author/email comment
                                                                           Date: Thu Feb 20 18:19:05 2025 +0000
                                                                               Added HTML header
Author: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 18:19:05 2025 +0000
                                                                             mm1t be2b93f13b47b3fb520ba2592028bf59a1b6c8d2 (tag: v1-beta)
                                                                           Author: pyskandarova <1132221815@pfur.ru>
   Added HTML header
                                                                                                                                                      Initial Commit
                                                                           Date: Thu Feb 20 18:18:11 2025 +0000
  mm1t be2b93f13b47b3fb520ba2592028bf59a1b6c8d2 (tag: v1-beta)
Author: pyskandarova <1132221815@pfur.ru>
                                                                              Added standard HTML page tags
Date: Thu Feb 20 18:18:11 2025 +0000
   Added standard HTML page tags
                                                                           Author: pyskandarova <1132221815@pfur.ru>
                                                                           Date: Thu Feb 20 07:34:19 2025 +0000
Author: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 07:34:19 2025 +0000
                                                                              Added h2 tag
   Added h2 tag
                                                                           Author: pyskandarova <1132221815@pfur.ru>
                                                                           Date: Thu Feb 20 07:32:56 2025 +0000
 Author: pyskandarova <1132221815@pfur.ru>
Date: Thu Feb 20 07:32:56 2025 +0000
                                                                              gedit
   gedit
                                                                           Author: pyskandarova <1132221815@pfur.ru>
Author: pyskandarova <1132221815@pfur.ru>
                                                                           Date: Thu Feb 20 07:26:48 2025 +0000
Date: Thu Feb 20 07:26:48 2025 +0000
                                                                              Initial Commit
   Initial Commit
Рис. 76: Просмотр веток
```

Рис. 80: Возвращение на ветку style

[pyskandarova@server.pyskandarova.net hello]\$ git add hello.html git commit --amend -m "Add an author/email comment" Puc. 81: Сброс ветки style к нужному коммиту

[pyskandarova@server.pyskandarova.net hello]\$ git log Author: pyskandarova <1132221815@pfur.ru> Date: Thu Feb 20 20:56:58 2025 +0000 Add an author/email comment ommit d2411588758af5589ad7886776ea6b92c36c92f9 (tag: v1) Author: pyskandarova <1132221815@pfur.ru> Date: Thu Feb 20 18:19:05 2025 +0000 Added HTML header commit be2b93f13b47b3fb529ba2592028bf59a1b6c8d2 (tag: v1-beta) Author: pyskandarova <1132221815@pfur.ru> Date: Thu Feb 20 18:18:11 2025 +0000 Added standard HTML page tags Author: pyskandarova <1132221815@pfur.ru> Date: Thu Feb 20 07:34:19 2025 +0000 Added h2 tag Author: pyskandarova <1132221815@pfur.ru> Date: Thu Feb 20 07:32:56 2025 +0000 gedit Author: pyskandarova <1132221815@pfur.ru> Date: Thu Feb 20 07:26:48 2025 +0000

Рис. 82: Проверка ветки



Рис. 83: Сброс ветки master

```
[pyskandarova@server.pyskandarova.net hello]$ git add hello.html
                                                                                                                                [pyskandarova@server.pyskandarova.net hello]$ git log
                                                               Ivan@DESKTOP-08NN2QL MINGW64 ~/MD/lab01/hello (master)
git commit --amend -m "Add an author/email comment"
                                                              $ cd
                                                                                                                                Author: pyskandarova <1132221815@pfur.ru>
Рис. 84: Перебазирование
                                                                                                                                Date: Thu Feb 20 20:56:58 2025 +0000
 [pyskandarova@server.pyskandarova.net hello]$ git checkout hello.html
                                                              Ivan@DESKTOP-08NNZQL MINGW64 ~
                                                               $ cd MD/lab01
                                                                                                                                    Add an author/email comment
cat hello.html
Updated 1 path from the index
                                                               Ivan@DESKTOP-08NN2QL MINGW64 ~/MD/lab01
On branch master
nothing to commit, working tree clean
                                                                                                                                Author: pyskandarova <1132221815@pfur.ru>
                                                              hello/
                                                                                                                                Date: Thu Feb 20 18:19:05 2025 +0000
   <head>
                                                               Ivan@DESKTOP-08NN2QL MINGW64 ~/MD/lab01
    </head>
                                                                                                                                    Added HTML header
    <body>
                                                               $ pwd
       <h1>Hello, World!</h1>
                                                              /c/Users/Ivan/MD/Tab01
   </body>
                                                                                                                                commit be2b93f13b47b3fb520ba2592028bf59a1b6c8d2 (tag: v1-beta)
                                                               Evan@DESKTOP-08NN2QL MINGW64 ~/MD/lab01
                                                                                                                                Author: pyskandarova <1132221815@pfur.ru>
Рис. 85: Слияние style в master
                                                                                                                                Date: Thu Feb 20 18:18:11 2025 +0000
[pyskandarova@server.pyskandarova.net hello]$ git log
  ommit 7e8ad844480a6398df31d88cb7b683e281f636e6 (HEAD -> master)
                                                                                                                                    Added standard HTML page tags
                                                              Рис. 87: Клонирование репозиториев
Author: pyskandarova <1132221815@pfur.ru>
                                                               Ivan@DESKTOP-08NN2QL MINGW64 ~/MD/lab01
Date: Thu Feb 20 20:56:58 2025 +0000
                                                               $ git clone hello cloned_hello
                                                                                                                                Author: pyskandarova <1132221815@pfur.ru>
   Add an author/email comment
                                                               Cloning into 'cloned_hello'...
                                                                                                                                Date: Thu Feb 20 07:34:19 2025 +0000
                                                               done.
Author: pyskandarova <1132221815@pfur.ru>
                                                                                                                                    Added h2 tag
                                                               [van@DESKTOP-08NN2QL MINGW64 ~/MD/lab01
Date: Thu Feb 20 18:19:05 2025 +0000
                                                               $ 15
                                                               cloned_hello/ hello/
   Added HTML header
                                                                                                                                Author: pyskandarova <1132221815@pfur.ru>
                                                               Evan@DESKTOP-08NN2QL MINGW64 ~/MD/Tab01
                                                                                                                                Date: Thu Feb 20 07:32:56 2025 +0000
 ommit be2b93f13b47b3fb520ba2592028bf59a1b6c8d2 (tag: v1-beta)
Author: pyskandarova <1132221815@pfur.ru>
                                                                                                                                   gedit
Date: Thu Feb 20 18:18:11 2025 +0000
                                                              Рис. 88: Создание клона репозитория hello
   Added standard HTML page tags
                                                               Ivan@DESKTOP-08NN2QL MINGW64 ~/MD/lab01
                                                                                                                                Author: pyskandarova <1132221815@pfur.ru>
                                                               s cd cloned_hello
                                                                                                                                Date: Thu Feb 20 07:26:48 2025 +0000
Author: pyskandarova <1132221815@pfur.ru>
                                                               van@DESKTOP-08NN2QL MINGW64 ~/MD/lab01/cloned_hello (master)
Date: Thu Feb 20 07:34:19 2025 +0000
                                                                                                                                    Initial Commit
                                                               $ 15
                                                               README.md index.html lib/
                                                                                                                                  Рис. 90: Просмотр истории репозитория
   Added h2 tag
                                                                                                                                 [pyskandarova@server.pyskandarova.net hello]$ git add index.html
                                                                vanWDESKTOP-08NN2QL MINGW64 ~/MD/Tab01/cloned_hello (master)
                                                                                                                                git commit -m "Added index.html."
Author: pyskandarova <1132221815@pfur.ru>
                                                                                                                                fatal: pathspec 'index.html' did not match any files
Date: Thu Feb 20 07:32:56 2025 +0000
                                                                                                                                [master 059e557] Added index.html.
                                                              Рис. 89: Просмотр клонированного репозитория
                                                                                                                                 1 file changed, 0 insertions(+), 0 deletions(-)
                                                               [pyskandarova@server.pyskandarova.net hello]$ git checkout hello.html
                                                                                                                                 rename hello.html => lib/hello.html (100%)
                                                               git status
                                                               cat hello.html
                                                                                                                                Рис. 92: Просмотр доступных веток в клонированном репозитории
Author: pyskandarova <1132221815@pfur.ru>
                                                              Updated 1 path from the index
Date: Thu Feb 20 07:26:48 2025 +0000
                                                              On branch master
                                                               nothing to commit, working tree clean
   Initial Commit
Рис. 86: Просмотр логов
                                                                  <head>
                                                                  </head>
                                                                  <body>
                                                                      <h1>Hello, World!</h1>
                                                                  </body>
                                                               </html>
```

Puc. 91: Изучение origin

```
[pyskandarova@server.pyskandarova.net hello]$ git checkout hello.html
 [pyskandarova@server.pyskandarova.net hello]$ git checkout hello.html
                                                                                                                                                       git cat-file -p <hash>
                                                                            git status
 git status
                                                                                                                                                       bash: syntax error near unexpected token 'newline'
                                                                            cat hello.html
 cat hello.html
                                                                                                                                                       bash: syntax error near unexpected token 'newline'
 Updated 1 path from the index
                                                                            Updated 1 path from the index
                                                                                                                                                       [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <treehash>
                                                                                                                                                       bash: syntax error near unexpected token "newline'
                                                                            On branch master
 On branch master
                                                                                                                                                       [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <libhash>
 nothing to commit, working tree clean
                                                                            nothing to commit, working tree clean
                                                                                                                                                       bash: syntax error near unexpected token 'newline'
                                                                            <<html>
 <<html>
                                                                                                                                                       [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <hellohash>
                                                                                                                                                       bash: syntax error near unexpected token 'newline'
                                                                                <head>
    <head>
                                                                                                                                                       [pyskandarova@server.pyskandarova.net hello]$ git checkout -b style
                                                                                </head>
    </head>
    <body>
                                                                                <body>
                                                                                                                                                       Switched to a new branch 'style'
                                                                                    <h1>Hello, World!</h1>
                                                                                                                                                       On branch style
         <h1>Hello, World!</h1>
                                                                                                                                                       Untracked files:
                                                                                </body>
    </body>
                                                                                                                                                        (use "git add <file>... " to include in what will be committed)
                                                                             /html>
 /html>
Рис. 93: Просмотр всех веток
                                                                           Рис. 97: Извлечение изменений
                                                                                                                                                       nothing added to commit but untracked files present (use "git add" to track
 [pyskandarova@server.pyskandarova.net hello]$ git add index.html
                                                                            [pyskandarova@server.pyskandarova.net hello]$ git add index.html
                                                                                                                                                          Рис. 102: Создание чистого репозитория
 git commit -m "Added index.html."
                                                                            git commit -m "Added index.html."
 fatal: pathspec 'index.html' did not match any files
                                                                            fatal: pathspec 'index.html' did not match any files
                                                                                                                                                        [pyskandarova@server.pyskandarova.net hello]$ git add index.html
 [master 059e557] Added index.html.
                                                                             [master 059e557] Added index.html.
                                                                                                                                                        git commit -m "Added index.html."
                                                                                                                                                        fatal: pathspec 'index.html' did not match any files
 1 file changed, 0 insertions(+), 0 deletions(-)
                                                                             1 file changed, 0 insertions(+), 0 deletions(-)
                                                                                                                                                        [master 059e557] Added index.html.
 rename hello.html => lib/hello.html (100%)
                                                                             rename hello.html => lib/hello.html (100%)
                                                                                                                                                        1 file changed, 0 insertions(+), 0 deletions(-)
Рис. 94: Переход в репозиторий hello
                                                                                                                                                        rename hello.html => lib/hello.html (100%)
                                                                            Puc. 99: Слив извлеченных изменений в локальную ветку master
                                                                            [pyskandarova@server.pyskandarova.net hello]$ git add index.html Рис. 103: Добавление удаленного репозитория
  README.md – Блокнот
                                                                            git commit -m "Added index.html."
 Файл Правка Формат Вид Справка
                                                                            fatal: pathspec 'index.html' did not match any files
                                                                                                                                                         1 This is the Hello World example from the git tutorial,
                                                                             [master 059e557] Added index.html.
 This is the Hello World example from the git tutorial.
                                                                                                                                                        Рис. 104: Редактирование файла README.md
                                                                             1 file changed, 0 insertions(+), 0 deletions(-)
This is the Hello World example from the git tutorial.
                                                                                                                                                        pyskandarova@server.pyskandarova.net hello]$ git cat-file -t <hash>
                                                                             rename hello.html => lib/hello.html (100%)
                                                                                                                                                         it cat-file -p <hash>
                                                                                                                                                         ash: syntax error near unexpected token 'newline'
                                                                            Puc. 100: Объединение fetch и merge в одну команду
                                                                                                                                                         sh: syntax error near unexpected token 'newline'
                                                                             [pyskandarova@server.pyskandarova.net hello]$ git cat-file -t <hash>
                                                                                                                                                        [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <treehash>
                                                                                                                                                         ash: syntax error near unexpected token "newline'
                                                                             git cat-file -p <hash>
                                                                                                                                                        [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <libhash>
Рис. 95: Внесение изменения в файл README.md
                                                                             bash: syntax error near unexpected token 'newline'
                                                                                                                                                        bash: syntax error near unexpected token 'newline'
                                                                             bash: syntax error near unexpected token 'newline'
                                                                                                                                                        (pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <hellohash>
 [pyskandarova@server.pyskandarova.net hello]$ git add index.html
                                                                             [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <treehash>
                                                                                                                                                        bash: syntax error near unexpected token 'newline'
 git commit -m "Added index.html."
                                                                                                                                                        [pyskandarova@server.pyskandarova.net hello]$ git checkout -b style
                                                                             bash: syntax error near unexpected token 'newline'
fatal: pathspec 'index.html' did not match any files
                                                                             [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <libhash>
                                                                                                                                                        Switched to a new branch 'style'
 [master 059e557] Added index.html.
                                                                             bash: syntax error near unexpected token 'newline'
                                                                                                                                                        On branch style
                                                                             [pyskandarova@server.pyskandarova.net hello]$ git cat-file -p <hellohash>
 1 file changed, 0 insertions(+), 0 deletions(-)
                                                                                                                                                        Untracked files:
                                                                             bash: syntax error near unexpected token 'newline'
                                                                                                                                                         (use "git add <file>..." to include in what will be committed)
 rename hello.html => lib/hello.html (100%)
                                                                             [pyskandarova@server.pyskandarova.net hello]$ git checkout -b style
                                                                             git status
Рис. 96: Добавление изменения и создание коммита
                                                                                                                                                        nothing added to commit but untracked files present (use "git add" to track
                                                                             Switched to a new branch 'style'
 [pyskandarova@server.pyskandarova.net hello]$ git add index.html
                                                                             On branch style
                                                                                                                                                       Рис. 105: Коммит и отправка изменений в общий репозиторий
 git commit -m "Added index.html."
                                                                             Untracked files:
 fatal: pathspec 'index.html' did not match any files
                                                                              (use "git add <file>..." to include in what will be committed)
 [master 059e557] Added index.html.
```

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

Рис. 101: Добавление локальной ветки, которая отслеживает удаленную ветку

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

rename hello.html => lib/hello.html (100%)

Рис. 98: Проверка README.md

ing added to commit but untracked files present (use "git add" to t Рис. 106: Извлечение общих изменений

se "git add <file>..." to include in what will be committe

ed to a new branch 'style

[pyskandarova@server.pyskandarova.net hello]\$ git cat-file -t <hash>

Вывод

■ В результате выполнения лабораторной работы мы научились полному взаимодействию с git и разобрали основные его особенности.