

**РОССИЙСКИЙ УНИВЕРСИТЕТ ДРУЖБЫ НАРОДОВ**

**Факультет физико-математических и естественных наук**

**Кафедра прикладной информатики и теории вероятностей**

**ОТЧЕТ**

**ПО ЛАБОРАТОРНОЙ РАБОТЕ № 1.**

*дисциплина: Математическое моделирование*

Студент: Зорин Илья

Группа: НПИбд-02-18

**МОСКВА**

2021 г.

## **Цель.**

Приобрести навыки работы с git.

## Ход выполнения работы.

- Провёл первичную настройку git (рис. 1).

```
MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01
$ git config --global user.name "imzorin-rudn"
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$ git config --global user.email "1032182596@pfur.ru"
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$ git config --global core.autocrlf input
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$ git config --global core.safecrlf true
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$ git config --global core.quotepath off
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$ |
```

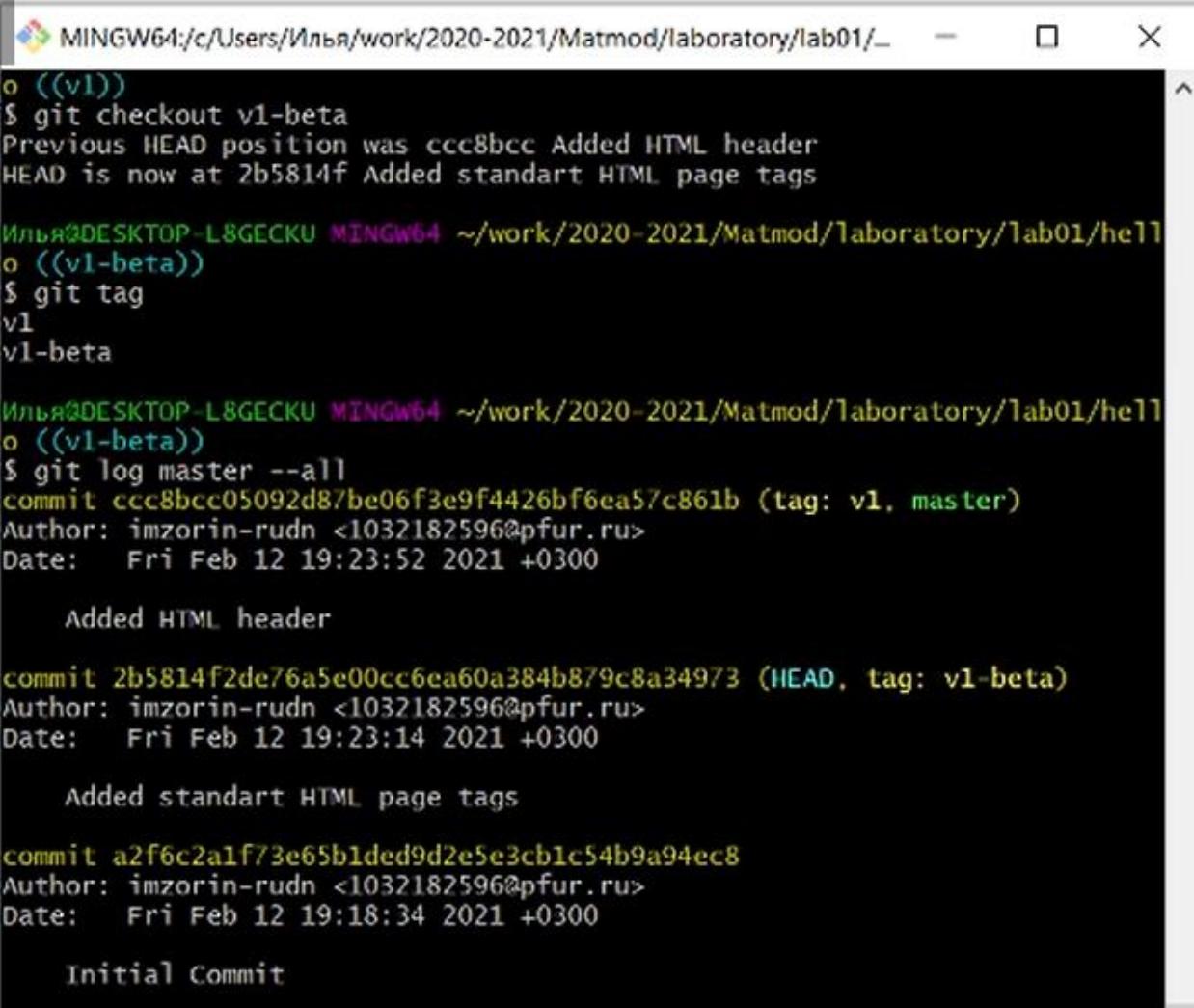
Рис. 1

- Создал проект (рис. 2).

```
MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01/_/
$ touch hello.html
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o
$ echo "Hello, World!" > hello.html
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o
$ git init
Initialized empty Git repository in C:/Users/Илья/work/2020-2021/Matmod/lab
oratory/lab01/hello/.git/
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (master)
$ git add hello.html
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (master)
$ git commit -m "Initial Commit"
[master (root-commit) a2f6c2a] Initial Commit
 1 file changed, 1 insertion(+)
  create mode 100644 hello.html
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (master)
$ git status
On branch master
nothing to commit, working tree clean
```

Рис. 2

3. Задал индексацию изменений (рис. 3).



```
MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01/_ - X
o ((v1))
$ git checkout v1-beta
Previous HEAD position was ccc8bcc Added HTML header
HEAD is now at 2b5814f Added standart HTML page tags

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/he...
o ((v1-beta))
$ git tag
v1
v1-beta

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/he...
o ((v1-beta))
$ git log master --all
commit ccc8bcc05092d87be06f3e9f4426bf6ea57c861b (tag: v1, master)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:23:52 2021 +0300

    Added HTML header

commit 2b5814f2de76a5e00cc6ea60a384b879c8a34973 (HEAD, tag: v1-beta)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:23:14 2021 +0300

    Added standart HTML page tags

commit a2f6c2a1f73e65b1ded9d2e5e3cb1c54b9a94ec8
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:18:34 2021 +0300

Initial Commit
```

Рис. 3

4. Отключил локальные изменения до индексации (рис. 4).

```
MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01/_ - □ X
$ 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")

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ git checkout hello.html
Updated 1 path from the index

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ git status
On branch master
nothing to commit, working tree clean

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ cat hello.html
<html>
  <head>
  </head>
  <body>
    <h1>Hello, world!<h1>
  </body>
</html>

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ vim hello.html
```

Рис. 4

5. Отменил проиндексированные изменения (рис. 5).

```
MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01/_ - □ ×
$ vim hello.html

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (master)
$ git add hello.html

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   hello.html

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (master)
$ git reset HEAD hello.html
Unstaged changes after reset:
M       hello.html

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (master)
$ git checkout hello.html
Updated 1 path from the index

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (master)
$ git status
On branch master
nothing to commit, working tree clean

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (master)
$ vim
```

Рис. 5

6. Отменил коммиты (рис. 6).

MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01/\_ - □ X

```
o (master)
$ git log --all
commit 8a29fbf15fed852e1cadbb0912b70b6d69376eb0 (tag: oops)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:34:07 2021 +0300

    This reverts commit 51849985880319ae4db31876019e623a042d5741.

commit 51849985880319ae4db31876019e623a042d5741
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:33:56 2021 +0300

    Ooops

commit ccc8bcc05092d87be06f3e9f4426bf6ea57c861b (HEAD -> master, tag: v1)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:23:52 2021 +0300

    Added HTML header

commit 2b5814f2de76a5e00cc6ea60a384b879c8a34973 (tag: v1-beta)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:23:14 2021 +0300

    Added standart HTML page tags

commit a2f6c2a1f73e65b1ded9d2e5e3cb1c54b9a94ec8
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:18:34 2021 +0300

    Initial Commit

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/he11
o (master)
$ |
```

Рис. 6

7. Удалил коммит из ветки (рис. 7).

```
MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01/_ - □ ×
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/he11o (master)
$ git reset --hard v1
HEAD is now at ccc8bcc Added HTML header

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/he11o (master)
$ git log
commit ccc8bcc05092d87be06f3e9f4426bf6ea57c861b (HEAD -> master, tag: v1)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:23:52 2021 +0300

    Added HTML header

commit 2b5814f2de76a5e00cc6ea60a384b879c8a34973 (tag: v1-beta)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:23:14 2021 +0300

    Added standart HTML page tags

commit a2f6c2a1f73e65b1ded9d2e5e3cb1c54b9a94ec8
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:18:34 2021 +0300

    Initial Commit

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/he11o (master)
$ git log --all
commit 8a29fbf15fed852e1cadbb0912b70b6d69376eb0 (tag: oops)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:34:07 2021 +0300

    This reverts commit 51849985880319ae4db31876019e623a042d5741.
```

Рис. 7

8. Переместил файлы (рис. 8).

The screenshot shows a terminal window titled 'MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01/\_'. The window contains the following text:

```
Add an author/email comment

commit 2b5814f2de76a5e00cc6ea60a384b879c8a34973 (tag: v1-beta)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:23:14 2021 +0300

    Added standart HTML page tags

commit a2f6c2alf73e65b1ded9d2e5e3cb1c54b9a94ec8
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:18:34 2021 +0300

Initial Commit

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ mkdir lib

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ git mv hello.html lib

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    renamed:    hello.html -> lib/hello.html

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ |
```

Рис. 8

9. Поработал с объектами git (рис. 9).

```
MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01/_ - □ X
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ git log --max-count=1
commit 854106130527e0051da8615152909327c1be8a70 (HEAD -> master)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:44:30 2021 +0300

    Added index.html

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ git cat-file -t 854106130
commit

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ git cat-file -p 854106130
tree 65ae69f08fbccbc6c6adc011db404f52166c5107
parent 3ad63d988283965460ea26206083b6ef64c5e83f
author imzorin-rudn <1032182596@pfur.ru> 1613148270 +0300
committer imzorin-rudn <1032182596@pfur.ru> 1613148270 +0300

    Added index.html

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ git cat-file -p 65ae69f08
100644 blob cf5bc0ea78289c0be141b578ca407f1159bd25bc    index.html
040000 tree f23c78f1e7f0bd93caeba8f75b94c398b3d79099    lib

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ git cat-file -p f23c78f
```

Рис. 9

10. Создал ветку (рис. 10).

```
MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01/_ - □ X
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (master)
$ git checkout -b style
Switched to a new branch 'style'

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (style)
$ git status
On branch style
nothing to commit, working tree clean

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (style)
$ touch lib/style.css

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (style)
$ vim lib/style.css

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (style)
$ git add lib/style.css

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (style)
$ git commit -m "Added css stylesheet"
[style 71363ef] Added css stylesheet
 1 file changed, 3 insertions(+)
 create mode 100644 lib/style.css

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hell
o (style)
$ |
```

Рис. 10

11. Произвёл слияние веток (рис. 11).

```
MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01/_ - □ X
* commit d4e2b48b67d086341a31a0186c18d56291ab9c8d (HEAD -> style)
| Merge: 2706401 ff8f3bf
| Author: imzorin-rudn <1032182596@pfur.ru>
| Date:   Fri Feb 12 20:02:02 2021 +0300
|
|       Merge branch 'master' into style
|
* commit ff8f3bf28da2221287abc7528c184afba67e7326 (master)
| Author: imzorin-rudn <1032182596@pfur.ru>
| Date:   Fri Feb 12 20:01:07 2021 +0300
|
|       Added README
|
* commit 270640192f3dd07d4bac3645171d8896ad8dce4c
| Author: imzorin-rudn <1032182596@pfur.ru>
| Date:   Fri Feb 12 19:57:06 2021 +0300
|
|       Updated index.html
|
* commit 3fd92b2d86edbc1183a90607cc1802e874bc0e5c
| Author: imzorin-rudn <1032182596@pfur.ru>
| Date:   Fri Feb 12 19:54:48 2021 +0300
|
|       Hello uses style.css
|
* commit 71363ef0895a99d6195a1891cf41921f48a7c55a
| Author: imzorin-rudn <1032182596@pfur.ru>
| Date:   Fri Feb 12 19:52:23 2021 +0300
|
|       Added css stylesheet
|
* commit 854106130527e0051da8615152909327c1be8a70
| Author: imzorin-rudn <1032182596@pfur.ru>
| Date:   Fri Feb 12 19:44:30 2021 +0300
|:
|:
```

Рис. 11

12. Создал и разрешил конфликт (рис. 12).

MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01/\_ - X

```
Life is great

* commit d4e2b48b67d086341a31a0186c18d56291ab9c8d (style)
Merge: 2706401 ff8f3bf
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 20:02:02 2021 +0300

    Merge branch 'master' into style

* commit ff8f3bf28da2221287abc7528c184afba67e7326
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 20:01:07 2021 +0300

    Added README

* commit 270640192f3dd07d4bac3645171d8896ad8dce4c
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:57:06 2021 +0300

    Updated index.html

* commit 3fd92b2d86edbc1183a90607cc1802e874bc0e5c
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:54:48 2021 +0300

    Hello uses style.css

* commit 71363ef0895a99d6195a1891cf41921f48a7c55a
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:52:23 2021 +0300
```

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/he11  
o (master)  
\$ git chec

Рис. 12

13. Сбросил ветки style and master (рис. 13).

```
MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01/_ - □ ×
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:44:30 2021 +0300

    Added index.html

* commit 3ad63d988283965460ea26206083b6ef64c5e83f
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:23:52 2021 +0300

    Add an author/email comment

* commit 2b5814f2de76a5e00cc6ea60a384b879c8a34973 (tag: v1-beta)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:23:14 2021 +0300

    Added standart HTML page tags

* commit a2f6c2a1f73e65b1ded9d2e5e3cb1c54b9a94ec8
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:18:34 2021 +0300

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ git reset --hard ff8f3bf28
HEAD is now at ff8f3bf Added README

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/hello (master)
$ git checkout master
```

Рис. 13

14. Произвёл клонирование репозиториев (рис. 14).

```
MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01 - X ^

commit 854106130527e0051da8615152909327c1be8a70
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:44:30 2021 +0300

    Added index.html

commit 3ad63d988283965460ea26206083b6ef64c5e83f
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:23:52 2021 +0300

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/he11o (master)
$ cd ..

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$ pwd
/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$ ls
hello/

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$ git clone hello cloned_hello
Cloning into 'cloned_hello'...
done.

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$ ls
cloned_hello/  hello/

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$
```

Рис. 14

15. Поработал с изменениями (рис. 15).

```
MINGW64:/c/Users/Илья/work/2020-2021/Matmod/laboratory/lab01 - □ X
ed_hello (master)
$ git log --max-count+2
fatal: unrecognized argument: --max-xount+2

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/clone
ed_hello (master)
$ git log --max-count=2
commit 55df4f2974709fefb3f8995a3b935b10eab3aa4a (HEAD -> master, origin/m
ster, origin/HEAD)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 20:17:01 2021 +0300

    Changed README in original repo

commit a520ffebf288147afc71818e2516d531b2cea54b (origin/style, style)
Author: imzorin-rudn <1032182596@pfur.ru>
Date:   Fri Feb 12 19:57:06 2021 +0300

    Updated index.html

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01/clone
ed_hello (master)
$ cd ..

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$ git clone --bare hello hello.git
Cloning into bare repository 'hello.git'...
done.

Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$ ls hello.git
HEAD config description hooks/ info/ objects/ packed-refs refs/
Илья@DESKTOP-L8GECKU MINGW64 ~/work/2020-2021/Matmod/laboratory/lab01
$
```

Рис. 15

**Вывод,**

Приобрёл навыки работы с git.

**Описание процесса выполнения работы.**

**Вывод.**

**Контрольные вопросы.**