

Лабораторная работа №1. Работа с git

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11 February, 2022

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Цель работы

Ознакомиться с системой управления версиями git.

Задачи

1. Научиться работе с репозиториями
2. Научиться работе с коммитами и индексацией
3. Научиться просматривать список произведенных изменений.
4. Научиться работе с ветками

Научились создавать репозитории, добавлять файлы в них, проверять их состояние, клонировать и создавать чистые репозитории.

```
bakla@DESKTOP-BBMDGE3 MINGW64 ~/mathmod/hello
$ git init
Initialized empty Git repository in C:/Users/bakla/mathmod/hello/.git/
```

```
bakla@DESKTOP-BBMDGE3 MINGW64 ~/mathmod/hello (master)
$ git add hello.html

bakla@DESKTOP-BBMDGE3 MINGW64 ~/mathmod/hello (master)
$ git commit -m "Initial Commit"
[master (root-commit) 930a70d] Initial Commit
1 file changed, 1 insertion(+)
create mode 100644 hello.html
```

```
bakla@DESKTOP-BBMDGE3 MINGW64 ~/mathmod/hello (master)
$ git status
On branch master
nothing to commit, working tree clean
```

```
bakla@DESKTOP-BBMDGE3 MINGW64 ~/mathmod
$ git clone hello cloned_hello
Cloning into 'cloned_hello'...
done.

bakla@DESKTOP-BBMDGE3 MINGW64 ~/mathmod
$ ls
cloned_hello/  hello/
```

```
bakla@DESKTOP-BBMDGE3 MINGW64 ~/mathmod/cloned_hello (master)
$ cd ..

bakla@DESKTOP-BBMDGE3 MINGW64 ~/mathmod
$ git clone --bare hello hello.git
Cloning into bare repository 'hello.git'...
done.

bakla@DESKTOP-BBMDGE3 MINGW64 ~/mathmod
$ ls hello.git
HEAD  config  description  hooks/  info/  objects/  packed-refs  refs/
```

Работа с коммитами и индексацией

Научились делать индексацию и коммит изменений, сбрасывать их, изменить предыдущий коммит.

```
mb@mb65c70p-b90d63 ~/mathmod/hello (master)
$ git reset --hard v1
HEAD is now at c3bcb4e Added HTML header
mb@mb65c70p-b90d63 ~/mathmod/hello (master)
$ git log
commit c3bcb4e17866c3730c799edac7746daf4a185 (HEAD -> master, tag: v1)
Author: asb@yashov <asb@yashov223@yandex.ru>
Date:   Thu Feb 10 14:29:18 2022 +0300

    Added HTML header

commit 3018ba2e5dc0b6e8270b5ff51ed2a1dafa2408 (tag: v1-beta)
Author: asb@yashov <asb@yashov223@yandex.ru>
Date:   Thu Feb 10 14:27:34 2022 +0300

    Added standard HTML page tags

commit F3210ff76d0c830d74760c0c0d4d833996d0ff3
Author: asb@yashov <asb@yashov223@yandex.ru>
Date:   Thu Feb 10 14:12:03 2022 +0300

    Added hi tag

commit 930a70889c0f6bc774f0e1cd0c497603bae3b04
Author: asb@yashov <asb@yashov223@yandex.ru>
Date:   Thu Feb 10 13:56:38 2022 +0300

    Initial Commit
```

```
mb@mb65c70p-b90d63 ~/mathmod/hello (master)
$ git add hello.html
mb@mb65c70p-b90d63 ~/mathmod/hello (master)
$ git commit -m "Add an author/email comment"
[master 1511817] Add an author/email comment
Date: Thu Feb 10 15:04:25 2022 +0300
1 file changed, 1 insertion(+)
```

```
mb@mb65c70p-b90d63 ~/mathmod/hello (master)
$ git add hello.html
mb@mb65c70p-b90d63 ~/mathmod/hello (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   hello.html
```

```
mb@mb65c70p-b90d63 ~/mathmod/hello (master)
$ git commit
[master f22d477] Added hi tag
2 file changed, 1 insertion(+), 1 deletion(-)
mb@mb65c70p-b90d63 ~/mathmod/hello (master)
$ git status
On branch master
nothing to commit, working tree clean
```

Список произведенных изменений

```
bak1a@DESKTOP-BBWDG3 MINGW64 ~/mathmod/hello (master)
$ git log
commit c2bc9aed17866c15735e759a6aa774b6a4f4a1b3 (HEAD -> master)
Author: asbaklashov <asbaklashov123@yandex.ru>
Date: Thu Feb 10 14:29:18 2022 +0300

    Added HTML header

commit 3018be2e5a0cc6be827085ff51ed2a1da5af2498
Author: asbaklashov <asbaklashov123@yandex.ru>
Date: Thu Feb 10 14:27:34 2022 +0300

    Added standard HTML page tags

commit f322df78d2c63cb747802e94da6483898cda8fe3
Author: asbaklashov <asbaklashov123@yandex.ru>
Date: Thu Feb 10 14:12:01 2022 +0300

    Added h1 tag

commit 930a70d89c0fd0c774f0e1c10c497603bae5b2d4
Author: asbaklashov <asbaklashov123@yandex.ru>
Date: Thu Feb 10 13:56:58 2022 +0300

    Initial Commit

bak1a@DESKTOP-BBWDG3 MINGW64 ~/mathmod/hello (master)
$ git log --pretty=oneline
c2bc9aed17866c15735e759a6aa774b6a4f4a1b3 (HEAD -> master) Added HTML header
3018be2e5a0cc6be827085ff51ed2a1da5af2498 Added standard HTML page tags
f322df78d2c63cb747802e94da6483898cda8fe3 Added h1 tag
930a70d89c0fd0c774f0e1c10c497603bae5b2d4 Initial Commit

bak1a@DESKTOP-BBWDG3 MINGW64 ~/mathmod/hello (master)
$ git log --pretty=oneline --max-count=2
c2bc9aed17866c15735e759a6aa774b6a4f4a1b3 (HEAD -> master) Added HTML header
3018be2e5a0cc6be827085ff51ed2a1da5af2498 Added standard HTML page tags

bak1a@DESKTOP-BBWDG3 MINGW64 ~/mathmod/hello (master)
$ git log --pretty=oneline --since='5 minutes ago'
c2bc9aed17866c15735e759a6aa774b6a4f4a1b3 (HEAD -> master) Added HTML header
3018be2e5a0cc6be827085ff51ed2a1da5af2498 Added standard HTML page tags

bak1a@DESKTOP-BBWDG3 MINGW64 ~/mathmod/hello (master)
$ git log --pretty=oneline --until='5 minutes ago'
f322df78d2c63cb747802e94da6483898cda8fe3 Added h1 tag
930a70d89c0fd0c774f0e1c10c497603bae5b2d4 Initial Commit

bak1a@DESKTOP-BBWDG3 MINGW64 ~/mathmod/hello (master)
$ git log --pretty=oneline --author=asbaklashov
c2bc9aed17866c15735e759a6aa774b6a4f4a1b3 (HEAD -> master) Added HTML header
3018be2e5a0cc6be827085ff51ed2a1da5af2498 Added standard HTML page tags
f322df78d2c63cb747802e94da6483898cda8fe3 Added h1 tag
930a70d89c0fd0c774f0e1c10c497603bae5b2d4 Initial Commit

bak1a@DESKTOP-BBWDG3 MINGW64 ~/mathmod/hello (master)
$ git log --pretty=oneline --all
c2bc9aed17866c15735e759a6aa774b6a4f4a1b3 (HEAD -> master) Added HTML header
3018be2e5a0cc6be827085ff51ed2a1da5af2498 Added standard HTML page tags
f322df78d2c63cb747802e94da6483898cda8fe3 Added h1 tag
930a70d89c0fd0c774f0e1c10c497603bae5b2d4 Initial Commit
```


Работа с ветками

Научились работе с ветками (переключаться между ними, слиять, просматривать, сбрасывать, создавать и т.д.)

```
ash@ashok:~/BPOG03 KINGS04 ~/mathend/hello (master)
$ git log --graph --all
* commit ab0cf47a82d60334df7bc645a9c02b1d15645856 (HEAD -> master)
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 16:01:11 2022 +0300

    Life is great

+ commit ab0cf47a82d60334df7bc645a9c02b1d15645856 (style)
  Merges: e7aec31 f23a055
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:53:33 2022 +0300

    Merge branch "master" into style

+ commit f23a055d4d6083f27c3abd9cb7a4d623ad4798fc
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:51:34 2022 +0300

    Added README

+ commit e7aec313401117de2ef1f50c3e4291af751f41f
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:47:25 2022 +0300

    Updated index.html

+ commit 5d4a570a2b849b0452ac04e14700e92dab0d61f
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:46:04 2022 +0300

    Hello uses style.css

+ commit 1b0f3b82a2d582a3099d3a7e8d48a512efdb336
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:44:03 2022 +0300

    Added css stylesheet

+ commit 2ed00b5ec99920bd6383c9cb9c03c0ffa2f34
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:15:29 2022 +0300

    Added index.html

+ commit d3718d6911db7a0ddeec6164c5cabcc51040e9f
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:12:18 2022 +0300

    Moved hello.html to lib

+ commit 15319579b08840cdcd4ba1e7e25c624f831a8f
  Author: asbaklashov <bak.lashov123@yandex.ru>
```

```
ash@ashok:~/BPOG03 KINGS04 ~/mathend/hello (style)
$ git reset --hard e7aec313401117de2ef1f50c3e4291af751f41f
HEAD is now at e7aec31 Updated index.html
```

```
ash@ashok:~/BPOG03 KINGS04 ~/mathend/hello ([v2-beta])
$ git checkout master
Previous HEAD position was 3018be2 Added standard HTML page tags
Switched to branch 'master'
```

```
ash@ashok:~/BPOG03 KINGS04 ~/mathend/hello (master)
$ git checkout style
Switched to branch 'style'

ash@ashok:~/BPOG03 KINGS04 ~/mathend/hello (style)
$ git merge master
Merge made by the 'ort' strategy.
 README.md | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 README.md

ash@ashok:~/BPOG03 KINGS04 ~/mathend/hello (style)
$ git log --graph --all
* commit ab0cf47a82d60334df7bc645a9c02b1d15645856 (HEAD -> style)
  Merges: e7aec31 f23a055
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:53:33 2022 +0300

    Merge branch "master" into style

+ commit f23a055d4d6083f27c3abd9cb7a4d623ad4798fc (master)
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:51:34 2022 +0300

    Added README

+ commit e7aec313401117de2ef1f50c3e4291af751f41f
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:47:25 2022 +0300

    Updated index.html

+ commit 5d4a570a2b849b0452ac04e14700e92dab0d61f
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:46:04 2022 +0300

    Hello uses style.css

+ commit 1b0f3b82a2d582a3099d3a7e8d48a512efdb336
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:44:03 2022 +0300

    Added css stylesheet

+ commit 2ed00b5ec99920bd6383c9cb9c03c0ffa2f34
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:15:29 2022 +0300

    Added index.html

+ commit d3718d6911db7a0ddeec6164c5cabcc51040e9f
  Author: asbaklashov <bak.lashov123@yandex.ru>
  Date: Thu Feb 10 15:12:18 2022 +0300

    Moved hello.html to lib

+ commit 15319579b08840cdcd4ba1e7e25c624f831a8f
  Author: asbaklashov <bak.lashov123@yandex.ru>

Add an author/email comment

+ commit c1bcbad17866c15731e759d8ae774bda4f4a1b3 (tag: v2)
  Author: asbaklashov <bak.lashov123@yandex.ru>
```

Вывод

В ходе данной лабораторной работы я ознакомился с системой управления версиями git.