

Отчёт по лабораторной работе №1

Система контроля версий Git

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1 Цель работы

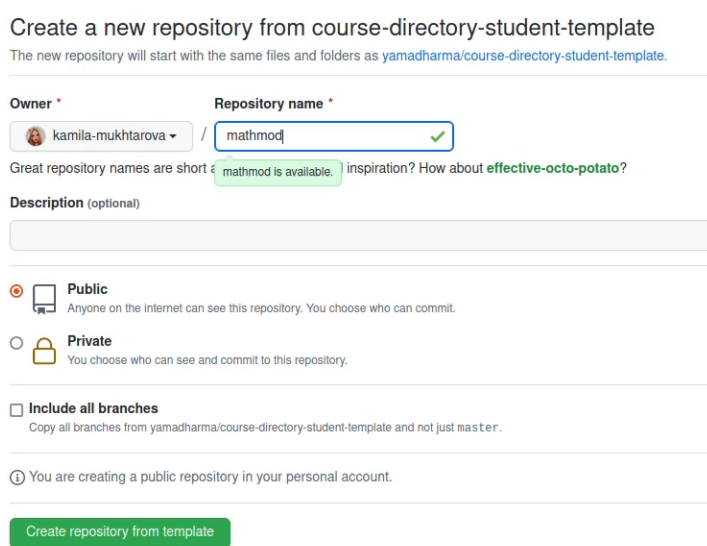
Целью данной работы является изучение идеологии и применения средств контроля версий.

2 Теоретическая часть

Git — это набор консольных утилит, которые отслеживают и фиксируют изменения в файлах (чаще всего речь идет об исходном коде программ, но вы можете использовать его для любых файлов на ваш вкус). Изначально Git был создан Линусом Торвальдсом при разработке ядра Linux. Однако инструмент так понравился разработчикам, что в последствии, он получил широкое распространение и его стали использовать в других проектах. С его помощью вы можете сравнивать, анализировать, редактировать, сливать изменения и возвращаться назад к последнему сохранению. Этот процесс называется контролем версий.

3 Выполнение лабораторной работы

Создаем учетную запись на github.com и репозиторий на основе шаблона преподавателя.(рис. 3.1)



The screenshot shows the GitHub interface for creating a new repository from a template. The title is 'Create a new repository from course-directory-student-template'. Below the title, it says 'The new repository will start with the same files and folders as [yamadharm/course-directory-student-template](#).' The form has two main sections: 'Owner' and 'Repository name'. The 'Owner' dropdown is set to 'kamila-mukhtarova'. The 'Repository name' input field contains 'mathmod' and has a green checkmark. Below the name field, there is a hint: 'Great repository names are short & **mathmod** is available. Inspiration? How about **effective-octo-potato**?'. There is a 'Description (optional)' text area. Below the description, there are two radio buttons: 'Public' (selected) and 'Private'. The 'Public' option has a note: 'Anyone on the Internet can see this repository. You choose who can commit.' The 'Private' option has a note: 'You choose who can see and commit to this repository.' Below the radio buttons, there is a checkbox 'Include all branches' with a note: 'Copy all branches from yamadharm/course-directory-student-template and not just master.' At the bottom, there is a green button 'Create repository from template'.

Рис. 3.1: Создание репозитория

Задаем конфигурацию пользователя и генерируем SSH-ключ(рис. 3.2, 3.3)

```
generated from yamadharma/course-directory-student-template
kamuhtarova@Ubuntu: ~
kamuhtarova@Ubuntu:~$ git config --global user.name "kamila-mukhtarova"
kamuhtarova@Ubuntu:~$ git config --global user.email "1032203686@pfur.ru"
kamuhtarova@Ubuntu:~$ git config --global core.quotePath false
kamuhtarova@Ubuntu:~$ git config --global init.defaultBranch
kamuhtarova@Ubuntu:~$ git config --global core.autocrlf input
>
> ^C
kamuhtarova@Ubuntu:~$ git config --global core.autocrlf input
kamuhtarova@Ubuntu:~$ git config --global core.safecrlf warn
kamuhtarova@Ubuntu:~$
kamuhtarova@Ubuntu:~$ ssh-keygen -C "kamila-mukhtarova 1032203686@pfur.ru"
Generating public/private rsa key pair.
Enter file in which to save the key (/home/kamuhtarova/.ssh/id_rsa):
Created directory '/home/kamuhtarova/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/kamuhtarova/.ssh/id_rsa
Your public key has been saved in /home/kamuhtarova/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:KtmNRJTm3Ngyuc64i1dhBiwXiMWGR8qLnBjs8CBjtQs kamila-mukhtarova 1032203686@pfur.ru
The key's randomart image is:
+---[RSA 3072]-----+
|B+....|
|O=* =.o|
|oE.+ =.=|
|+.+ ..@ o|
|o+ . o.=S|
|. +o+|
| .o+= .|
|.o.o|
|..oo|
+---[SHA256]-----+
kamuhtarova@Ubuntu:~$
```

Рис. 3.2: SSH-ключ

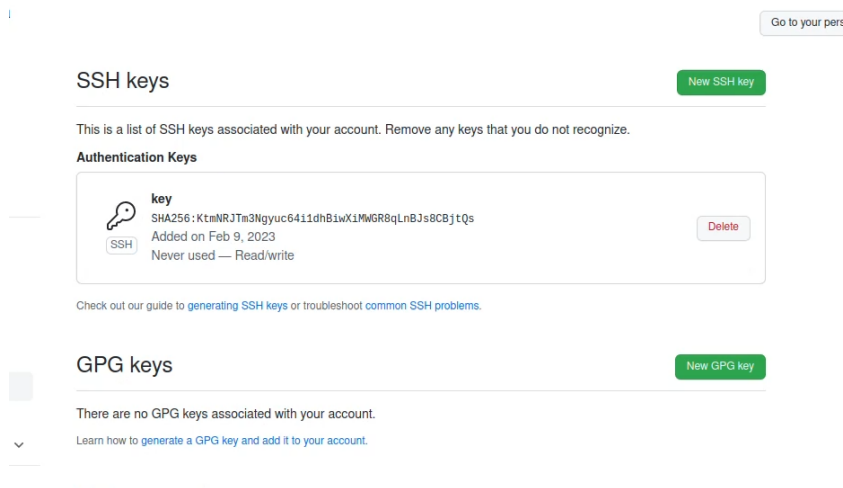


Рис. 3.3: SSH-ключ

Скопировали репозиторий в папку.(рис. 3.4)

```
kamuhtarova@Ubuntu: ~/work/study/2022-2023/MathModel/...
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com,140.82.121.3' (ECDSA) to the list of known hosts.
remote: Enumerating objects: 27, done.
remote: Counting objects: 100% (27/27), done.
remote: Compressing objects: 100% (26/26), done.
remote: Total 27 (delta 1), reused 11 (delta 0), pack-reused 0
Receiving objects: 100% (27/27), 16.94 KiB | 4.24 MiB/s, done.
Resolving deltas: 100% (1/1), done.
Submodule 'template/presentation' (https://github.com/yamadharma/academic-presentation-markdown-template.git) registered for path 'template/presentation'
Submodule 'template/report' (https://github.com/yamadharma/academic-laboratory-report-template.git) registered for path 'template/report'
Cloning into '/home/kamuhtarova/work/study/2022-2023/MathModel/mathmod/template/presentation'...
remote: Enumerating objects: 82, done.
remote: Counting objects: 100% (82/82), done.
remote: Compressing objects: 100% (57/57), done.
remote: Total 82 (delta 28), reused 77 (delta 23), pack-reused 0
Cloning into '/home/kamuhtarova/work/study/2022-2023/MathModel/mathmod/template/report'...
remote: Enumerating objects: 101, done.
remote: Counting objects: 100% (101/101), done.
remote: Compressing objects: 100% (70/70), done.
remote: Total 101 (delta 40), reused 88 (delta 27), pack-reused 0
Receiving objects: 100% (101/101), 327.25 KiB | 3.15 MiB/s, done.
Resolving deltas: 100% (40/40), done.
Submodule path 'template/presentation': checked out 'b1be3800ee91f5809264cb755d316174540b753e'
Submodule path 'template/report': checked out '1d1b61dcac9c287a83917b82e3aef11a33b1e3b2'
kamuhtarova@Ubuntu:~/work/study/2022-2023/MathModel$ cd mathmod/
kamuhtarova@Ubuntu:~/work/study/2022-2023/MathModel/mathmod$ ls
CHANGELOG.md  COURSE  Makefile  README.en.md  README.md
config        LICENSE  package.json  README.git-flow.md  template
kamuhtarova@Ubuntu:~/work/study/2022-2023/MathModel/mathmod$
```


Рис. 3.4: git clone


Оформили курс по данному шаблону и загрузили в репозиторий.(рис. 3.5, 3.6)



```
HO И ВРУЧНУЮ.

kamuhtarova@Ubuntu: ~/work/study/2022-2023/MathModel/...
create mode 100644 project-group/stage3/report/pandoc/filters/pandocxnos/pandoc
attributes.py
create mode 100644 project-group/stage3/report/report.md
create mode 100644 project-group/stage4/presentation/Makefile
create mode 100644 project-group/stage4/presentation/image/kulyabov.jpg
create mode 100644 project-group/stage4/presentation/presentation.md
create mode 100644 project-group/stage4/report/Makefile
create mode 100644 project-group/stage4/report/bib/cite.bib
create mode 100644 project-group/stage4/report/image/placeimg_800_600_tech.jpg
create mode 100644 project-group/stage4/report/pandoc/csl/gost-r-7-0-5-2008-num
eric.csl
create mode 100755 project-group/stage4/report/pandoc/filters/pandoc_eqnos.py
create mode 100755 project-group/stage4/report/pandoc/filters/pandoc_fignos.py
create mode 100755 project-group/stage4/report/pandoc/filters/pandoc_secnos.py
create mode 100755 project-group/stage4/report/pandoc/filters/pandoc_tablenos.p
y
create mode 100644 project-group/stage4/report/pandoc/filters/pandocxnos/_init
_.py
create mode 100644 project-group/stage4/report/pandoc/filters/pandocxnos/core.p
y
create mode 100644 project-group/stage4/report/pandoc/filters/pandocxnos/main.p
y
create mode 100644 project-group/stage4/report/pandoc/filters/pandocxnos/pandoc
attributes.py
create mode 100644 project-group/stage4/report/report.md
kamuhtarova@Ubuntu:~/work/study/2022-2023/MathModel/mathmod$ git push
Enumerating objects: 40, done.
Counting objects: 100% (40/40), done.
Delta compression using up to 6 threads
Compressing objects: 100% (30/30), done.
Writing objects: 100% (38/38), 342.34 KiB | 2.44 MiB/s, done.
Total 38 (delta 4), reused 0 (delta 0)
remote: Resolving deltas: 100% (4/4), completed with 1 local object.
To github.com:kamila-mukhtarova/mathmod.git
5ffc228..2afdee7 master -> master
kamuhtarova@Ubuntu:~/work/study/2022-2023/MathModel/mathmod$
```

Рис. 3.5: git push


 master ▾


 1 branch

 0 tags

Go to file

Add file ▾

 Code ▾

 kamila-mukhtarova feat(main):make course structure

2afdee7 now 2 commits

















 config	Initial commit	10 minutes ago
 labs	feat(main):make course structure	now
 presentation	feat(main):make course structure	now
 project-group	feat(main):make course structure	now
 template	Initial commit	10 minutes ago
 .gitattributes	Initial commit	10 minutes ago
 .gitignore	Initial commit	10 minutes ago
 .gitmodules	Initial commit	10 minutes ago
 CHANGELOG.md	Initial commit	10 minutes ago
 COURSE	feat(main):make course structure	now
 LICENSE	Initial commit	10 minutes ago
 Makefile	Initial commit	10 minutes ago
 README.en.md	Initial commit	10 minutes ago
 README.git-flow.md	Initial commit	10 minutes ago
 README.md	Initial commit	10 minutes ago
 prepare	feat(main):make course structure	now

Рис. 3.6: репозиторий

4 Вывод

Мы приобрели практические навыки работы с системой контроля версий git и создали свой репозиторий

Список литературы

1. Git для новичков
2. Основы Git
3. Руководство по оформлению Markdown файлов