

Отчёт по лабораторной работе №1

Система контроля версий Git

Леаду Жислен НКНбд-01-19

Содержание

1	Цель работы	4
2	Выполнение лабораторной работы	5
3	Вывод	9
	Список литературы	10

List of Figures

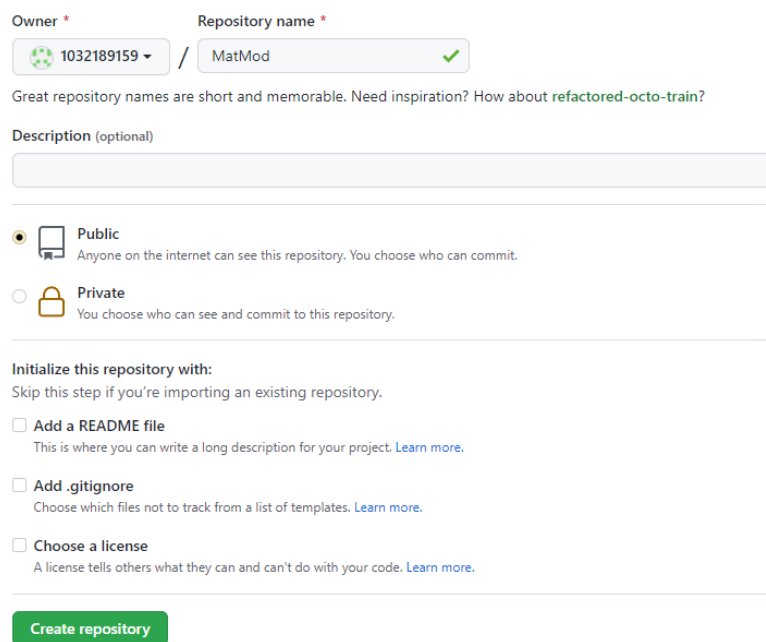
2.1	Создание репозитория	5
2.2	Инициализация репозитория	5
2.3	Создание SSH-ключа	6
2.4	Добавление ключа на github.com	6
2.5	Загрузка файлов	7
2.6	Инициализация git-flow и начало релиза	7
2.7	Завершение релиза и отправка изменений в сетевой репозиторий	7
2.8	Объединение веток в сетевом репозитории	8

1 Цель работы

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

2 Выполнение лабораторной работы

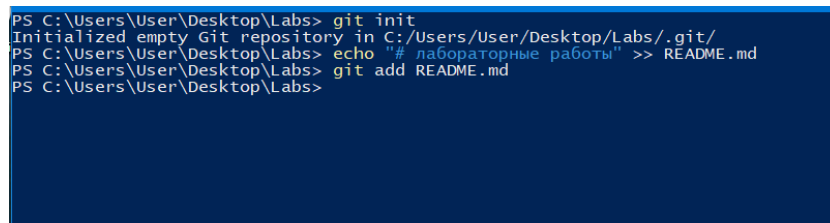
Создаем учетную запись на github.com и репозиторий



The screenshot shows the GitHub 'Create new repository' form. At the top, there are two input fields: 'Owner' with a dropdown menu showing '1032189159' and 'Repository name' with the text 'MatMod' and a green checkmark. Below these fields is a line of text: 'Great repository names are short and memorable. Need inspiration? How about [refactored-octo-train](#)?'. Underneath is a 'Description (optional)' text area. Further down, there are two radio button options: 'Public' (selected) with the description 'Anyone on the internet can see this repository. You choose who can commit.' and 'Private' with the description 'You choose who can see and commit to this repository.'. Below the radio buttons is a section titled 'Initialize this repository with:' followed by the instruction 'Skip this step if you're importing an existing repository.' and three checkboxes: 'Add a README file' (with subtext 'This is where you can write a long description for your project. [Learn more.](#)'), 'Add .gitignore' (with subtext 'Choose which files not to track from a list of templates. [Learn more.](#)'), and 'Choose a license' (with subtext 'A license tells others what they can and can't do with your code. [Learn more.](#)'). At the bottom of the form is a green 'Create repository' button.

Figure 2.1: Создание репозитория

Инициализируем локальный репозиторий и создаю в нем файл README.md



```
PS C:\Users\User\Desktop\Labs> git init
Initialized empty Git repository in C:/Users/User/Desktop/Labs/.git/
PS C:\Users\User\Desktop\Labs> echo "# лабораторные работы" >> README.md
PS C:\Users\User\Desktop\Labs> git add README.md
PS C:\Users\User\Desktop\Labs>
```

Figure 2.2: Инициализация репозитория

Создаем SSH-ключ и прописываем его в настройках на github.com

```
PS C:\Users\User\Desktop\Labs> git init
Initialized empty Git repository in C:\Users\User\Desktop\Labs\.git\
PS C:\Users\User\Desktop\Labs> echo "# лабораторные работы" >> README.md
PS C:\Users\User\Desktop\Labs> git add README.md
PS C:\Users\User\Desktop\Labs> git config --global user.name Leadu
PS C:\Users\User\Desktop\Labs> git config --global user.email "1032189159@pfur.ru"
PS C:\Users\User\Desktop\Labs> git commit -m "first commit"
[master (root-commit) f6c908b] first commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 README.md
PS C:\Users\User\Desktop\Labs> ssh-keygen -C "Leadu 1032189159@pfur.ru"
Generating public/private rsa key pair.
Enter file in which to save the key (C:\Users\User\.ssh\id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in C:\Users\User\.ssh\id_rsa.
Your public key has been saved in C:\Users\User\.ssh\id_rsa.pub.
The key fingerprint is:
SHA256:W02j10gMde282ttoc2x716p51lMYMTBmIO+XAS0M Leadu 1032189159@pfur.ru
The key's randomart image is:
+--[RSA 2048]--+
o oo. ++
= .o.o.=
o.o. .+ .
.=o=
+3=+ B0
. = .o..
. . =.
. . +
+o.
+---[SHA256]-----
PS C:\Users\User\Desktop\Labs> cat ~/.ssh/id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDoiZ7XjY0lvxxCU8TMk2Jo4z9POIZ8Pt/RmSTD8kG8IovHvB3aj8igJ0loHEAph2
K4tR9v837o9t9/S/pUsDr9uln1gnt+llj2izDCVRm+jdM9W5scQnkUMV5XXChFNCnchN/6vQd8mVtPF5eolqT+GguapuRxA30xUL
FMv3lojozQIF7tMU/yjO5VWqZaO5tl1fMogIK/ey9V13Iw9OPwRmD6XAqjxMDmctP9mGDxiX4lpFQrkVHZ/lcBPKa
myaB2Oe+Lvuc2U/19QanfuyY8C3StYWmT9weyNtWWANu/XyDkr710jN7arWEMjhiOWUbhh3V4A44g0i095QI Leadu
1032189159@pfur.ru
PS C:\Users\User\Desktop\Labs>
```

Figure 2.3: Создание SSH-ключа

Go to your personal profile

SSH keys / Add new

Title

ssh

Key

ssh-rsa
AAAAAB3NzaC1yc2EAAAADAQABAAQDoiZ7XjY0lvxxCU8TMk2Jo4z9POIZ8Pt/RmSTD8kG8IovHvB3aj8igJ0loHEAph2
K4tR9v837o9t9/S/pUsDr9uln1gnt+llj2izDCVRm+jdM9W5scQnkUMV5XXChFNCnchN/6vQd8mVtPF5eolqT+GguapuRxA
30xULFMv3lojozQIF7tMU/yjO5VWqZaO5tl1fMogIK/ey9V13Iw9OPwRmD6XAqjxMDmctP9mGDxiX4lpFQrkVHZ/lcBPKa
myaB2Oe+Lvuc2U/19QanfuyY8C3StYWmT9weyNtWWANu/XyDkr710jN7arWEMjhiOWUbhh3V4A44g0i095QI Leadu
1032189159@pfur.ru

Add SSH key

Figure 2.4: Добавление ключа на github.com

Загружаем файлы лицензионного соглашения и gitignore. Отправляем все фай-
лы в сетевой репозиторий.

```

PS C:\Users\User\Desktop\Labs> git remote add origin git@github.com:1032189159/MatMod.git
PS C:\Users\User\Desktop\Labs> wget https://creativecommons.org/licenses/by/4.0/legalcode.txt -O LICENSE
PS C:\Users\User\Desktop\Labs> wget https://www.toptal.com/developers/gitignore/api/python -O .gitignore
PS C:\Users\User\Desktop\Labs> git add .
warning: LF will be replaced by CRLF in .gitignore.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in LICENSE.
The file will have its original line endings in your working directory
PS C:\Users\User\Desktop\Labs> git commit -am "add license"
[master e46c57c] add license
2 files changed, 555 insertions(+)
create mode 100644 .gitignore
create mode 100644 LICENSE
PS C:\Users\User\Desktop\Labs> git push -u origin master
The authenticity of host 'github.com (140.82.121.4)' can't be established.
ED25519 key fingerprint is SHA256:+DiY3wvV6Tujhbpzsf/zLDA0zPMSVHdkr4UvCQvU.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (7/7), 7.70 KiB | 1.92 MiB/s, done.
Total 7 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:1032189159/MatMod.git
 * [new branch] master -> master
branch 'master' set up to track 'origin/master'.
PS C:\Users\User\Desktop\Labs> git push
Everything up-to-date
PS C:\Users\User\Desktop\Labs>

```

Figure 2.5: Загрузка файлов

Использование системы управления версиями. Создаем ветку, начинаем и завершаем в ней релиз.

```

PS C:\Users\User\Desktop\Labs> echo "1.0.0" >> version
PS C:\Users\User\Desktop\Labs> git add .
PS C:\Users\User\Desktop\Labs> git commit -am "chore(main): add version"
[release/1.0.0 dace0c0] chore(main): add version
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 version
PS C:\Users\User\Desktop\Labs> git flow release finish -m "ver 1" 1.0.0
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
Merge made by the 'ort' strategy.
 version | Bin 0 -> 16 bytes
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 version
Already on 'master'
Your branch is ahead of 'origin/master' by 2 commits.
(use "git push" to publish your local commits)
Switched to branch 'develop'
Merge made by the 'ort' strategy.
 version | Bin 0 -> 16 bytes
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 version
Deleted branch release/1.0.0 (was dace0c0).

Summary of actions:
- Release branch 'release/1.0.0' has been merged into 'master'
- The release was tagged 'v1.0.0'
- Release tag 'v1.0.0' has been back-merged into 'develop'
- Release branch 'release/1.0.0' has been locally deleted
- You are now on branch 'develop'

PS C:\Users\User\Desktop\Labs>

```

Figure 2.6: Инициализация git-flow и начало релиза

```

PS C:\Users\User\Desktop\Labs> git push --all
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (5/5), 473 bytes | 236.00 KiB/s, done.
Total 5 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), completed with 1 local object.
To github.com:1032189159/MatMod.git
 * [new branch] master -> master
 * [new branch] develop -> develop
PS C:\Users\User\Desktop\Labs> git push --tags
Enumerating objects: 1, done.
Counting objects: 100% (1/1), done.
Writing objects: 100% (1/1), 157 bytes | 157.00 KiB/s, done.
Total 1 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:1032189159/MatMod.git
 * [new tag] v1.0.0 -> v1.0.0
PS C:\Users\User\Desktop\Labs>

```

Figure 2.7: Завершение релиза и отправка изменений в сетевой репозиторий

Выполним объединение веток

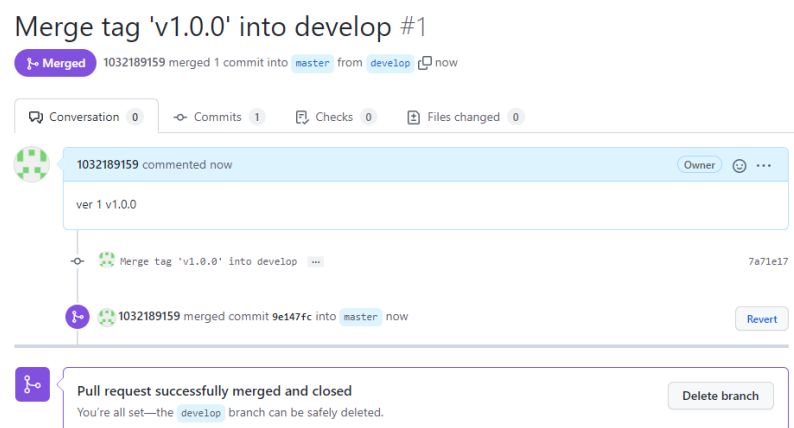


Figure 2.8: Объединение веток в сетевом репозитории

3 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