

Отчёт по лабораторной работе №1

Система контроля версий Git

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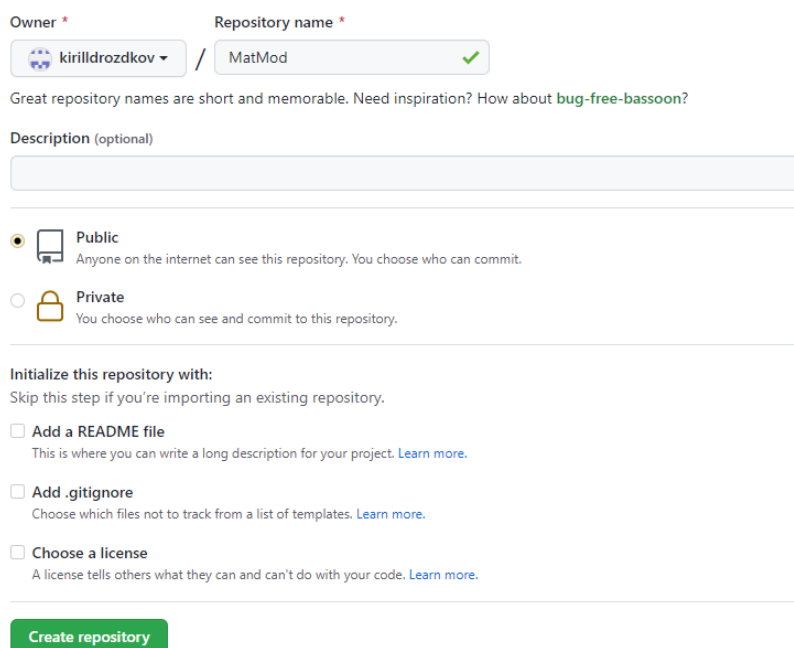
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1 Цель работы


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

2 Выполнение лабораторной работы

Создаем учетную запись на github.com и репозиторий





Owner * Repository name *

 kirilldrozdkov / MatMod ✓

Great repository names are short and memorable. Need inspiration? How about [bug-free-bassoon?](#)

Description (optional)

☒  **Public**
Anyone on the internet can see this repository. You choose who can commit.

☐  **Private**
You choose who can see and commit to this repository.

Initialize this repository with:
Skip this step if you're importing an existing repository.

☐ **Add a README file**
This is where you can write a long description for your project. [Learn more.](#)

☐ **Add .gitignore**
Choose which files not to track from a list of templates. [Learn more.](#)

☐ **Choose a license**
A license tells others what they can and can't do with your code. [Learn more.](#)

Create repository

Figure 2.1: Создание репозитория

Инициализируем локальный репозиторий и создаю в нем файл README.md

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

Figure 2.2: Инициализация репозитория

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

```

PS C:\Users\User\Desktop\work\MatMod> git init
Initialized empty Git repository in C:\Users\User\Desktop\work\MatMod\.git\
PS C:\Users\User\Desktop\work\MatMod> echo "# Наблюдательные работы" >> README.md
PS C:\Users\User\Desktop\work\MatMod> git add README.md
PS C:\Users\User\Desktop\work\MatMod> git config --global user.name kirilldrozdov
PS C:\Users\User\Desktop\work\MatMod> git config --global user.email "1032160875@pfur.ru"
PS C:\Users\User\Desktop\work\MatMod> git commit -m "first commit"
[master (root-commit) 62268ab] first commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 README.md
PS C:\Users\User\Desktop\work\MatMod> ssh-keygen -C "kirilldrozdov 1032160875@pfur.ru"
Generating public/private rsa key pair.
Enter file in which to save the key (C:\Users\User\.ssh\id_rsa):
Created directory C:\Users\User\.ssh.
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's fingerprint is:
SHA256:/wNpXfPd/zM9wSmlxs7AbctmSkdPizxMwbX1lwvqNU kirilldrozdov 1032160875@pfur.ru
The key's randomart image is:
+-----[RSA 2048]-----+
|  .+..+O |
|  .+..+O |
|  .+..+O |
|  .+..+O |
|  .+..+O |
|  .+..+O |
|  .+..+O |
|  .+..+O |
|  .+..+O |
|  .+..+O |
+-----[SHA256]-----+
PS C:\Users\User\Desktop\work\MatMod> cat ~/.ssh/id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCAHVEs19n8UWxIKG
rOMhaMzkhjMdCqJ+BzgKP6a69POQ9LztYlul3RuJnuqJlygJp4
INonTaY599oS17J4FyT6LNCsGdHRCeYfBn5F73l0qqa17xMt+L
Co7/InhUQbipgupjFjP56q3sCsNkN8hr+B4IdCL45RrfcNWAi+
OtfFgWjqPMa16bmtFUZ3u4MMtECWp5p6QDXRMkgS3UYTL3
mwQhP4TwLkSSQobF/EuTJ6Me5fChSjJaznzld8dw7RFN9NuinV
FoRnZlQU1XrbXnGJO3F3UBCegT9f8wVftfQdPSsB+qamOBm8
G6lxf0I9IPuIl2SZqPI0IV15mmNpJV kirilldrozdov
PS C:\Users\User\Desktop\work\MatMod>

```

Figure 2.3: Создание SSH-ключа

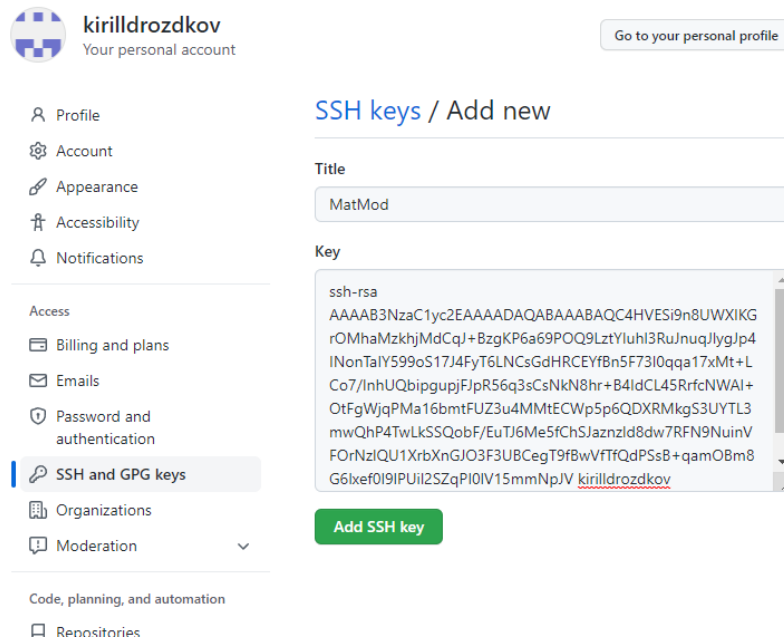


Figure 2.4: Добавление ключа на github.com

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

```

PS C:\Users\User\Desktop\work\MatMod> cat ~/.ssh/id_rsa.pub
ssh-rsa AAAA3Kzaciyc2EAAADAAQBAABAC4HVES19h0wXIKGmWmhzkhjMdcq3-BzgpK669P009LztYIuh13RuJnuq1yq1p4INonTaly599os17
H4PYtOLNCSgdHRCYFbn5F710qqa1xMt-tLCo/1rhU0b1pgupF3pS5q3scsNkN8hr+B4IdCL45R+FCNWA1+0TFgwjqPma16bmTFU23udMTECwp5p00
XRmkGS3YtL3m0hP4TwLkSSQobF/EuTJ6Me5fCHS3aznzld8dw/RFN9Nu1nVForNz1QU1Xrbxng303F3UBCegT9F8wVTFqdpSSB+qam0Bm8G61xeF0191P
01125ZqP101V15mmkpV.kirilldrozdov.10321608/50pfr.ru
PS C:\Users\User\Desktop\work\MatMod>
PS C:\Users\User\Desktop\work\MatMod> git remote add origin git@github.com:kirilldrozdov/MatMod.git
PS C:\Users\User\Desktop\work\MatMod> wget https://creativecommons.org/licenses/by/4.0/legalcode.txt -O LICENSE
PS C:\Users\User\Desktop\work\MatMod> wget https://www.toptal.com/developers/gitignore/api/python -O .gitignore
PS C:\Users\User\Desktop\work\MatMod> 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\work\MatMod> git commit -am "add license"
[master 10fcec3] add license
2 files changed, 355 insertions(+)
create mode 100644 .gitignore
create mode 100644 LICENSE
PS C:\Users\User\Desktop\work\MatMod> git push -u origin master
The authenticity of host 'github.com (140.82.121.4)' can't be established.
ED25519 key fingerprint is SHA256:-diY3wvV6tU3jhb215F/zLDa0zPMSvldkr4UvCoql.
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), 7.1 KiB | 1.93 MiB/s, done.
Total 7 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:kirilldrozdov/MatMod.git
+ [new branch] master -> master
branch 'master' set up to track 'origin/master'.
PS C:\Users\User\Desktop\work\MatMod> git push
Everything up-to-date
PS C:\Users\User\Desktop\work\MatMod>

```

Figure 2.5: Загрузка файлов

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

```

PS C:\Users\User\Desktop\work\MatMod>
PS C:\Users\User\Desktop\work\MatMod> git flow init
which branch should be used for bringing forth production releases?
- master
Branch name for production releases: [master]
Branch name for "next release" development: [develop]

How to name your supporting branch prefixes?
Feature branches? [feature/]
Bugfix branches? [bugfix/]
Release branches? [release/]
Hotfix branches? [hotfix/]
Support branches? [support/]
Version tag prefix? [v]
Hooks and filters directory? [C:/Users/User/Desktop/work/MatMod/.git/hooks]
PS C:\Users\User\Desktop\work\MatMod> git branch
* develop
  master
PS C:\Users\User\Desktop\work\MatMod> git flow release start 1.0.0
Switched to a new branch 'release/1.0.0'

Summary of actions:
- A new branch 'release/1.0.0' was created, based on 'develop'
- You are now on branch 'release/1.0.0'

Follow-up actions:
- Bump the version number now!
- Start committing last-minute fixes in preparing your release
- When done, run:

    git flow release finish '1.0.0'

PS C:\Users\User\Desktop\work\MatMod> echo "1.0.0" >> version
PS C:\Users\User\Desktop\work\MatMod> git add .
PS C:\Users\User\Desktop\work\MatMod> git commit -am "main: add version"
[release/1.0.0 b0ff53b] main: add version
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 version
PS C:\Users\User\Desktop\work\MatMod> 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 -> 10 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.

```

Figure 2.6: Инициализация git-flow и начало релиза

```

PS C:\Users\User\Desktop\work\MatMod> 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), 476 bytes | 238.00 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:kirilldrozdov/MatMod.git
 * [new branch]      master -> master
PS C:\Users\User\Desktop\work\MatMod> git push --tags
Enumerating objects: 1, done.
Counting objects: 100% (1/1), done.
Writing objects: 100% (1/1), 164 bytes | 164.00 KiB/s, done.
Total 1 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:kirilldrozdov/MatMod.git
 * [new tag]         v1.0.0 -> v1.0.0
PS C:\Users\User\Desktop\work\MatMod>

```

Figure 2.7: Завершение релиза и отправка изменений в сетевой репозиторий

Выполним объединение веток

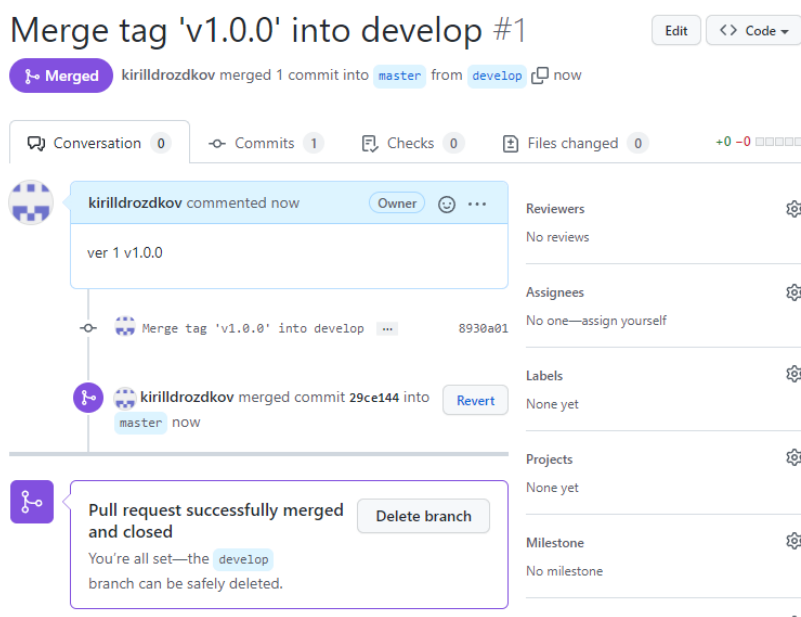


Figure 2.8: Объединение веток в сетевом репозитории

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