

Первоначальна настройка git

Лабораторная работа №2

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Информация

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Вводная часть

- SCV git
- ПО для работы с git

- Изучить идеологию и применение средств контроля версий.
- Освоить умения по работе с git.

1. Установить и настроить ПО для работы с git.
2. Ответить на теоритические вопросы

Выполнение лабораторной работы №2

```
[astarceva@fedora ~]$ sudo dnf install git
[sudo] пароль для astarceva:
Последняя проверка окончания срока действия метаданных: 1:11:43 назад, Пн 20 фев 2023 23:20:30.
Пакет git-2.39.1-1.fc36.x86_64 уже установлен.
Зависимости разрешены.
Отсутствуют действия для выполнения.
Выполнено!
```

```
[astarceva@fedora ~]$ dnf install gh
Ошибка: Эту команду нужно запускать с привилегиями суперпользователя (на большинстве систем - под именем пользователя root).
[astarceva@fedora ~]$ sudo dnf install gh
Последняя проверка окончания срока действия метаданных: 1:12:40 назад, Пн 20 фев 2023 23:20:30.
Зависимости разрешены.
=====
Пакет      Архитектура  Версия      Репозиторий  Размер
=====
Установка:
gh          x86_64       2.23.0-1.fc36  updates      8.2 МБ

Результат транзакции
=====
Установка 1 Пакет

Объем загрузки: 8.2 М
Объем изменений: 41 М
Продолжить? [д/н]: д
Загрузка пакетов:
```

```
[astarceva@fedora ~]$ git config --global core.autocrlf input
```

```
[astarceva@fedora ~]$ git config --global core.safecrlf warn
```

Создали ключи ssh

```
[astarceva@fedora ~]$ ssh-keygen -t rsa -b 4096
Generating public/private rsa key pair.
Enter file in which to save the key (/home/astarceva/.ssh/id_rsa):
Created directory '/home/astarceva/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/astarceva/.ssh/id_rsa
Your public key has been saved in /home/astarceva/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:TSgdYxapd9H56jmQ9yVL/d4KT99+UFeiJk75hIT6QZU astarceva@fedora
The key's randomart image is:
+---[RSA 4096]-----+
|
|  *+.o . |
|  ++E o . |
|  .+o..+ o ..|
|  o.OO* + . o|
|  oS=. * . o.|
|  . + + + o|
|  +.+.=. |
|  ++o.= |
|  .o+B |
+----[SHA256]-----+
```

```
[astarceva@fedora ~]$ ssh-keygen -t ed25519
Generating public/private ed25519 key pair.
Enter file in which to save the key (/home/astarceva/.ssh/id_ed25519):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/astarceva/.ssh/id_ed25519
Your public key has been saved in /home/astarceva/.ssh/id_ed25519.pub
The key fingerprint is:
SHA256:HHHmvJ0LNGa+H8/o0xGAKotb/fDM3L11leLzqHkF5aI astarceva@fedora
The key's randomart image is:
+---[ED25519 256]---+
|
|  o. |
|  .+. . |
|  .+.. o |
|  . . .B.. o ..|
|  . + =S+ o..o..|
|  . o o + +E. .o |
|  o B . +.o.OO |
|  . * o ++.o+ |
|  o**=. . |
+----[SHA256]-----+
```

Создали ключи gpg

```
[astarceva@fedora ~]$ gpg --full-generate-key
gpg (GnuPG) 2.3.7; Copyright (C) 2021 Free Software Foundation, Inc.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.
```

```
gpg: создан каталог '/home/astarceva/.gnupg'
```

```
gpg: создан щит с ключами '/home/astarceva/.gnupg/pubring.kbx'
```

```
Выберите тип ключа:
```

- (1) RSA and RSA
- (2) DSA and Elgamal
- (3) DSA (sign only)
- (4) RSA (sign only)
- (9) ECC (sign and encrypt) *default*
- (10) ECC (только для подписи)
- (14) Existing key from card

```
Ваш выбор? 1
```

```
длина ключей RSA может быть от 1024 до 4096.
```

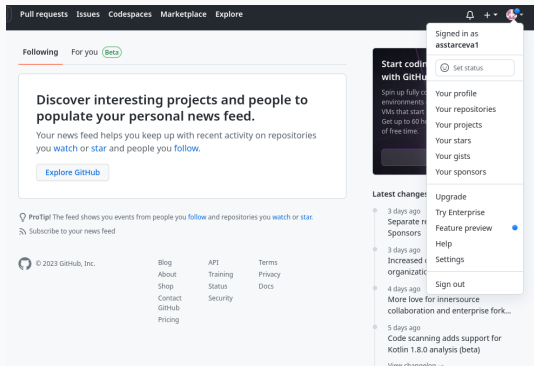
```
Какой размер ключа Вам необходим? (3072) 4096
```

```
Запрошенный размер ключа - 4096 бит
```

```
Выберите срок действия ключа.
```

```
0 = не ограничен
```

Настройка github



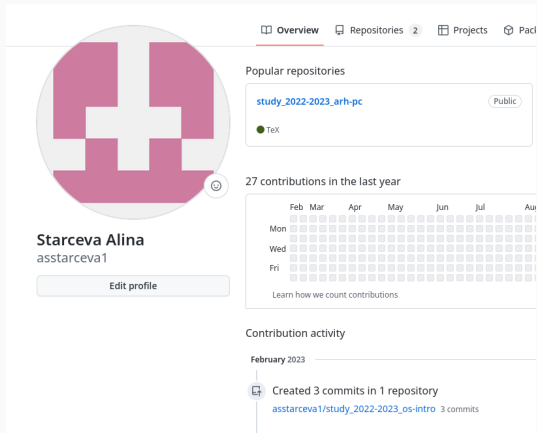
The screenshot shows the GitHub homepage. At the top, there's a navigation bar with links: Pull requests, Issues, Codespaces, Marketplace, and Explore. Below this, a header section says "Discover interesting projects and people to populate your personal news feed." and "Your news feed helps you keep up with recent activity on repositories you watch or star and people you follow." with a button "Explore GitHub".

A user menu is open on the right side, showing the user is signed in as "asstarceva1". The menu options are: Set status, Your profile, Your repositories, Your projects, Your stars, Your gists, Your sponsors, Upgrade, Try Enterprise, Feature preview, Help, Settings, and Sign out.

Below the menu, there's a "Latest changes" section with a list of updates:

- 3 days ago: Separate repositories into separate sponsors
- 3 days ago: Increased support for organizational users
- 4 days ago: More love for innersource collaboration and enterprise fork...
- 5 days ago: Code scanning adds support for Kotlin 1.8.0 analysis (beta)

At the bottom, there's a footer with copyright information: © 2023 GitHub, Inc. and links to Blog, About, Shop, Contact GitHub, Pricing, API, Training, Status, Security, Terms, Privacy, and Docs.



The screenshot shows the GitHub profile page for "Starceva Alina" (asstarceva1). The profile picture is a circular avatar with a pink and white geometric pattern. The page has tabs for Overview, Repositories (2), Projects, and Packages.

Under "Popular repositories", there's a list with one repository: "study_2022-2023_arh-pc" (Public) by "TeX".

Below this, there's a section "27 contributions in the last year" with a calendar grid showing contributions from February to August. The grid shows contributions on Monday, Wednesday, and Friday in February, and on Monday, Wednesday, and Friday in March.

At the bottom, there's a section "Contribution activity" for February 2023, showing "Created 3 commits in 1 repository" for "asstarceva1/study_2022-2023_os-intro" with 3 commits.

Добавление PGP ключа в GitHub

GPG keys / Add new

Title

Title

Key

```
-----BEGIN PGP PUBLIC KEY BLOCK-----
Z9Sla0t1gSUr0Bpr5w+s7uqkhjxN77gvjGqe8HEFw5GIDo575aGuuRcCaxH5gB/y
grTluG14GfbkgvixHjMthlV3B0DTALMccmHkhEmO8NbG7765+rkvCMYx52ylje0l
HpMRBw816A01ajQ9jJMV7GPQdMrKFw7UA6YN3J56VFA4jZsHvE22sk8aM+6gQeW
IEuXo79KLvruSmxVGvULHNm+R4NvUklASHfshikA4MI6LBDcj/rUETARXcsZ0
6BMR6Y8XWMjr33Zst5UUCwZd8rPk88sf59dJAq+pyfmRHh7cipWa6p2nF/cjwsc/
VkZ0HxlrWw==
=KuFB
-----END PGP PUBLIC KEY BLOCK-----
```

Add GPG key

Check out our guide to [generating SSH keys](#) or [troubleshoot common SSH problems](#).

GPG keys

New GPG key

This is a list of GPG keys associated with your account. Remove any keys that you do not recognize.



Title

Email address: 1132226503@pfur.ru

Key ID: 53D8B70DF5B860A6

Subkeys: BF250B4606AB1838

Added on Feb 21, 2023

Delete

Learn how to [generate a GPG key and add it to your account](#).

Vigilant mode

Настройка автоматических подписей коммитов git и gh

```
[astarceva@fedora ~]$ git config --global user.signingkey  
[astarceva@fedora ~]$ git config --global commit.gpgsign true  
[astarceva@fedora ~]$ git config --global gpg.program $(which gpg2)
```

```
[astarceva@fedora ~]$ gh auth login  
? What account do you want to log into? GitHub.com  
? What is your preferred protocol for Git operations? SSH  
? Upload your SSH public key to your GitHub account? /home/astarceva/.ssh/id_rsa  
.pub  
? Title for your SSH key: Title  
? How would you like to authenticate GitHub CLI? Login with a web browser  
  
! First copy your one-time code: E72C-8709  
Press Enter to open github.com in your browser...
```

Создание репозитория курса на основе шаблона

Создали шаблон рабочего пространства.

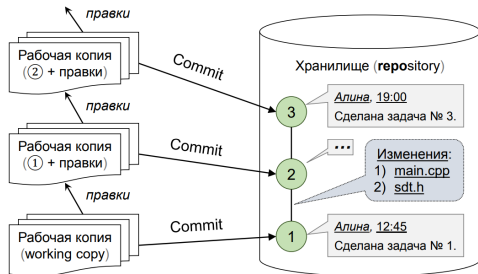
```
[astarceva@fedora Операционные системы]$ git clone --recursive git@github.com:astarceva/study_2022-2023_os-intro.git
Клонирование в «study_2022-2023_os-intro»...
remote: Enumerating objects: 65, done.
remote: Counting objects: 100% (65/65), done.
remote: Compressing objects: 100% (52/52), done.
remote: Total 65 (delta 5), reused 49 (delta 4), pack-reused 0
Получение объектов: 100% (65/65), 359.28 КиБ | 749.00 КиБ/с, готово.
Определение изменений: 100% (5/5), готово.
Подмодуль «template/presentation» (https://github.com/yamadharm/academic-presentation-markdown-template.git) зарегистрирован по пути «template/presentation»
Подмодуль «template/report» (https://github.com/yamadharm/academic-laboratory-report-template.git) зарегистрирован по пути «template/report»
Клонирование в «/home/astarceva/work/study/2022-2023/Операционные системы/study_2022-2023_os-intro/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
```


Настройка каталога курса

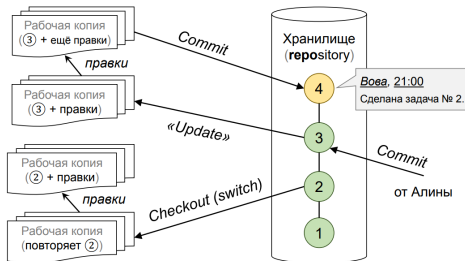
```
[astarceva@fedora study_2022-2023_os-intro]$ git add .  
[astarceva@fedora study_2022-2023_os-intro]$ git commit -am 'feat(main): make co  
urse structure'
```

```
[astarceva@fedora study_2022-2023_os-intro]$ git push
```

Единоличная работа с VCS



Работа с общим хранилищем



Результаты

В ходе выполнения данной лабораторной работы была изучена идеология и применение средств контроля версий и освоены умения по работе с git.