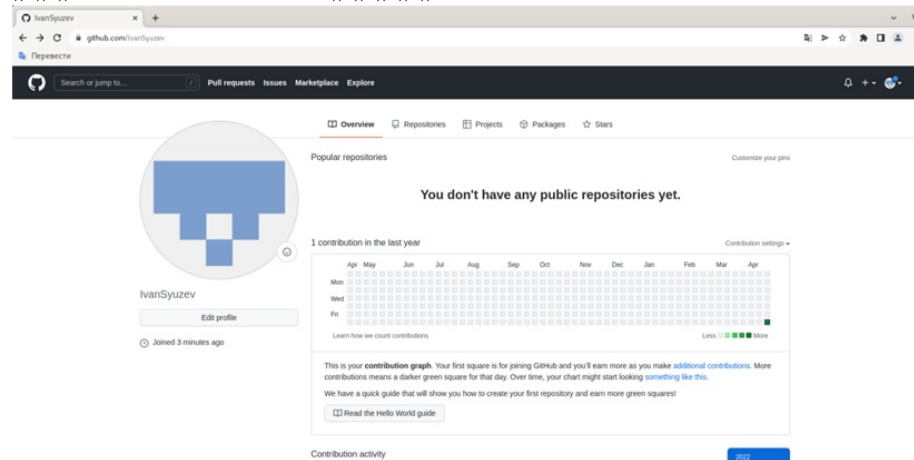


## №2

### : ##### 1. git. Github.com



##### 2. git-flow gh Fedora Linux (.



2.6.2)

```
iasyuzev@fedora/tmp — sudo dnf install gh
'gitflow/hooks/post-flow-hotfix-finish' -> '/usr/local/share/doc/gitflow/hooks/post-flow-hotfix-finish'
'gitflow/hooks/post-flow-hotfix-publish' -> '/usr/local/share/doc/gitflow/hooks/post-flow-hotfix-publish'
'gitflow/hooks/post-flow-hotfix-start' -> '/usr/local/share/doc/gitflow/hooks/post-flow-hotfix-start'
'gitflow/hooks/post-flow-release-branch' -> '/usr/local/share/doc/gitflow/hooks/post-flow-release-branch'
'gitflow/hooks/post-flow-release-delete' -> '/usr/local/share/doc/gitflow/hooks/post-flow-release-delete'
'gitflow/hooks/post-flow-release-finish' -> '/usr/local/share/doc/gitflow/hooks/post-flow-release-finish'
'gitflow/hooks/post-flow-release-publish' -> '/usr/local/share/doc/gitflow/hooks/post-flow-release-publish'
'gitflow/hooks/post-flow-release-start' -> '/usr/local/share/doc/gitflow/hooks/post-flow-release-start'
'gitflow/hooks/post-flow-release-track' -> '/usr/local/share/doc/gitflow/hooks/post-flow-release-track'
'gitflow/hooks/pre-flow-feature-delete' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-feature-delete'
'gitflow/hooks/pre-flow-feature-finish' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-feature-finish'
'gitflow/hooks/pre-flow-feature-publish' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-feature-publish'
'gitflow/hooks/pre-flow-feature-pull' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-feature-pull'
'gitflow/hooks/pre-flow-feature-start' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-feature-start'
'gitflow/hooks/pre-flow-feature-track' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-feature-track'
'gitflow/hooks/pre-flow-hotfix-delete' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-hotfix-delete'
'gitflow/hooks/pre-flow-hotfix-finish' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-hotfix-finish'
'gitflow/hooks/pre-flow-hotfix-publish' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-hotfix-publish'
'gitflow/hooks/pre-flow-hotfix-start' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-hotfix-start'
'gitflow/hooks/pre-flow-release-branch' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-release-branch'
'gitflow/hooks/pre-flow-release-delete' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-release-delete'
'gitflow/hooks/pre-flow-release-finish' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-release-finish'
'gitflow/hooks/pre-flow-release-publish' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-release-publish'
'gitflow/hooks/pre-flow-release-start' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-release-start'
'gitflow/hooks/pre-flow-release-track' -> '/usr/local/share/doc/gitflow/hooks/pre-flow-release-track'
[iasyuzev@fedora tmp]$ sudo dnf install gh
fedora - x86_64 1.4 MB/s | 79 MB 00:56
```

```
iasyuzev@fedora/tmp
Пакет Архитектура Версия Репозиторий Размер
-----
Установка:
gh x86_64 2.7.0-1.fc35 updates 6.8 M

Результат транзакции
-----
Установка 1 Пакет

Объем загрузки: 6.8 M
Объем изменений: 32 M
Продолжить? [д/н]: д
Загрузка пакетов:
gh-2.7.0-1.fc35.x86_64.rpm 1.6 MB/s | 6.8 MB 00:04
-----
Общий размер 1.4 MB/s | 6.8 MB 00:04
Проверка транзакции
Проверка транзакции успешно завершена.
Идет проверка транзакции
Тест транзакции проведен успешно.
Выполнение транзакции
Подготовка :
Установка : gh-2.7.0-1.fc35.x86_64 1/1
Запуск скриплетов: gh-2.7.0-1.fc35.x86_64 1/1
Проверка : gh-2.7.0-1.fc35.x86_64 1/1

Установлен:
gh-2.7.0-1.fc35.x86_64
```

##### 3. git (. 2.6.3)

```
iasyuzev@fedora/tmp
Объем загрузки: 6.8 M
Объем изменений: 32 M
Продолжить? [д/н]: д
Загрузка пакетов:
gh-2.7.0-1.fc35.x86_64.rpm 1.6 MB/s | 6.8 MB 00:04
-----
Общий размер 1.4 MB/s | 6.8 MB 00:04
Проверка транзакции
Проверка транзакции успешно завершена.
Идет проверка транзакции
Тест транзакции проведен успешно.
Выполнение транзакции
Подготовка :
Установка : gh-2.7.0-1.fc35.x86_64 1/1
Запуск скриплетов: gh-2.7.0-1.fc35.x86_64 1/1
Проверка : gh-2.7.0-1.fc35.x86_64 1/1

Установлен:
gh-2.7.0-1.fc35.x86_64

Выполнено!
[iasyuzev@fedora tmp]$ git config --global user.name "Ivan Syuzev"
[iasyuzev@fedora tmp]$ git config --global user.email "syuzevivan123@yandex.ru"
[iasyuzev@fedora tmp]$ git config --global core.quotePath false
[iasyuzev@fedora tmp]$ git config --global init.defaultBranch master
[iasyuzev@fedora tmp]$ git config --global core.autocrlf input
[iasyuzev@fedora tmp]$ git config --global core.safecrlf warn
[iasyuzev@fedora tmp]$
```

##### 4. ssh pgp (. 2.6.4 2.6.5)

```
lasyuzev@fedora:/tmp
[asyuzev@fedora tmp]$ git config --global user.email "syuzevivan123@yandex.ru"
[asyuzev@fedora tmp]$ git config --global core.quotepath false
[asyuzev@fedora tmp]$ git config --global init.defaultBranch master
[asyuzev@fedora tmp]$ git config --global core.autocrlf input
[asyuzev@fedora tmp]$ git config --global core.safecrlf warn
[asyuzev@fedora tmp]$ ssh-keygen -t rsa -b 4096
Generating public/private rsa key pair.
Enter file in which to save the key (/home/iasyuzev/.ssh/id_rsa):
Created directory '/home/iasyuzev/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/iasyuzev/.ssh/id_rsa
Your public key has been saved in /home/iasyuzev/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:V5h/hY6nlq5Yfo1j8xmpkfQ9Syhat0kzweKx1lAM8 iasyuzev@fedora
The key's randomart image is:
+-----[RSA 4096]-----+
|
| .      o      .
| +      o      .
| E      o      .
| .S . + +
|
| ooo...+ o =
| ..+o=ooo.. +
| o=+o=+... ..
| ooo=+...
|
+-----[SHA256]-----+
[asyuzev@fedora tmp]$

[asyuzev@fedora tmp]$ gpg --full-generate-key
gpg (GnuPG) 2.3.4; 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.

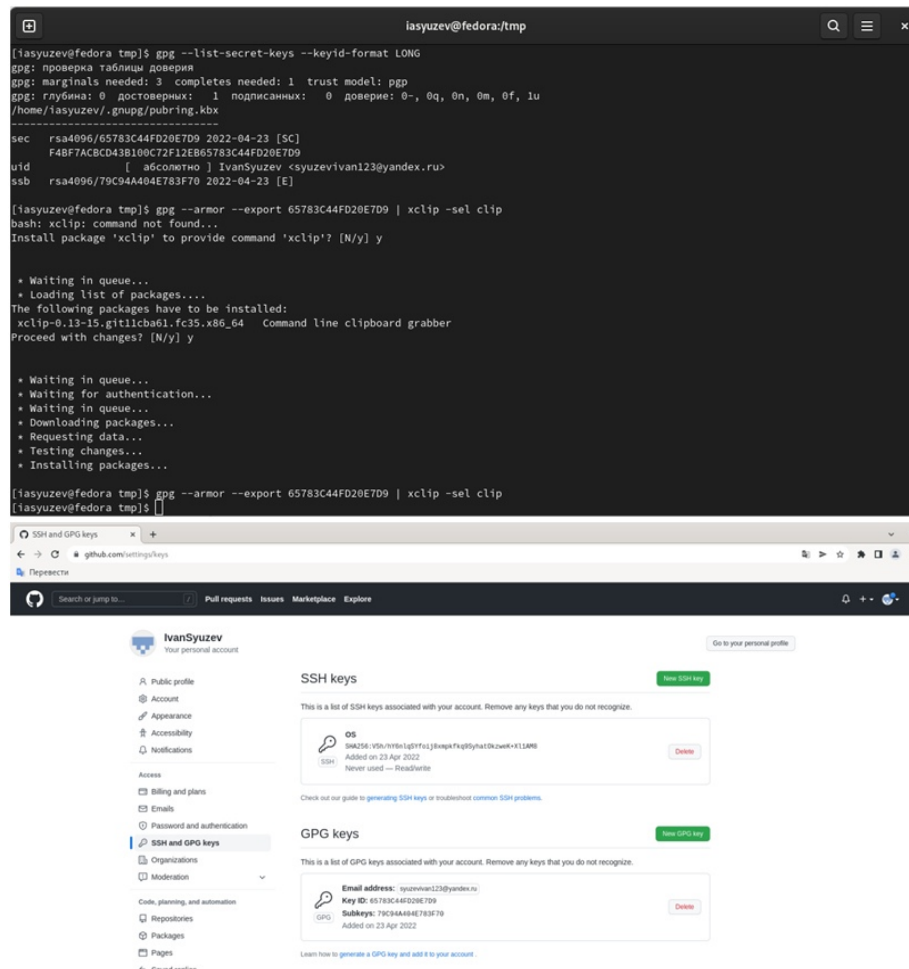
gpg: создан каталог '/home/iasyuzev/.gnupg'
gpg: создан шит с ключами '/home/iasyuzev/.gnupg/pubring.kbx'
Выберите тип ключа:
(1) RSA and RSA
(2) DSA and Elgamal
(3) DSA (sign only)
(4) RSA (sign only)
(9) ECC (sign and encrypt) «default»
(10) ECC (только для подписи)
(14) Existing key from card
Ваш 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
<n> = срок действия ключа - n дней
<n>w = срок действия ключа - n недель
<n>m = срок действия ключа - n месяцев
<n>y = срок действия ключа - n лет
Срок действия ключа? (0)
Срок действия ключа не ограничен
Все верно? (y/N) y

GnuPG должен составить идентификатор пользователя для идентификации ключа.
Ваше полное имя: IvanSyuzev
Адрес электронной почты: syuzevivan123@yandex.ru
Примечание:
Вы выбрали следующий идентификатор пользователя:
"IvanSyuzev <syuzevivan123@yandex.ru>"

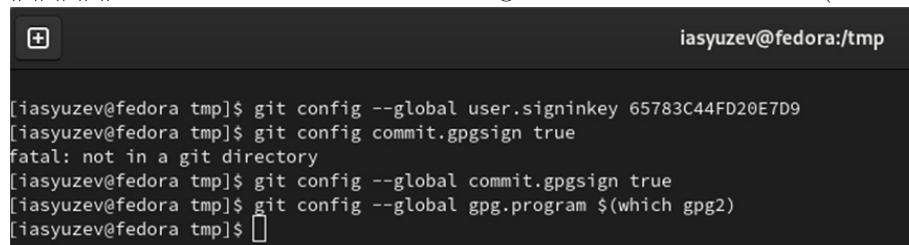
Сменить (N)Имя, (C)Примечание, (E)Адрес; (O)Принять/(Q)Выход? O
Необходимо получить много случайных чисел. Желательно, чтобы Вы
в процессе генерации выполняли какие-то другие действия (печать
на клавиатуре, движения мыши, обращения к дискам); это даст генератору
случайных чисел больше возможностей получить достаточное количество энтропии.
Необходимо получить много случайных чисел. Желательно, чтобы Вы
в процессе генерации выполняли какие-то другие действия (печать
на клавиатуре, движения мыши, обращения к дискам); это даст генератору
случайных чисел больше возможностей получить достаточное количество энтропии.
gpg: /home/iasyuzev/.gnupg/trustdb.gpg: создана таблица доверия
gpg: создан каталог '/home/iasyuzev/.gnupg/openpgp-revocs.d'
gpg: сертификат отзыва записан в '/home/iasyuzev/.gnupg/openpgp-revocs.d/F4BF7ACBCD43B180C72F12EB65783C44FD020E7D9.rev'.
Открытый и секретный ключи созданы и подписаны.

pub  rsa4096 2022-04-23 [SC]
    F4BF7ACBCD43B180C72F12EB65783C44FD020E7D9
uid          IvanSyuzev <syuzevivan123@yandex.ru>
sub  rsa4096 2022-04-23 [E]
```

##### 5. pgp ssh Github ( . 2.6.6)



##### 6. git (. 2.6.7)



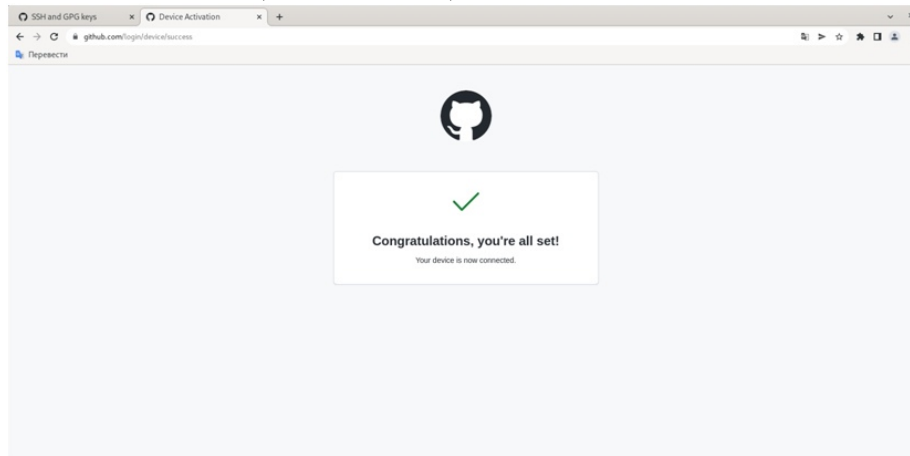
```
[iasyuzev@fedora tmp]$ gh auth login
? What account do you want to log into? GitHub.com
? What is your preferred protocol for Git operations? HTTPS
? Authenticate Git with your GitHub credentials? Yes
? How would you like to authenticate GitHub CLI? Login with a web browser

! First copy your one-time code: 2768-2322
Press Enter to open github.com in your browser...
Окно или вкладка откроются в текущем сеансе браузера.
libva error: vaGetDriverNameByIndex() failed with unknown libva error, driver_name
✓ Authentication complete.
- gh config set -h github.com git_protocol https
✓ Configured git protocol
✓ Logged in as IvanSyuzev
[iasyuzev@fedora tmp]$
```

##### 7.

gh(

)



##### 8.

:

,

(.

```
[iasyuzev@fedora Операционные системы]$ gh repo create study_2021-2022_os-intro --template=yamadharma/course-directory-student-template --public
Created repository IvanSyuzev/study_2021-2022_os-intro on GitHub
[iasyuzev@fedora Операционные системы]$ git clone --recursive git@github.com:IvanSyuzev/study_2021-2022_os-intro.git os-intro
Клонирование в «os-intro»...
```

```
[iasyuzev@fedora os-intro]$ git clone --recursive git@github.com:IvanSyuzev/study_2021-2022_os-intro.git os-intro
Клонирование в «os-intro»...
The authenticity of host 'github.com (140.82.121.3)' can't be established.
ED25519 key fingerprint is SHA256:0VJ2wvV6TuJ2hbpZisf/zLDABZPMSvMdkr4UVCQQu.
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.
remote: Enumerating objects: 20, done.
remote: Counting objects: 100% (20/20), done.
remote: Compressing objects: 100% (18/18), done.
remote: Total 20 (delta 2), reused 15 (delta 2), pack-reused 0
Получение объектов: 100% (20/20), 12.40 KiB | 12.40 KiB/c, готово.
Определение изменений: 100% (2/2), готово.
Подмодуль «template/presentation» (https://github.com/yamadharma/academic-presentation-markdown-template.git) зарегистрирован по пути «template/presentation»
Подмодуль «template/report» (https://github.com/yamadharma/academic-laboratory-report-template.git) зарегистрирован по пути «template/report»
Клонирование в «/home/iasyuzev/work/study/2021-2022/Операционные системы/os-intro/os-intro/template/presentation»...
remote: Enumerating objects: 42, done.
remote: Counting objects: 100% (42/42), done.
remote: Compressing objects: 100% (34/34), done.
remote: Total 42 (delta 9), reused 40 (delta 7), pack-reused 0
Получение объектов: 100% (42/42), 31.19 KiB | 638.00 KiB/c, готово.
Определение изменений: 100% (9/9), готово.
Клонирование в «/home/iasyuzev/work/study/2021-2022/Операционные системы/os-intro/os-intro/template/report»...
remote: Enumerating objects: 78, done.
remote: Counting objects: 100% (78/78), done.
remote: Compressing objects: 100% (52/52), done.
remote: Total 78 (delta 31), reused 69 (delta 22), pack-reused 0
Получение объектов: 100% (78/78), 292.27 KiB | 1.69 MiB/c, готово.
Определение изменений: 100% (11/11), готово.
Submodule path 'template/presentation': checked out '2eabb7586f8a9aded2b506cd1018e625b228b93'
Submodule path 'template/report': checked out 'df7b2ef80f8def3b9a496f8695277469a1a7842a'
[iasyuzev@fedora os-intro]$
```

```

iasyuzev@fedora os-intro]$ git commit -am 'feat(main): make course structure'
[master c993da4] feat(main): make course structure
149 files changed, 16590 insertions(+), 14 deletions(-)
create mode 100644 labs/lab01/presentation/Makefile
create mode 100644 labs/lab01/presentation/presentation.md
create mode 100644 labs/lab01/report/Makefile
create mode 100644 labs/lab01/report/bib/cite.bib
create mode 100644 labs/lab01/report/image/placemg_800_600_tech.jpg
create mode 100644 labs/lab01/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100644 labs/lab01/report/report.md
create mode 100644 labs/lab02/presentation/Makefile
create mode 100644 labs/lab02/presentation/presentation.md
create mode 100644 labs/lab02/report/Makefile
create mode 100644 labs/lab02/report/bib/cite.bib
create mode 100644 labs/lab02/report/image/placemg_800_600_tech.jpg
create mode 100644 labs/lab02/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100644 labs/lab03/presentation/Makefile
create mode 100644 labs/lab03/presentation/presentation.md
create mode 100644 labs/lab03/report/Makefile
create mode 100644 labs/lab03/report/bib/cite.bib
create mode 100644 labs/lab03/report/image/placemg_800_600_tech.jpg
create mode 100644 labs/lab03/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100644 labs/lab03/report/report.md
create mode 100644 labs/lab04/presentation/Makefile
create mode 100644 labs/lab04/presentation/presentation.md
create mode 100644 labs/lab04/report/Makefile
create mode 100644 labs/lab04/report/bib/cite.bib
create mode 100644 labs/lab04/report/image/placemg_800_600_tech.jpg
create mode 100644 labs/lab04/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100644 labs/lab04/report/report.md
create mode 100644 labs/lab05/presentation/Makefile
create mode 100644 labs/lab05/presentation/presentation.md

iasyuzev@fedora os-intro]$ git push
Enumerating objects: 29, done.
Counting objects: 100% (20/20), done.
Compressing objects: 100% (16/16), done.
Writing objects: 100% (19/19), 265.88 KiB | 2.13 MiB/s, done.
Total 19 (changes: 2), 265.88 KiB | 2.13 MiB/s, done.
remote: Resolving deltas: 100% (2/2), completed with 1 local object.
To github.com:iasyuzev/study_2021-2022_os-intro.git
   1a1ca7..c993da4 master -> master

```

### : VCS git. ###  
: 1) Git .  
git (Version  
Control System,VCS)

2)

- 3) — , / ,  
- Wikipedia.
- Bitcoin.
- 4) email  
: git config --global user.name " " git config --global  
user.email "work@mail" utf-8 git: git config --global  
quotepath false  
~/tutorial, : cd mkdir tutorial cd tutorial git init
- 5) (   
): ssh-keygen -C" work@mail" ~/.ssh/.  
cat ~/.ssh/id\_rsa.pub | xclip -sel clip
- 6) Git : — ,
- 7) git: — git: — : git  
init — ( ) : git pull —  
: git push —  
: git status — : git diff—  
: — / :git add . —  
/ / : git add — — /  
( / ): git rm  
— : —  
: git commit -am '—'  
: git commit — , : git checkout -b  
— — : git checkout — ( ,  
, ) —  
: git push origin — — : git  
merge --no-ff — — : — :git  
branch -d — — :git branch -D — —  
: git push origin : —
- 8) git ( ):  
git add hello.txt git commit -am'
- 9) , git: " "
- 10) , , , , ,  
gitignore . :

```
curl -L -s https://www.gitignore.io/api/list , , C
C++ curl -L -s https://www.gitignore.io/api/c » .gitignore curl -L -s
https://www.gitignore.io/api/c++ » .gitignore
```