

РОССИЙСКИЙ УНИВЕРСИТЕТ ДРУЖБЫ НАРОДОВ

Факультет физико-математических и естественных наук

Кафедра прикладной информатики и теории вероятностей

ОТЧЕТ

ПО ЛАБОРАТОРНОЙ РАБОТЕ № 3

дисциплина: *Архитектура компьютера*

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МОСКВА

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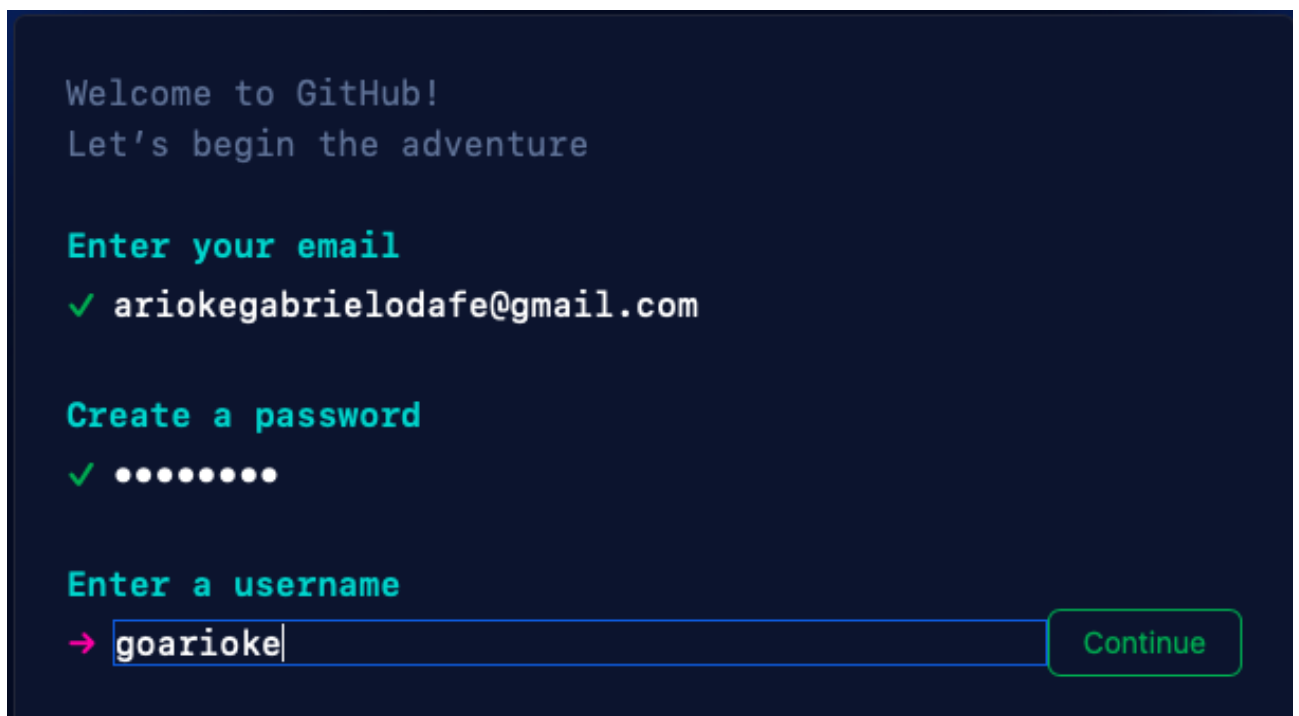
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1 Цель работы:

Целью работы является изучить идеологию и применение средств контроля версий. Приобрести практические навыки по работе с системой git.

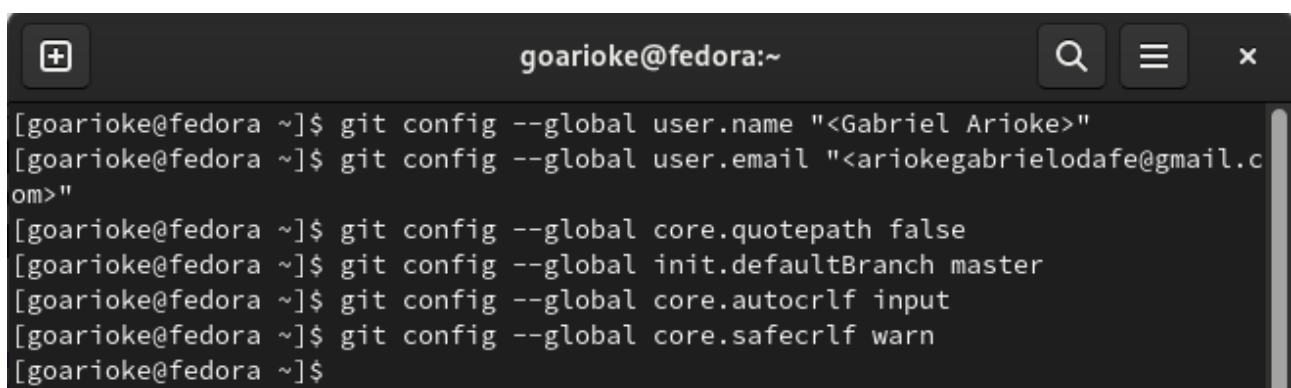
2. Задание

2.1 Описание: Настройка github



(Рис. 1) Создал учетную запись github для выполнения лабораторных работ.

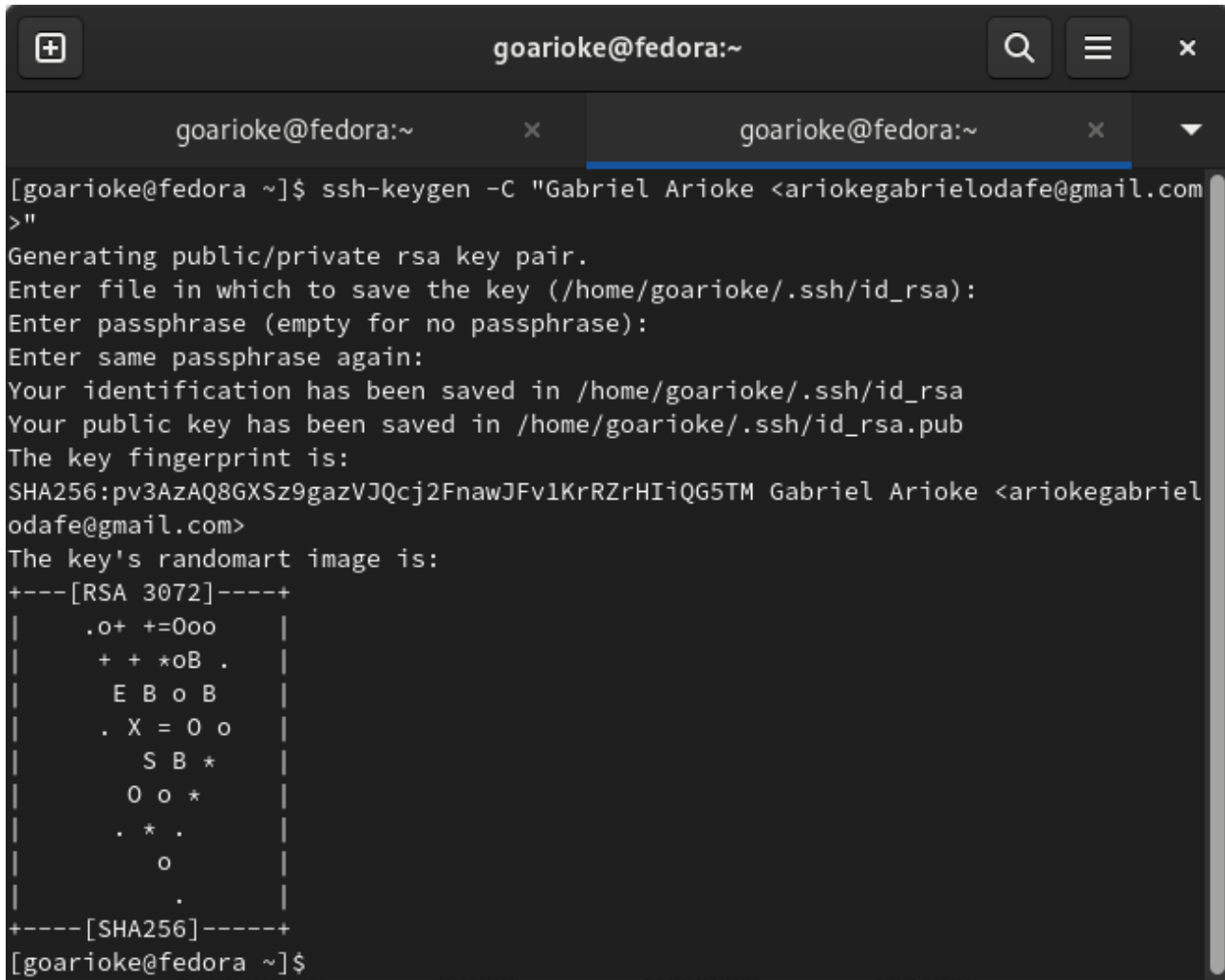
2.2 Описание: Базовая настройка git



(Рис. 2) Я открыл терминал и ввел следующие команды выше, указав имя и адрес электронной почты для репозитория.

После этого настроил utf-8 в его выводе, название начальной ветви по умолчанию и вызвал ее (master), также определил параметры autocrlf и safecrlf.

2.3 Описание: Создание SSh ключа

A terminal window titled 'goarioke@fedora:~' with a search icon, a menu icon, and a close icon in the top right corner. The terminal shows the execution of the 'ssh-keygen' command with the option '-C' and a comment. It prompts for a file name, a passphrase, and a confirmation of the passphrase. It then displays the file locations where the keys were saved and the SHA256 fingerprint of the public key. Finally, it shows a randomart image for the key pair.

```
[goarioke@fedora ~]$ ssh-keygen -C "Gabriel Arioke <ariokegabrielodafe@gmail.com>"
Generating public/private rsa key pair.
Enter file in which to save the key (/home/goarioke/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/goarioke/.ssh/id_rsa
Your public key has been saved in /home/goarioke/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:pv3AzAQ8GSz9gazVJQcj2FnawJFv1KrRZrHIiQG5TM Gabriel Arioke <ariokegabrielodafe@gmail.com>
The key's randomart image is:
+---[RSA 3072]-----+
|  .o+ +=0oo |
|  + + *oB . |
|  E B o B |
|  . X = O o |
|  S B * |
|  O o * |
|  . * . |
|  o |
|  . |
+---[SHA256]-----+
[goarioke@fedora ~]$
```

(Рис. 3) Для последующей идентификации пользователя на сервере репозитория я сгенерировал пару ключей (закрытый и открытый).

```
[goarioke@fedora ~]$ cat ~/.ssh/id_rsa.pub | xclip -sel clip
bash: xclip: command not found...
Install package 'xclip' to provide command 'xclip'? [N/y] y

* Waiting in queue...
The following packages have to be installed:
  xclip-0.13-16.git11cba61.fc36.x86_64    Command line clipboard grabber
Proceed with changes? [N/y] y

* Waiting in queue...
* Waiting for authentication...
* Waiting in queue...
* Downloading packages...
* Requesting data...
* Testing changes...
* Installing packages...

[goarioke@fedora ~]$ cat ~/.ssh/id_rsa.pub | xclip -sel clip
```

Используя команду cat, я скопировал ключ в буфер обмена

Я зашел на сайт github, под своей учетной записью и перешел в меню настроек. После этого я выбрал ключи SSH и GPG.

SSH keys / Add new

Title

lab3

Key type

Authentication Key

Key

```
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGCWN/MN2wtC8WHA
/bnfwitpUGyORBCIXobs56IZjfyIGTDfZibxckVaggG
/Yw7wu3cmNRST8YoqXAdSEIbXI1mkY5M32So7qyW8QpPZtyHBndTrLu6ZQQvpB6DdJcyI4jXZ
+p0SSUekxoOZdfLDnzxCA3RaXom8bIyLdf4mm0V+LmEL0MyDTtuwTR4ea
/S3xEF9+LPxMYhzE58Tx84cqCLSAYD8eKbR21fwOrfvLLGNoSNU5MnwPbkqXyz9I
/JEJzmz5N9zGGvEgAMKiYhG0VSY+J1mOM1XbKjdQPOgjkPmc8i
/aLGRzWlBvBgNjvVqi4meH+cAGibGGazZ7fApqkmcZeION3rqw
/q2MHZuNhuXocWp6fGhv1d+3gGO1QwwsHnygkq4XIj
/XtxWhxwt7lv44xHpsGHHpcVD+bmVERKX4Ic1nsa1m0v7BBb
```

Add SSH key

3. Описание: Создание рабочего пространства и репозитория курса на основе шаблона

```
[goarioke@fedora ~]$ mkdir -p ~/work/study/2022-2023/"Computer Architecture"
[goarioke@fedora ~]$
```


Я открыл терминал и создал структуру каталогов для предмета "Я открыл терминал и создал структуру каталогов для предмета "Архитектура Компьютера".

3.1 Создание репозитория курса на основе шаблона

Create a new repository from course-directory-stud

The new repository will start with the same files and folders as [yamadharm/course-dir](#)

Owner *

 goarioke ▾

Repository name *

/ study_2022-2023_arh-pc ✓

Great repository names study_2022-2023_arh-pc is available. Inspiration? How about **sturdy**

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.

☐ **Include all branches**

Copy all branches from yamadharm/course-directory-student-template and not just master.

 You are creating a public repository in your personal account.

Create repository from template

На github я создал репозиторий с именем study_2022-2023_arch-pc.git

```

[goarioke@fedora Computer architecture]$ git clone --recursive git@github.com:goarioke/study_2022-2023_arh-pc.git
Cloning into 'study_2022-2023_arh-pc'...
The authenticity of host 'github.com (140.82.121.4)' can't be established.
ED25519 key fingerprint is SHA256:+DiY3wvV6TuJJhbpZisF/zLDA0zPMSvHdkr4UvC0qU.
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: 26, done.
remote: Counting objects: 100% (26/26), done.
remote: Compressing objects: 100% (25/25), done.
remote: Total 26 (delta 0), reused 17 (delta 0), pack-reused 0
Receiving objects: 100% (26/26), 16.39 KiB | 3.28 MiB/s, done.
Submodule 'template/presentation' (https://github.com/yamadharma/academic-presentation-markdown-template.git) regist
ered for path 'template/presentation'
Submodule 'template/report' (https://github.com/yamadharma/academic-laboratory-report-template.git) registered for p
ath 'template/report'
Cloning into '/home/goarioke/work/study/2022-2023/Computer architecture/study_2022-2023_arh-pc/template/presentation
'...
remote: Enumerating objects: 71, done.
remote: Counting objects: 100% (71/71), done.
remote: Compressing objects: 100% (49/49), done.
remote: Total 71 (delta 23), reused 68 (delta 20), pack-reused 0
Receiving objects: 100% (71/71), 88.89 KiB | 875.00 KiB/s, done.
Resolving deltas: 100% (23/23), done.
Cloning into '/home/goarioke/work/study/2022-2023/Computer architecture/study_2022-2023_arh-pc/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
Receiving objects: 100% (78/78), 292.27 KiB | 987.00 KiB/s, done.
Resolving deltas: 100% (31/31), done.
Submodule path 'template/presentation': checked out '2703b47423792d472694aaf7555a5626dce51a25'
Submodule path 'template/report': checked out 'df7b2ef80f8def3b9a496f8695277469a1a7842a'
[goarioke@fedora Computer architecture]$ $4$4$4$

```

Перешел в ранее созданный каталог и клонировал туда только что созданный репозиторий с помощью команды `git clone --recursive "link"`. Ссылку взял на github.

goarioke / study_2022-2023_arh-pcPublic

generated from yamadharma/course-directory-student-template

Pin

Unwatch1

Fork0

Star0

<> Code

Issues

Pull requests

Actions

Projects

Wiki

Security

...

master

Go to file

Add file

<> Code

About

Local

CodespacesNew

Clone

HTTPS

SSH

GitHub CLINew

git@github.com:goarioke/study_2022-2023_a

Use a password-protected SSH key.

Download ZIP

confi

temp

.gita

.gitig

.gitm

CHANGE... Initial commit 12 minutes ago

COURSE Initial commit 12 minutes ago

LICENSE Initial commit 12 minutes ago

Makefile Initial commit 12 minutes ago

No description, website, or topics provided.

Readme

CC-BY-4.0 license

0 stars

1 watching

0 forks

Releases

No releases published

Create a new release

Packages

Клонирование репозитория

3.2 Настройка каталога курса


```
[goarioke@fedora Computer architecture]$ cd ~/work/study/2022-2023/"Computer architecture"/study_2022-2023_arh-pc
[goarioke@fedora study_2022-2023_arh-pc]$ rm package.json
[goarioke@fedora study_2022-2023_arh-pc]$ echo arch-pc > COURSE
[goarioke@fedora study_2022-2023_arh-pc]$ make
[goarioke@fedora study_2022-2023_arh-pc]$ git add .
[goarioke@fedora study_2022-2023_arh-pc]$ git commit -am 'feat(main): make course structure'
[master b1e1265] feat(main): make course structure
91 files changed, 8229 insertions(+), 14 deletions(-)
create mode 100644 labs/lab01/presentation/Makefile
create mode 100644 labs/lab01/presentation/image/kulyabov.jpg
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/placeimg_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/image/kulyabov.jpg
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/placeimg_800_600_tech.jpg
create mode 100644 labs/lab02/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100644 labs/lab02/report/report.md
create mode 100644 labs/lab03/presentation/Makefile
create mode 100644 labs/lab03/presentation/image/kulyabov.jpg
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/placeimg_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/image/kulyabov.jpg
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/placeimg_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/lab10/presentation/Makefile
create mode 100644 labs/lab10/presentation/image/kulyabov.jpg
create mode 100644 labs/lab10/presentation/presentation.md
create mode 100644 labs/lab10/report/Makefile
create mode 100644 labs/lab10/report/bib/cite.bib
create mode 100644 labs/lab10/report/image/placeimg_800_600_tech.jpg
create mode 100644 labs/lab10/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100644 labs/lab10/report/report.md
create mode 100644 labs/lab11/presentation/Makefile
create mode 100644 labs/lab11/presentation/image/kulyabov.jpg
create mode 100644 labs/lab11/presentation/presentation.md
create mode 100644 labs/lab11/report/Makefile
create mode 100644 labs/lab11/report/bib/cite.bib
create mode 100644 labs/lab11/report/image/placeimg_800_600_tech.jpg
create mode 100644 labs/lab11/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100644 labs/lab11/report/report.md
delete mode 100644 package.json
create mode 100644 prepare
[goarioke@fedora study_2022-2023_arh-pc]$ git push
Enumerating objects: 22, done.
Counting objects: 100% (22/22), done.
Compressing objects: 100% (16/16), done.
Writing objects: 100% (20/20), 310.95 KiB | 1.81 MiB/s, done.
Total 20 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:goarioke/study_2022-2023_arh-pc.git
   811e8d7..b1e1265  master -> master
[goarioke@fedora study_2022-2023_arh-pc]$
```

```
create mode 100644 labs/lab05/presentation/Makefile
create mode 100644 labs/lab05/presentation/image/kulyabov.jpg
create mode 100644 labs/lab05/presentation/presentation.md
create mode 100644 labs/lab05/report/Makefile
create mode 100644 labs/lab05/report/bib/cite.bib
create mode 100644 labs/lab05/report/image/placeimg_800_600_tech.jpg
create mode 100644 labs/lab05/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100644 labs/lab05/report/report.md
create mode 100644 labs/lab06/presentation/Makefile
create mode 100644 labs/lab06/presentation/image/kulyabov.jpg
create mode 100644 labs/lab06/presentation/presentation.md
create mode 100644 labs/lab06/report/Makefile
create mode 100644 labs/lab06/report/bib/cite.bib
create mode 100644 labs/lab06/report/image/placeimg_800_600_tech.jpg
create mode 100644 labs/lab06/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100644 labs/lab06/report/report.md
create mode 100644 labs/lab07/presentation/Makefile
create mode 100644 labs/lab07/presentation/image/kulyabov.jpg
create mode 100644 labs/lab07/presentation/presentation.md
create mode 100644 labs/lab07/report/Makefile
create mode 100644 labs/lab07/report/bib/cite.bib
create mode 100644 labs/lab07/report/image/placeimg_800_600_tech.jpg
create mode 100644 labs/lab07/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100644 labs/lab07/report/report.md
create mode 100644 labs/lab08/presentation/Makefile
create mode 100644 labs/lab08/presentation/image/kulyabov.jpg
create mode 100644 labs/lab08/presentation/presentation.md
create mode 100644 labs/lab08/report/Makefile
create mode 100644 labs/lab08/report/bib/cite.bib
create mode 100644 labs/lab08/report/image/placeimg_800_600_tech.jpg
create mode 100644 labs/lab08/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100644 labs/lab08/report/report.md
create mode 100644 labs/lab09/presentation/Makefile
create mode 100644 labs/lab09/presentation/image/kulyabov.jpg
create mode 100644 labs/lab09/presentation/presentation.md
create mode 100644 labs/lab09/report/Makefile
create mode 100644 labs/lab09/report/bib/cite.bib
create mode 100644 labs/lab09/report/image/placeimg_800_600_tech.jpg
create mode 100644 labs/lab09/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100644 labs/lab09/report/report.md
```

Перейдите в каталог курса:

```
cd ~/work/study/2022-2023/"Архитектура компьютера"/arch-рс Удалите лишние файлы:
```

```
rm package.json
```

Создайте необходимые каталоги:

















```
echo arch-рс > COURSE
```

```
make
```

Отправьте файлы на сервер:

```
git add . git commit -am 'feat(main): make course structure'
```

```
git push
```

	goarioke feat(main): make cou...	...	22 minutes ago	 2
	config	Initial commit		1 hour ago
	labs	feat(main): make course str...		22 minutes ago
	template	Initial commit		1 hour ago
	.gitattribut...	Initial commit		1 hour ago
	.gitignore	Initial commit		1 hour ago
	.gitmodules	Initial commit		1 hour ago
	CHANGEL...	Initial commit		1 hour ago
	COURSE	feat(main): make course str...		22 minutes ago
	LICENSE	Initial commit		1 hour ago
	Makefile	Initial commit		1 hour ago
	README.e...	Initial commit		1 hour ago
	README.gi...	Initial commit		1 hour ago
	README.md	Initial commit		1 hour ago
	prepare	feat(main): make course str...		22 minutes ago

Я проверил иерархию рабочей области в локальном репозитории, и на странице github все работало правильно.

3.3 Задание для самостоятельной работы

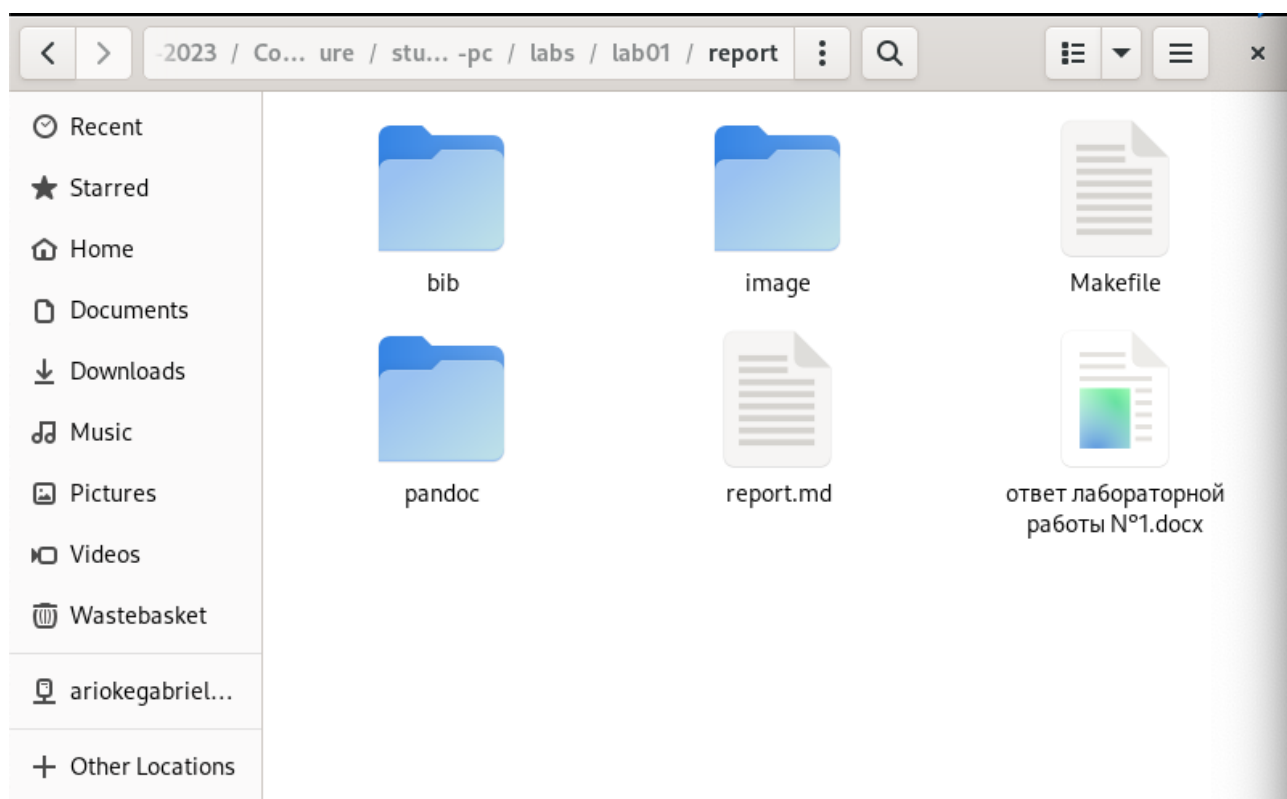
goarioke feat(main): make course structure ...		23 minutes ago	History
..			
lab01	feat(main): make course structure	23 minutes ago	
lab02	feat(main): make course structure	23 minutes ago	
lab03	feat(main): make course structure	23 minutes ago	
lab04	feat(main): make course structure	23 minutes ago	
lab05	feat(main): make course structure	23 minutes ago	
lab06	feat(main): make course structure	23 minutes ago	
lab07	feat(main): make course structure	23 minutes ago	
lab08	feat(main): make course structure	23 minutes ago	
lab09	feat(main): make course structure	23 minutes ago	
lab10	feat(main): make course structure	23 minutes ago	
lab11	feat(main): make course structure	23 minutes ago	


На фотографии выше показан репозиторий на github с разделами лабораторных работ (11 папок с лабораторными работами)

```
[goarioke@fedora Computer architecture]$ git clone git@github.com:goarioke/study_2022-2023_arh-pc.git arch-pc
Cloning into 'arch-pc'...
remote: Enumerating objects: 46, done.
remote: Counting objects: 100% (46/46), done.
remote: Compressing objects: 100% (40/40), done.
remote: Total 46 (delta 1), reused 37 (delta 1), pack-reused 0
Receiving objects: 100% (46/46), 327.29 KiB | 365.00 KiB/s, done.
Resolving deltas: 100% (1/1), done.
[goarioke@fedora Computer architecture]$
```

```
[goarioke@fedora arch-pc]$ git add .
[goarioke@fedora arch-pc]$ git commit -am 'add report lab1 and lab2'
[master 32bd708] add report lab1 and lab2
1 file changed, 1 insertion(+), 1 deletion(-)
[goarioke@fedora arch-pc]$ git push
To github.com:goarioke/study_2022-2023_arh-pc.git
```

Загрузил отчеты lab1 и lab2 на GitHub с помощью midnight commander.





 master ▾ study_2022-2023_arh-pc / labs / lab01 / report /







Go to file


Add file ▾

...

 goarioke Add files via upload ... 21 minutes ago  History

..



	bib	feat(main): make course structure	yesterday
	image	feat(main): make course structure	yesterday
	pandoc/csl	feat(main): make course structure	yesterday
	Makefile	feat(main): make course structure	yesterday
	report.md	feat(main): make course structure	yesterday
	ответ лабораторной раб...	Add files via upload	21 minutes ago

 master ▾ study_2022-2023_arh-pc / labs / lab02 / report /







Go to file

Add file ▾

...

 goarioke Add files via upload ... 16 minutes ago  History

..

	bib	feat(main): make course structure	yesterday
	image	feat(main): make course structure	yesterday
	pandoc/csl	feat(main): make course structure	yesterday
	Makefile	feat(main): make course structure	yesterday
	report.md	feat(main): make course structure	yesterday
	Ответ Лабораторная раб...	Add files via upload	16 minutes ago

фотографии выше, показывающие лабораторные отчеты, были добавлены в github.

4. Вывод: Я изучил идеологию и применение версий controls. И приобрел практические навыки работы с системой git.