

Отчёт по лабораторной работе 2

Архитектура компьютера

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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 Выполнение лабораторной работы

Регистрирую аккаунт на GitHub.

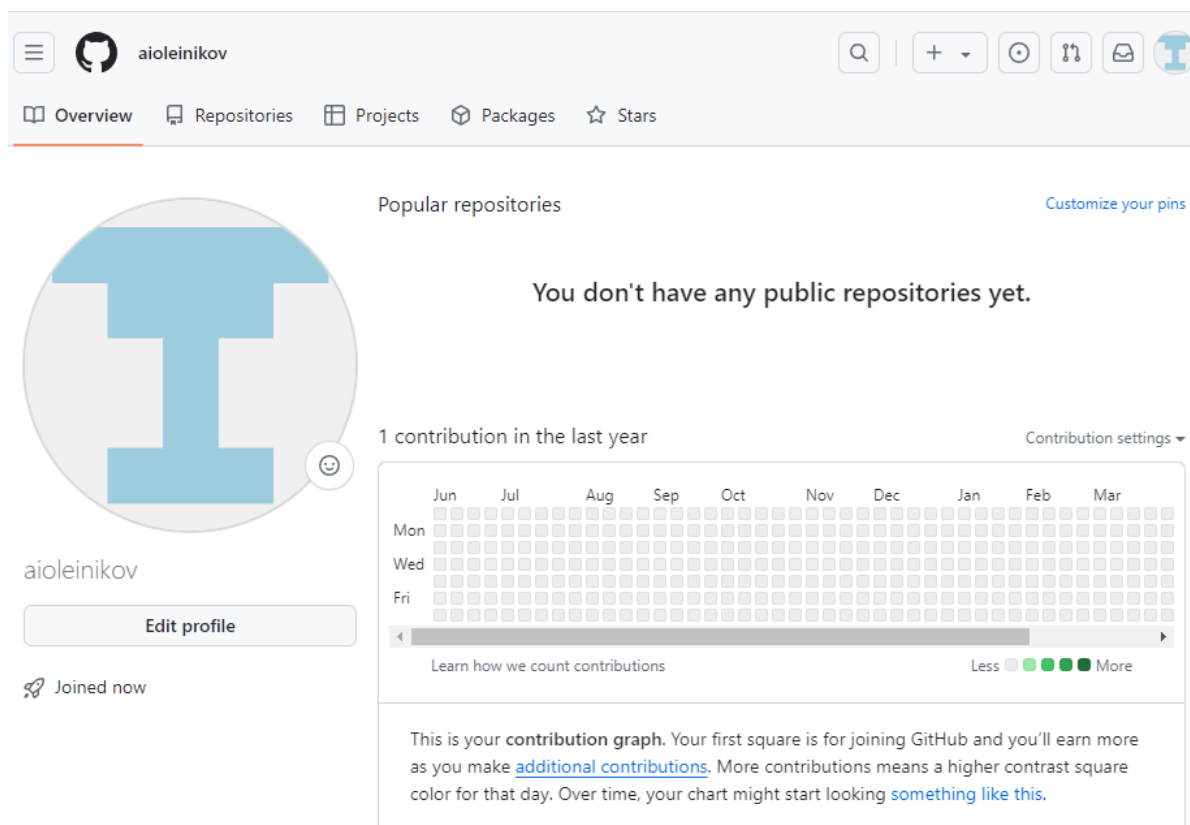


Рис. 2.1: Регистрация профиля

Аккаунт успешно зарегистрирован.

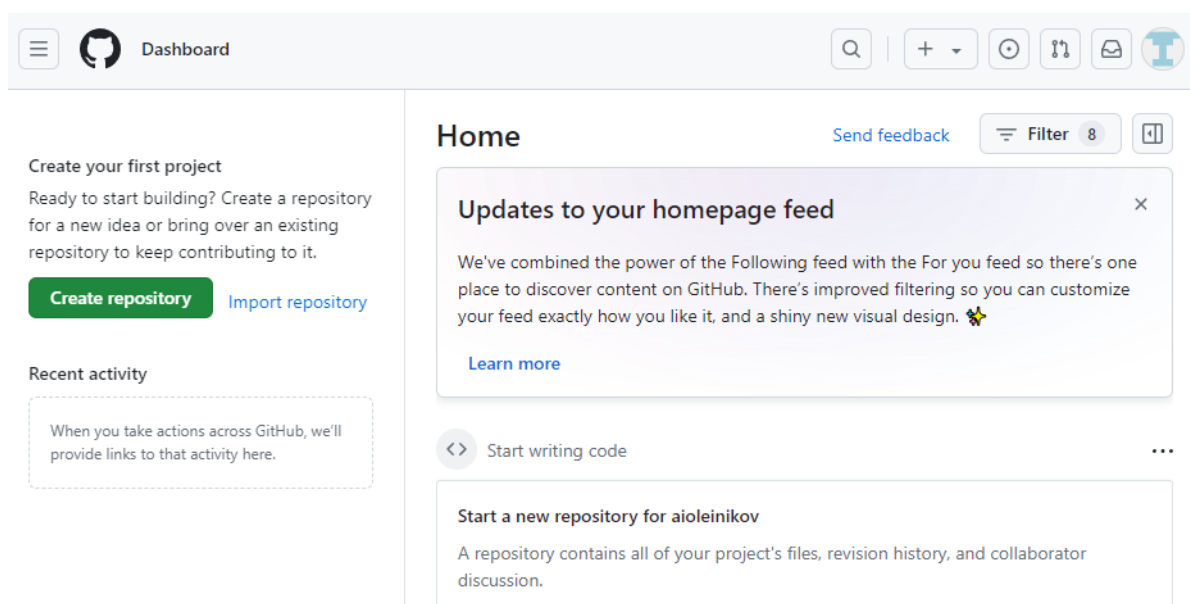


Рис. 2.2: Профиль создан

Следующий шаг – инициализация нового репозитория. Открываю репозиторий учителя и использую его в качестве основы.

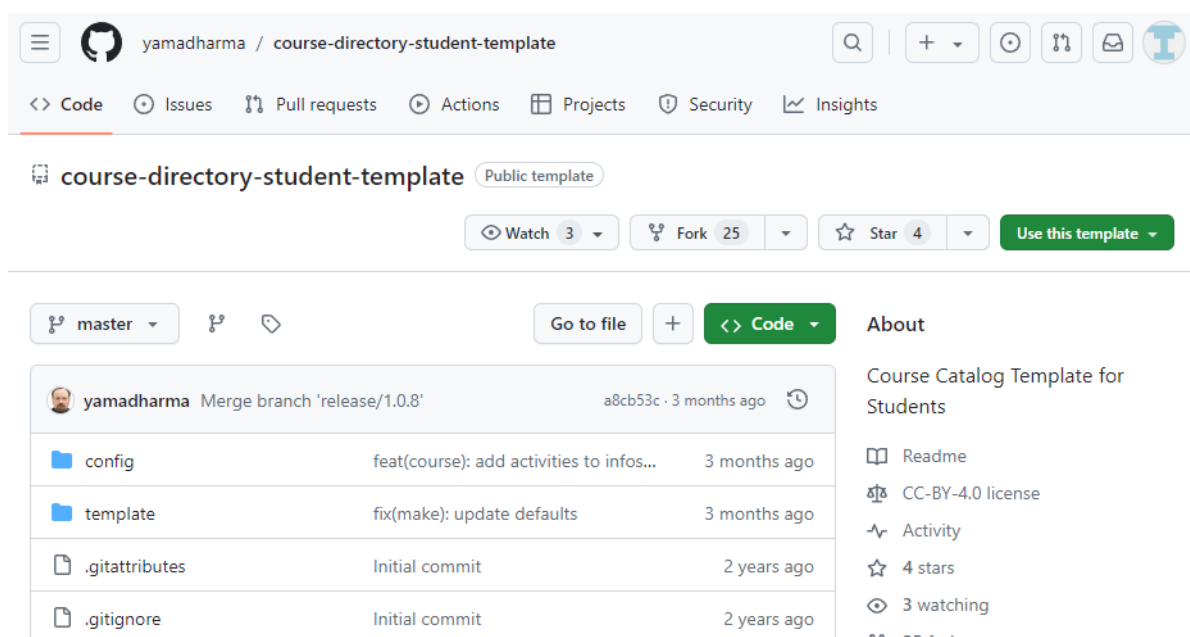


Рис. 2.3: Использование шаблона

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

Required fields are marked with an asterisk (*).



Owner * Repository name *

 aiolainikov ▾ /

✔ arch-pc is available.

Great repository names are short and memorable. Need inspiration? How about **bookish-octo-spork** ?

Description (optional)

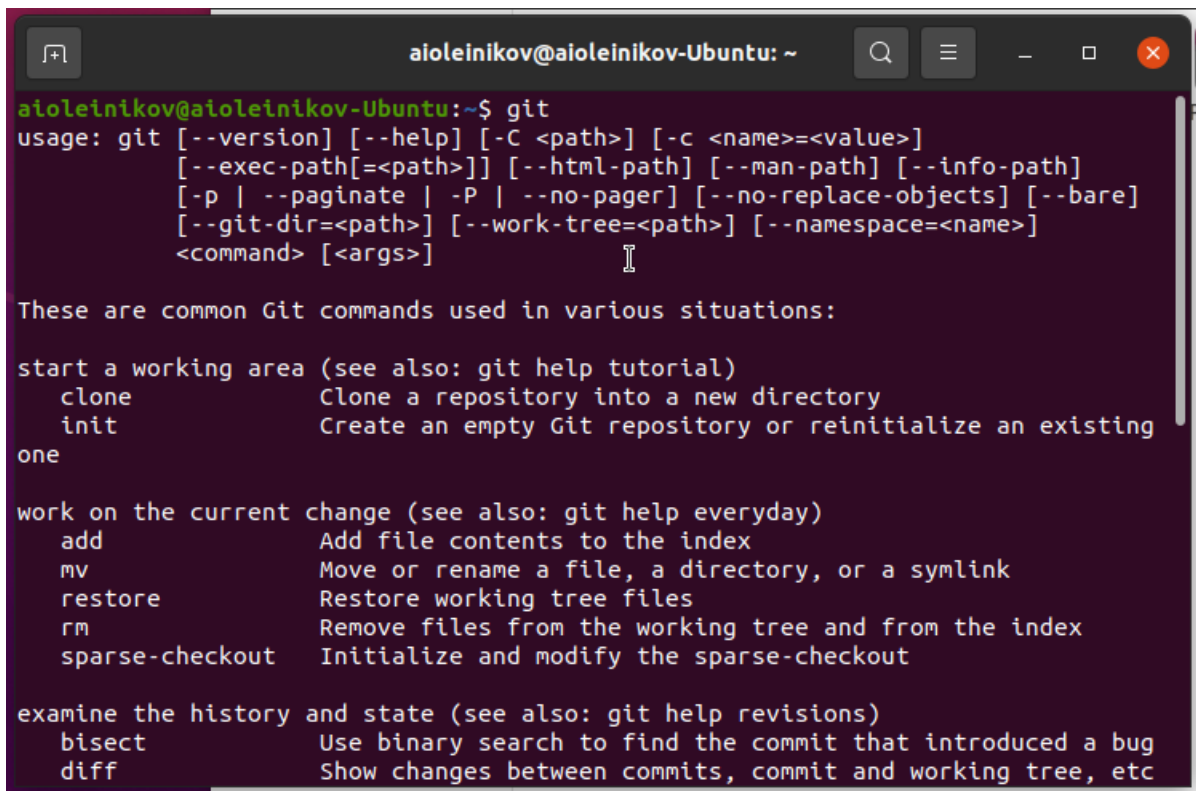
- ☒  **Public**
Anyone on the internet can see this repository. You choose who can commit.
- ☐  **Private**
You choose who can see and commit to this repository.

 You are creating a public repository in your personal account.

Create repository

Рис. 2.4: Использование шаблона

Программа Git установлена на компьютере.

A terminal window titled 'aiolenikov@aiolenikov-Ubuntu: ~' showing the output of the 'git' command. The output includes the usage of 'git' with various flags like --version, --help, -C, -c, --exec-path, --html-path, --man-path, --info-path, --paginate, --no-pager, --no-replace-objects, --bare, --git-dir, --work-tree, --namespace, and <command> <args>. It also lists common Git commands categorized into three groups: 'start a working area', 'work on the current change', and 'examine the history and state', each with a brief description of the command's function.

```
aiolenikov@aiolenikov-Ubuntu:~$ git
usage: git [--version] [--help] [-C <path>] [-c <name>=<value>]
        [--exec-path[=<path>]] [--html-path] [--man-path] [--info-path]
        [-p | --paginate | -P | --no-pager] [--no-replace-objects] [--bare]
        [--git-dir=<path>] [--work-tree=<path>] [--namespace=<name>]
        <command> [<args>]

These are common Git commands used in various situations:

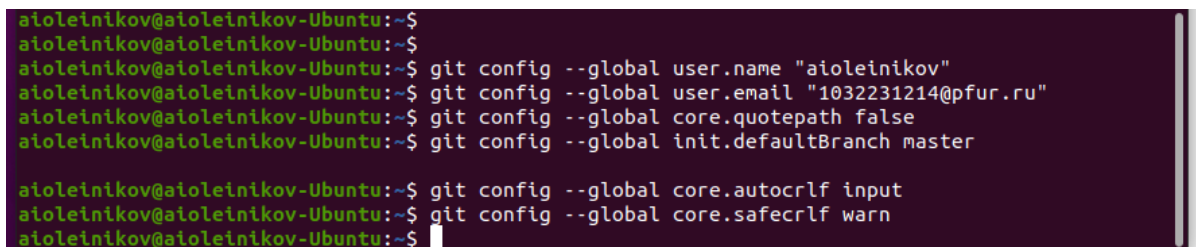
start a working area (see also: git help tutorial)
    clone                Clone a repository into a new directory
    init                 Create an empty Git repository or reinitialize an existing
one

work on the current change (see also: git help everyday)
    add                 Add file contents to the index
    mv                  Move or rename a file, a directory, or a symlink
    restore             Restore working tree files
    rm                  Remove files from the working tree and from the index
    sparse-checkout      Initialize and modify the sparse-checkout

examine the history and state (see also: git help revisions)
    bisect              Use binary search to find the commit that introduced a bug
    diff                Show changes between commits, commit and working tree, etc
```

Рис. 2.5: Команды git

Теперь предстоит настроить личные данные пользователя, конфигурацию ветвления и настройки символов.

A terminal window titled 'aiolenikov@aiolenikov-Ubuntu:~\$' showing a series of 'git config' commands being executed. The commands set global configuration for user.name, user.email, core.quotePath, init.defaultBranch, core.autocrlf, and core.safecrlf.

```
aiolenikov@aiolenikov-Ubuntu:~$
aiolenikov@aiolenikov-Ubuntu:~$
aiolenikov@aiolenikov-Ubuntu:~$ git config --global user.name "aiolenikov"
aiolenikov@aiolenikov-Ubuntu:~$ git config --global user.email "1032231214@pfur.ru"
aiolenikov@aiolenikov-Ubuntu:~$ git config --global core.quotePath false
aiolenikov@aiolenikov-Ubuntu:~$ git config --global init.defaultBranch master

aiolenikov@aiolenikov-Ubuntu:~$ git config --global core.autocrlf input
aiolenikov@aiolenikov-Ubuntu:~$ git config --global core.safecrlf warn
aiolenikov@aiolenikov-Ubuntu:~$
```

Рис. 2.6: Параметры git

Чтобы авторизоваться, необходимо создать SSH-ключ и добавить его в профиль.

```
aiolenikov@aiolenikov-Ubuntu: ~  
Generating public/private rsa key pair.  
Enter file in which to save the key (/home/aiolenikov/.ssh/id_rsa): Created directory '/home/aiolenikov/.ssh'.  
Enter passphrase (empty for no passphrase):  
Enter same passphrase again:  
Your identification has been saved in /home/aiolenikov/.ssh/id_rsa  
Your public key has been saved in /home/aiolenikov/.ssh/id_rsa.pub  
The key fingerprint is:  
SHA256:Q11WbYd7d8VuRsVPA199IaMZS1CWuVjk0tzxozX/RoY aiolenikov 1032231214@pfur.ru  
The key's randomart image is:  
+---[RSA 3072]---+  
| .+=00= =*|  
| .+*. +.B.X|  
| . ++.o ..B+|  
| ...o.o . 0|  
| .+S. = .+o|  
| .. o +E o |  
| . .o |  
| . . |  
| . . |  
+-----[SHA256]-----+  
aiolenikov@aiolenikov-Ubuntu:~$  
aiolenikov@aiolenikov-Ubuntu:~$
```

Рис. 2.7: Создание ключа

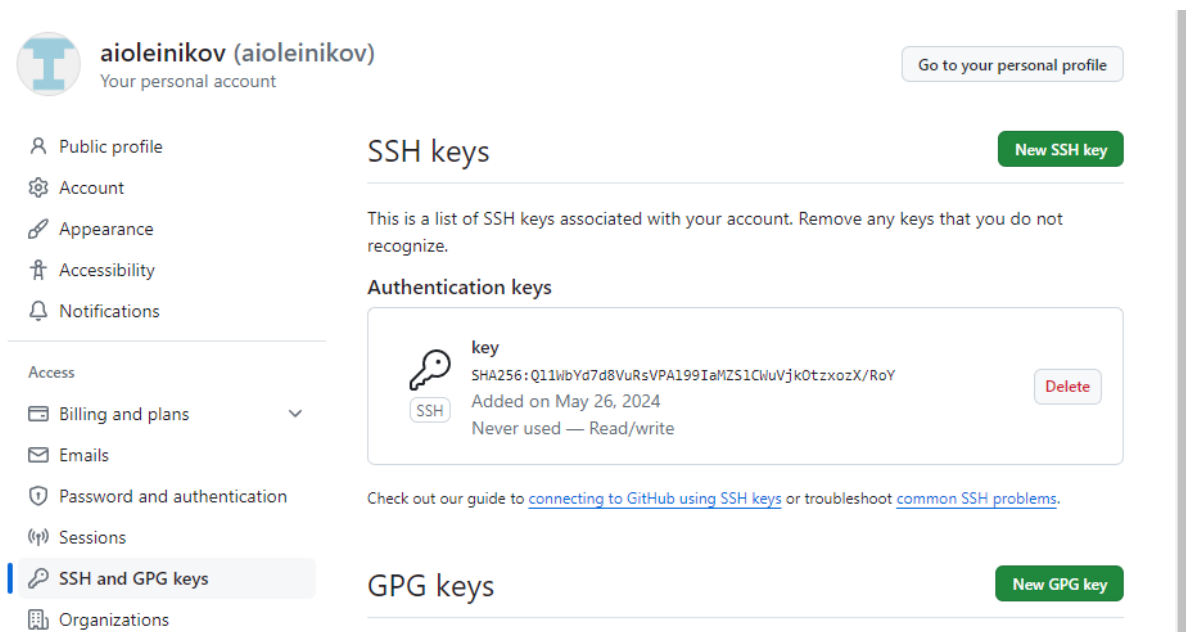
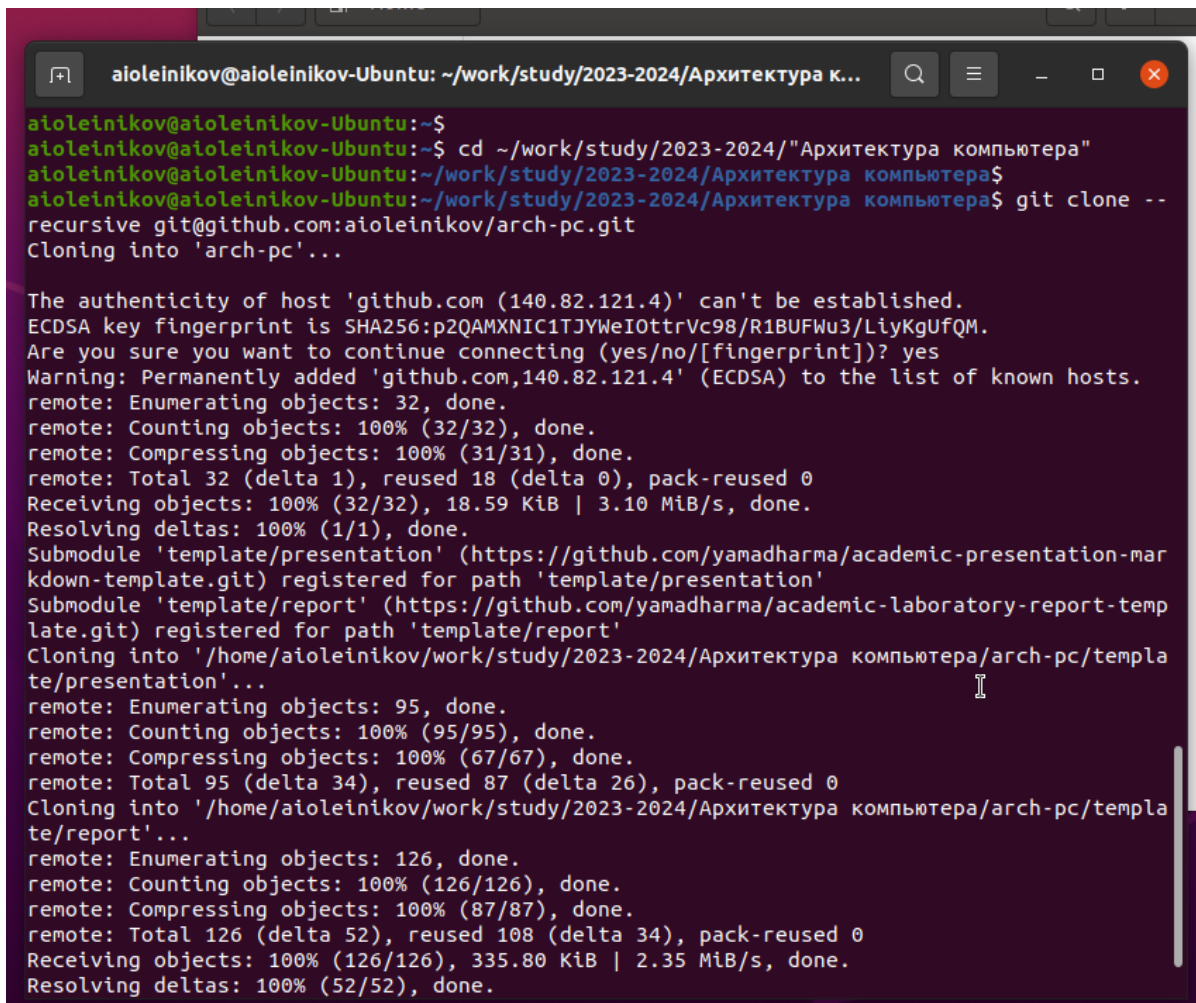


Рис. 2.8: Сохранение ключа

Теперь создам новую директорию и склонирую в неё репозиторий.



```
aioleinikov@aioleinikov-Ubuntu: ~/work/study/2023-2024/Архитектура к...
aioleinikov@aioleinikov-Ubuntu:~$
aioleinikov@aioleinikov-Ubuntu:~$ cd ~/work/study/2023-2024/"Архитектура компьютера"
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера$
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера$ git clone --recursive git@github.com:aioleinikov/arch-pc.git
Cloning into 'arch-pc'...

The authenticity of host 'github.com (140.82.121.4)' can't be established.
ECDSA key fingerprint is SHA256:p2QAMXNIC1TJYWeIOttrVc98/R1BUFWu3/LiyKgUfQM.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com,140.82.121.4' (ECDSA) to the list of known hosts.
remote: Enumerating objects: 32, done.
remote: Counting objects: 100% (32/32), done.
remote: Compressing objects: 100% (31/31), done.
remote: Total 32 (delta 1), reused 18 (delta 0), pack-reused 0
Receiving objects: 100% (32/32), 18.59 KiB | 3.10 MiB/s, done.
Resolving deltas: 100% (1/1), done.
Submodule 'template/presentation' (https://github.com/yamadharma/academic-presentation-markdown-template.git) registered for path 'template/presentation'
Submodule 'template/report' (https://github.com/yamadharma/academic-laboratory-report-template.git) registered for path 'template/report'
Cloning into '/home/aioleinikov/work/study/2023-2024/Архитектура компьютера/arch-pc/template/presentation'...
remote: Enumerating objects: 95, done.
remote: Counting objects: 100% (95/95), done.
remote: Compressing objects: 100% (67/67), done.
remote: Total 95 (delta 34), reused 87 (delta 26), pack-reused 0
Cloning into '/home/aioleinikov/work/study/2023-2024/Архитектура компьютера/arch-pc/template/report'...
remote: Enumerating objects: 126, done.
remote: Counting objects: 100% (126/126), done.
remote: Compressing objects: 100% (87/87), done.
remote: Total 126 (delta 52), reused 108 (delta 34), pack-reused 0
Receiving objects: 100% (126/126), 335.80 KiB | 2.35 MiB/s, done.
Resolving deltas: 100% (52/52), done.
```

Рис. 2.9: Создание рабочего каталога

В репозитории есть скрипт Make для организации директорий курса. Запустим его для создания директорий лабораторных работ.

```
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера/arch-pc$ rm package.json
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера/arch-pc$
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера/arch-pc$ echo arch-pc > COURSE
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера/arch-pc$
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера/arch-pc$ ls
CHANGELOG.md config COURSE LICENSE Makefile README.en.md README.git-flow.md README.md template
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера/arch-pc$ make
Usage:
  make <target>

Targets:
  list           List of courses
  prepare       Generate directories structure
  submodule     Update submodules

aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера/arch-pc$ make prepare
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера/arch-pc$ ls
CHANGELOG.md COURSE LICENSE prepare README.en.md README.md
config labs Makefile presentation README.git-flow.md template
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера/arch-pc$
```

Рис. 2.10: Создание рабочего каталога

После создания локальных директорий их можно отправить в удалённый репозиторий.

```
aioleinikov@aioleinikov-Ubuntu: ~/work/study/2023-2024/Архитектура компьютера/arch-pc
create mode 100644 labs/lab11/report/pandoc/filters/pandocxnos/pandocattributes.py
create mode 100644 labs/lab11/report/report.md
delete mode 100644 package.json
create mode 100644 prepare
create mode 100644 presentation/README.md
create mode 100644 presentation/README.ru.md
create mode 100644 presentation/presentation/Makefile
create mode 100644 presentation/presentation/image/kulyabov.jpg
create mode 100644 presentation/presentation/presentation.md
create mode 100644 presentation/report/Makefile
create mode 100644 presentation/report/bib/cite.bib
create mode 100644 presentation/report/image/placeimg_800_600_tech.jpg
create mode 100644 presentation/report/pandoc/csl/gost-r-7-0-5-2008-numeric.csl
create mode 100755 presentation/report/pandoc/filters/pandoc_eqnos.py
create mode 100755 presentation/report/pandoc/filters/pandoc_fignos.py
create mode 100755 presentation/report/pandoc/filters/pandoc_secnos.py
create mode 100755 presentation/report/pandoc/filters/pandoc_tablenos.py
create mode 100644 presentation/report/pandoc/filters/pandocxnos/__init__.py
create mode 100644 presentation/report/pandoc/filters/pandocxnos/core.py
create mode 100644 presentation/report/pandoc/filters/pandocxnos/main.py
create mode 100644 presentation/report/pandoc/filters/pandocxnos/pandocattributes.py
create mode 100644 presentation/report/report.md
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера/arch-pc$ git push
Warning: Permanently added the ECDSA host key for IP address '140.82.121.3' to the list of known hosts.
Enumerating objects: 37, done.
Counting objects: 100% (37/37), done.
Delta compression using up to 6 threads
Compressing objects: 100% (29/29), done.
Writing objects: 100% (35/35), 341.19 KiB | 2.94 MiB/s, done.
Total 35 (delta 4), reused 0 (delta 0)
remote: Resolving deltas: 100% (4/4), completed with 1 local object.
To github.com:aioleinikov/arch-pc.git
 fcb4249..51c64be master -> master
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера/arch-pc$
aioleinikov@aioleinikov-Ubuntu:~/work/study/2023-2024/Архитектура компьютера/arch-pc$
```

Рис. 2.11: push

3 Выводы

В ходе выполнения работы изучили работу с GitHub.