

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

Завожу аккаунт на GitHub.

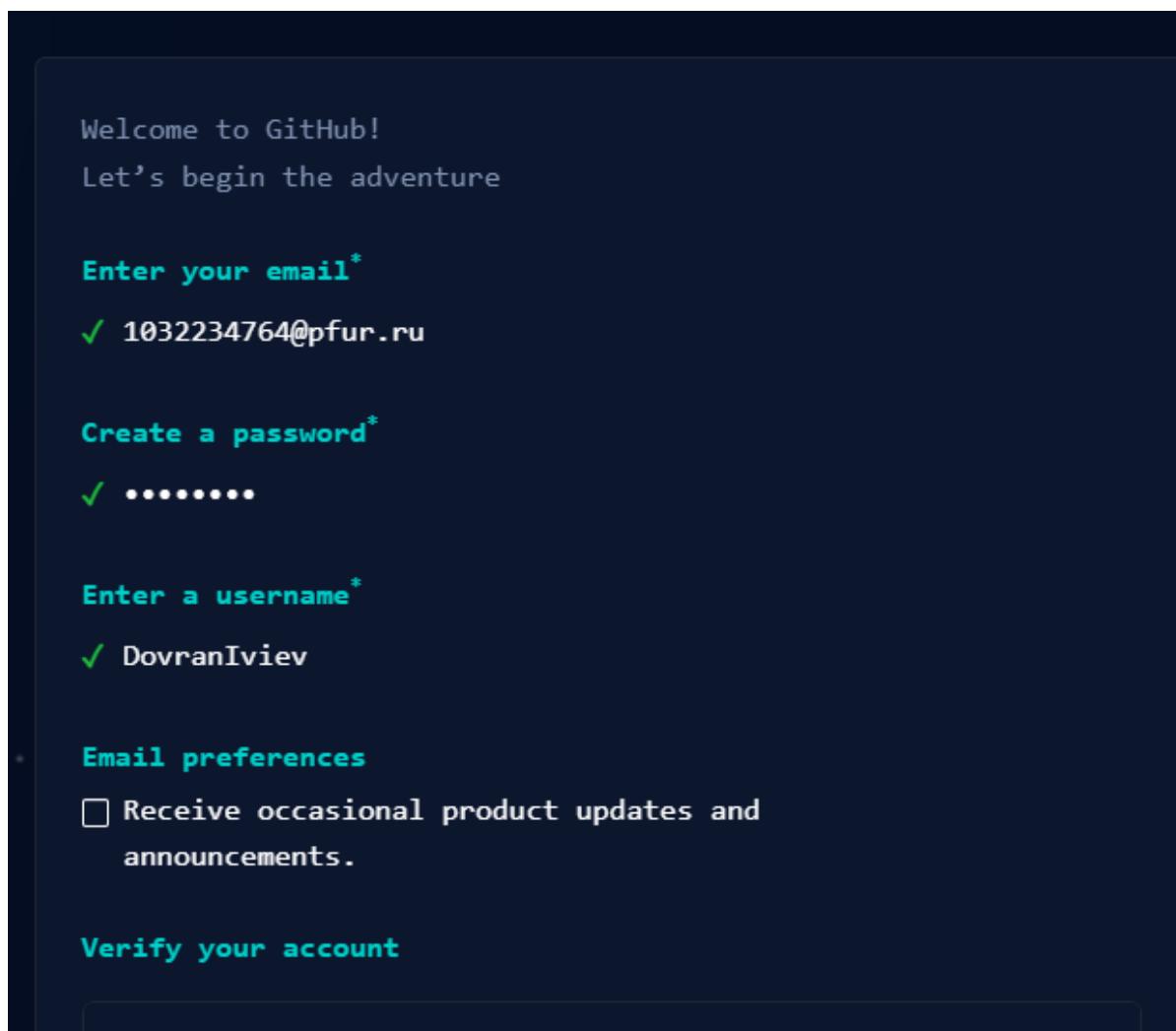


Рис. 2.1: Регистрация профиля

Аккаунт успешно заведен.

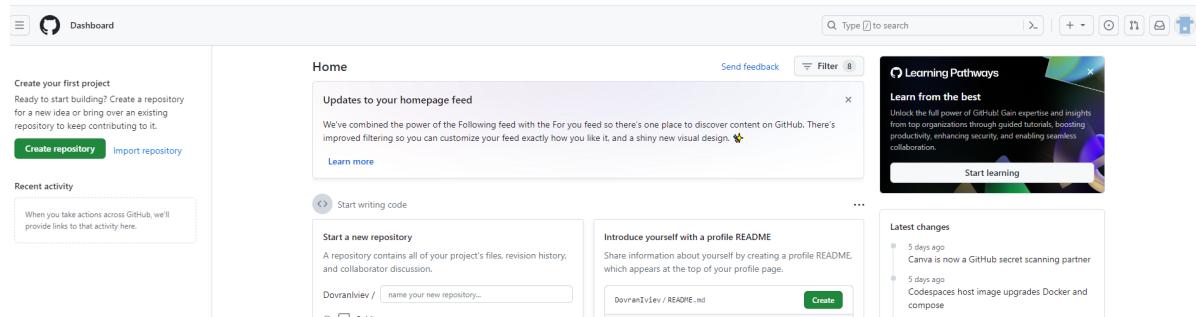


Рис. 2.2: Мой профиль

Следующий шаг – инициализация собственного хранилища кода. Для этого вхожу в хранилище учителя и использую его в качестве основы.

The screenshot shows the GitHub repository page for 'course-directory-student-template'. It's a public template repository. The top bar shows 'course-directory-student-template Public template'. The repository details include 'master' branch, 2 branches, 7 tags, 44 commits, 2 stars, 24 forks, and 2 watching. The commit list shows contributions from 'yamadharma' and 'ec12aba'. The 'About' section describes it as a 'Course Catalog Template for Students' with a 'Readme' file, 'CC-BY-4.0 license', 'Activity', 2 stars, 2 watching, and 24 forks. It also lists releases, with 'v1.0.6' being the latest on Nov 5. The repository URL is <https://github.com/yamadharma/course-directory-student-template>.

Рис. 2.3: Шаблон репозитория

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 *

arch-pc

arch-pc is available.

Great repository names are short and memorable. Need inspiration? How about [ideal-octo-garbanzo](#) ?

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 компьютер.

```
dovraniviev@VirtualBox:~$ 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
  grep           Print lines matching a pattern
  log            Show commit logs
  show           Show various types of objects
  status          Show the working tree status

grow, mark and tweak your common history
  branch         List, create, or delete branches
  commit         Record changes to the repository
  merge          Join two or more development histories together
  rebase         Reapply commits on top of another base tip
  reset          Reset current HEAD to the specified state
  switch         Switch branches
```

Рис. 2.5: Команда git

Требуется настроить личные данные, конфигурацию ветвления и настройки символов.

```
dovraniviev@VirtualBox:~$ git config --global user.name "DovranIviev"
dovraniviev@VirtualBox:~$ git config --global user.email "1032234764@pfur.ru"
dovraniviev@VirtualBox:~$ git config --global core.quotepath false
dovraniviev@VirtualBox:~$ git config --global init.defaultBranch master
dovraniviev@VirtualBox:~$ git config --global core.autocrlf input
dovraniviev@VirtualBox:~$ git config --global core.safecrlf warn
dovraniviev@VirtualBox:~$
```

Рис. 2.6: Параметры git

Чтобы войти, необходимо создать SSH-ключ и привязать его к учетной записи.

```
dovraniviev@VirtualBox:~$ ssh-keygen -C "DovranIview 1032234764@pfur.ru"
Generating public/private rsa key pair.
Enter file in which to save the key (/home/dovraniviev/.ssh/id_rsa):
Created directory '/home/dovraniviev/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/dovraniviev/.ssh/id_rsa
Your public key has been saved in /home/dovraniviev/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:LKWyHf4+TLkN4/BdkRLXj1VmWu1UiIIbq8ycXkXp3IM DovranIview 1032234764@pfur.ru
The key's randomart image is:
+---[RSA 3072]----+
|       . .=oo|
|     oo+ .*. o|
|     oB.+o o |
|     +o.E=o   .|
|     .++oS.+ ..|
|     =*+... .  |
|     +.*. .    |
|     B.* .    |
|     .o.o     |
+---[SHA256]----+
dovraniviev@VirtualBox:~$
```

Рис. 2.7: ssh ключ

Также вношу этот ключ в настройки моего аккаунта на GitHub.

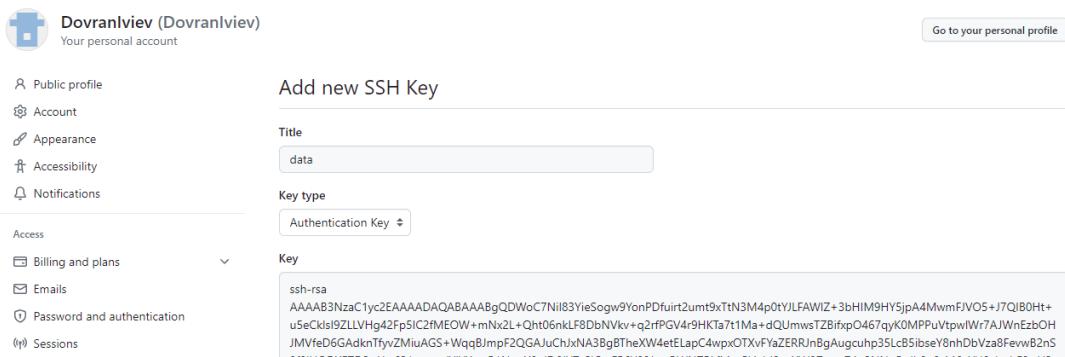


Рис. 2.8: Добавляю ключ

Затем создаем директорию и клонируем в нее хранилище.

```
dovraniviev@VirtualBox:~/work/study/2023-2024/"Архитектура компьютера"
dovraniviev@VirtualBox:~/work/study/2023-2024/Архитектура компьютера$ git clone --recursive git@github.com:DovranIviev/arch-pc.git
Cloning into 'arch-pc'...
The authenticity of host 'github.com (140.82.121.3)' can't be established.
ECDSA key fingerprint is SHA256:p2QAMXNIC1TJYWeI0trVC98/R1BUFWu3/LiyKgUfQM.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com,140.82.121.3' (ECDSA) to the list of known hosts.
remote: Enumerating objects: 30, done.
remote: Counting objects: 100% (30/30), done.
remote: Compressing objects: 100% (29/29), done.
remote: Total 30 (delta 1), reused 17 (delta 0), pack-reused 0
Receiving objects: 100% (30/30), 17.76 KiB | 2.54 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/dovraniviev/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/dovraniviev/work/study/2023-2024/Архитектура компьютера/arch-pc/template/report'...
remote: Enumerating objects: 112, done.
remote: Counting objects: 100% (112/112), done.
remote: Compressing objects: 100% (77/77), done.
remote: Total 112 (delta 45), reused 98 (delta 31), pack-reused 0
Receiving objects: 100% (112/112), 331.19 KiB | 2.85 MiB/s, done.
Resolving deltas: 100% (45/45), done.
Submodule path 'template/presentation': checked out '40a1761813e197d00e8443ff1ca72c60a304f24c'
Submodule path 'template/report': checked out '25e169d367953f60c76c251db299ed52852b401f'
dovraniviev@VirtualBox:~/work/study/2023-2024/Архитектура компьютера$
```

Рис. 2.9: Создание рабочего каталога

В хранилище находится скрипт Make для организации директорий курса. Запустим его, и будут сформированы директории для лабораторных работ.

```
dovraniviev@VirtualBox:~/work/study/2023-2024/Архитектура компьютера$ cd ~/work/study/2023-2024/"Архитектура компьютера"/arch-pc
dovraniviev@VirtualBox:~/work/study/2023-2024/Архитектура компьютера/arch-pc$ rm package.json
dovraniviev@VirtualBox:~/work/study/2023-2024/Архитектура компьютера/arch-pc$ echo arch-pc > COURSE
dovraniviev@VirtualBox:~/work/study/2023-2024/Архитектура компьютера/arch-pc$ make
dovraniviev@VirtualBox:~/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
dovraniviev@VirtualBox:~/work/study/2023-2024/Архитектура компьютера/arch-pc$
```

Рис. 2.10: Создание структуры курса

После этого можно загрузить эти директории в онлайн-хранилище кода.

```
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_tbletnos.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
dovraniviev@VirtualBox:~/work/study/2023-2024/Архитектура компьютера/arch-pc$ git push
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), 342.14 KiB | 4.07 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:DovranIviev/arch-pc.git
  128d44c..8aa3dee master -> master
dovraniviev@VirtualBox:~/work/study/2023-2024/Архитектура компьютера/arch-pc$
```

Рис. 2.11: Загрузка файлов

3 Выводы

В ходе выполнения работы изучили работу с GitHub.