

# Лабораторная работа 1

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# Цели и задачи работы

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# Цель лабораторной работы

Целью данной работы является изучение идеологии и применения средств контроля версий.

# Задачи лабораторной работы

1. Создать учетную запись на [github.com](https://github.com)
2. Настроить репозиторий

# **Процесс выполнения лабораторной работы**

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Git — это система контроля версий (VCS), которая позволяет отслеживать и фиксировать изменения в коде: вы можете восстановить код в случае сбоя или откатить до более ранних версий.

Команды Git принимают вид `git команда аргументы`, где аргументом может быть путь к файлу.


# Создаем учетную запись на github.com и репозиторий

Create a new repository from course-directory-student-template

The new repository will start with the same files and folders as [yamadharma/course-directory-student-template](#).

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Owner \*      Repository name \*


 osamarudn /  ✓

Great repository names are **mathmod** is available. e. Need inspiration? How about **studious-bassoon**?

Description (optional)

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☒  **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.

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☐ **Include all branches**  
Copy all branches from yamadharma/course-directory-student-template and not just master.

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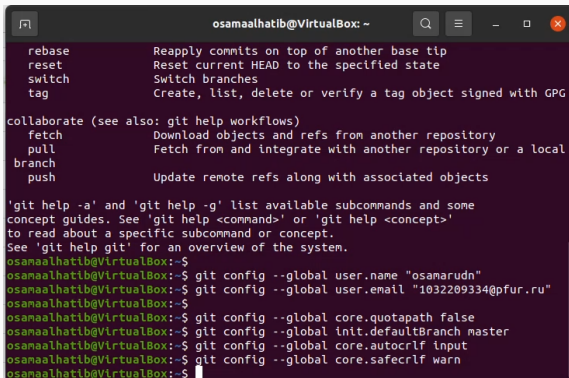
 You are creating a public repository in your personal account.

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[Create repository from template](#)

Figure 1: Создание репозитория

# Задаем конфигурацию

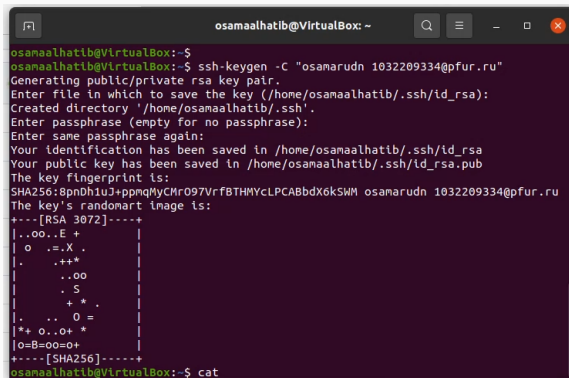


```
osamaalhatib@VirtualBox: ~  
rebase          Reapply commits on top of another base tip  
reset           Reset current HEAD to the specified state  
switch          Switch branches  
tag             Create, list, delete or verify a tag object signed with GPG  
  
collaborate (see also: git help workflows)  
  fetch         Download objects and refs from another repository  
  pull          Fetch from and integrate with another repository or a local  
  branch        branch  
  push          Update remote refs along with associated objects  
  
'git help -a' and 'git help -g' list available subcommands and some  
concept guides. See 'git help <command>' or 'git help <concept>'  
to read about a specific subcommand or concept.  
See 'git help git' for an overview of the system.  
osamaalhatib@VirtualBox:~$  
osamaalhatib@VirtualBox:~$ git config --global user.name "osamarudn"  
osamaalhatib@VirtualBox:~$ git config --global user.email "1032209334@pfur.ru"  
osamaalhatib@VirtualBox:~$  
osamaalhatib@VirtualBox:~$ git config --global core.quotapath false  
osamaalhatib@VirtualBox:~$ git config --global init.defaultBranch master  
osamaalhatib@VirtualBox:~$ git config --global core.autocrlf input  
osamaalhatib@VirtualBox:~$ git config --global core.safecrlf warn  
osamaalhatib@VirtualBox:~$
```

Figure 2: Конфигурация



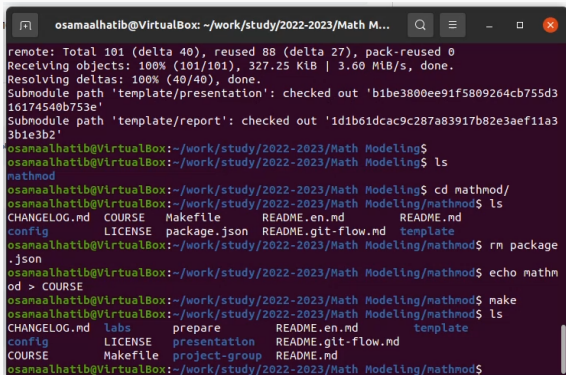
# Генерируем SSH-ключ



```
osamaalhatib@VirtualBox: ~  
osamaalhatib@VirtualBox:~$ ssh-keygen -C "osamarudn 1032209334@pfur.ru"  
Generating public/private rsa key pair.  
Enter file in which to save the key (/home/osamaalhatib/.ssh/id_rsa):  
Created directory '/home/osamaalhatib/.ssh'.  
Enter passphrase (empty for no passphrase):  
Enter same passphrase again:  
Your identification has been saved in /home/osamaalhatib/.ssh/id_rsa  
Your public key has been saved in /home/osamaalhatib/.ssh/id_rsa.pub  
The key fingerprint is:  
SHA256:8pnDh1uJ+ppmqMyCMr097VrfBTHMYCLPCABbdX6kSWM osamarudn 1032209334@pfur.ru  
The key's randomart image is:  
+---[RSA 3072]-----+  
|..oo..E +  
| o .=.X .  
|. .++*  
| . .oo  
| . S  
| . + * .  
|. .. 0 =  
|*+ o..o+ *  
|oB=o.o+  
+----[SHA256]-----+  
osamaalhatib@VirtualBox:~$ cat
```

Figure 3: SSH-ключ

# Создание репозитория из шаблона



```
osamaalhatib@VirtualBox: ~/work/study/2022-2023/Math M...
remote: Total 101 (delta 40), reused 88 (delta 27), pack-reused 0
Receiving objects: 100% (101/101), 327.25 KiB | 3.60 MiB/s, done.
Resolving deltas: 100% (40/40), done.
Submodule path 'template/presentation': checked out 'b1be380ee91f5809264cb755d316174540b753e'
Submodule path 'template/report': checked out '1d1b61dcac9c287a83917b82e3aef11a33b1e3b2'
osamaalhatib@VirtualBox:~/work/study/2022-2023/Math Modeling$
osamaalhatib@VirtualBox:~/work/study/2022-2023/Math Modeling$ ls
mathmod
osamaalhatib@VirtualBox:~/work/study/2022-2023/Math Modeling$ cd mathmod/
osamaalhatib@VirtualBox:~/work/study/2022-2023/Math Modeling/mathmod$ ls
CHANGELOG.md  COURSE  Makefile  README.en.md  README.md
config        LICENSE  package.json  README.git-flow.md  template
osamaalhatib@VirtualBox:~/work/study/2022-2023/Math Modeling/mathmod$ rm package
.json
osamaalhatib@VirtualBox:~/work/study/2022-2023/Math Modeling/mathmod$ echo mathmod > COURSE
osamaalhatib@VirtualBox:~/work/study/2022-2023/Math Modeling/mathmod$ make
osamaalhatib@VirtualBox:~/work/study/2022-2023/Math Modeling/mathmod$ ls
CHANGELOG.md  labs      prepare  README.en.md  template
config        LICENSE  presentation  README.git-flow.md
COURSE       Makefile  project-group  README.md
osamaalhatib@VirtualBox:~/work/study/2022-2023/Math Modeling/mathmod$
```

Figure 4: Создание структуры

# Оформленный репозиторий.

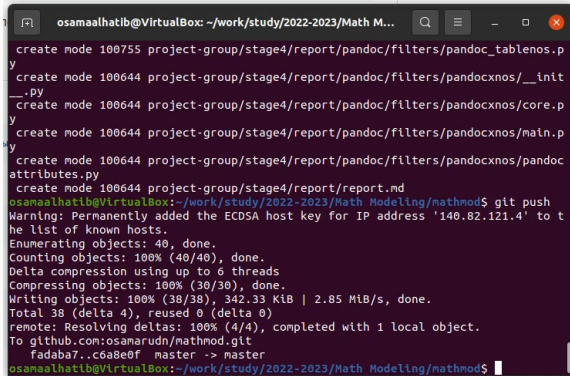
A terminal window with a dark background and light-colored text. The window title is 'osamaalhatib@VirtualBox: ~/work/study/2022-2023/Math M...'. The terminal shows the output of a 'git push' command. It lists several files being created, followed by a warning about an ECDSA host key, and then progress bars for enumerating, counting, compressing, and writing objects. The push is completed successfully, showing the commit hash 'fadaba7..c6a8e0f' and the branch 'master'.

Figure 5: репозиторий

## **Выводы по проделанной работе**

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Мы приобрели практические навыки работы с системой контроля версий git и создали свой репозиторий.