2.1 git установлен


```
C:\WINDOWS\system32\Cmd.exe

Microsoft Windows [Version 10.0.19045.6332]
(c) Корпорация Майкрософт (Microsoft Corporation). Все права защищены.

C:\Users\MSI>python --version
Python 3.13.7

C:\Users\MSI>git --version
git version 2.45.1.windows.1

C:\Users\MSI>
```

2.2Настройка git

```
Microsoft Windows [Version 10.0.19045.6332]
(c) Корпорация Майкрософт (Microsoft Corporation). Все права защищены.

C:\Users\MSI>python --version
Python 3.13.7

C:\Users\MSI>git --version
git version 2.45.1.windows.1

C:\Users\MSI>git config --global user.name "daniil"

C:\Users\MSI>git config --global user.email "undestoodsmallfrog86@gamil.com"

C:\Users\MSI>git config --list
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=openssl
http.sslcainfo=C:/Program Files/Git/mingw64/etc/ssl/certs/ca-bundle.crt
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=master
user.name=daniil
user.email=undestoodsmallfrog86@gamil.com
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
core.repositoryformatversion=0
core.filemode=false
core.bare=false
core.logallrefupdates=true
core.symlinks=false
core.ignorecase=true
remote.origin.url=https://github.com/understoodsmallfrog86-bit/Program-Engenering.git
remote.origin.fetch=+refs/heads/*:refs/remotes/origin/*
branch.main.remote=origin
branch.main.merge=refs/heads/main

C:\Users\MSI>
```
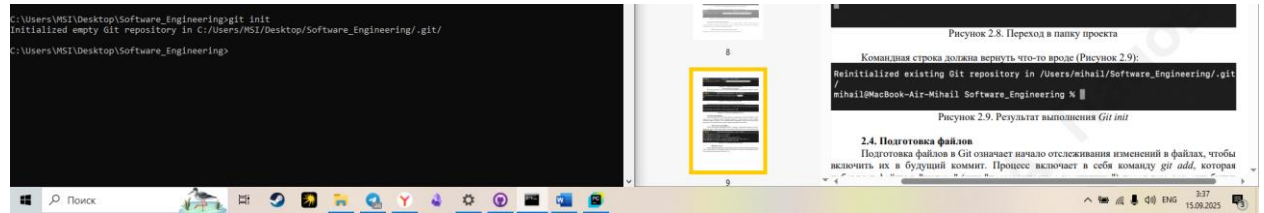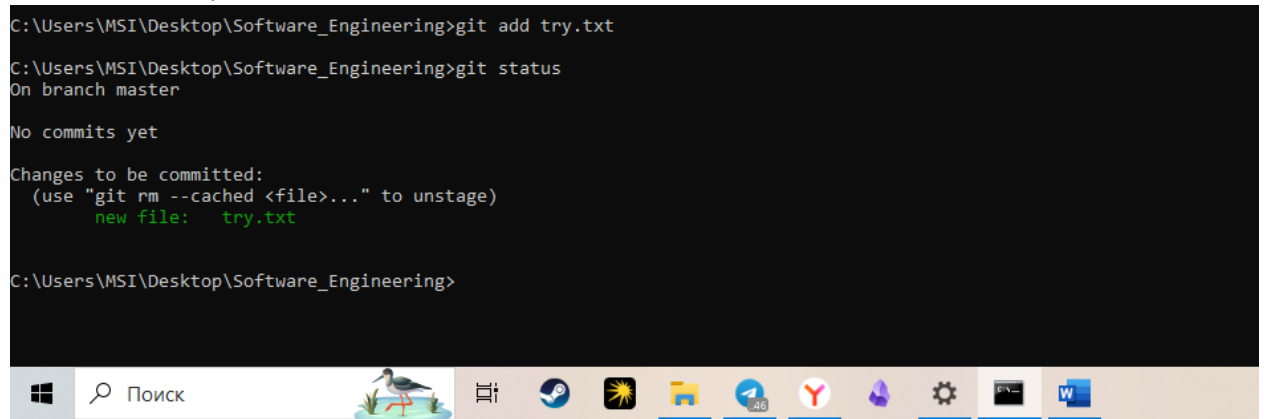
2.3 Создание репозитория

2.4 Подготовка файлов

2.5 Фиксация изменений


```
C:\WINDOWS\system32\Cmd.exe                                              —  □  ×

pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=master
user.name=daniil
user.email=undestoodsmallfrog86@gamil.com
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
core.repositoryformatversion=0
core.filemode=false
core.bare=false
core.logallrefupdates=true
core.symlinks=false
core.ignorecase=true
remote.origin.url=https://github.com/understoodsmallfrog86-bit/Program-Engenering.git
remote.origin.fetch=+refs/heads/*:refs/remotes/origin/*
branch.main.remote=origin
branch.main.merge=refs/heads/main

C:\Users\MSI>cd C:\Users\MSI\Desktop\Software_Engineering

C:\Users\MSI\Desktop\Software_Engineering>git init
Initialized empty Git repository in C:/Users/MSI/Desktop/Software_Engineering/.git/

C:\Users\MSI\Desktop\Software_Engineering>git add try.txt
fatal: pathspec 'try.txt' did not match any files

C:\Users\MSI\Desktop\Software_Engineering>git add try.txt

C:\Users\MSI\Desktop\Software_Engineering>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   try.txt


C:\Users\MSI\Desktop\Software_Engineering>git commit -m "ла-ла-ла"
[master (root-commit) 19d8d38] ╦╫-╦╫-╦╫
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 try.txt

C:\Users\MSI\Desktop\Software_Engineering>git log
commit 19d8d382c69ba2bd6e2eeacb4bda4fc727305b07 (HEAD -> master)
Author: daniil <undestoodsmallfrog86@gamil.com>
Date:   Mon Sep 15 03:41:58 2025 +0500

    ла-ла-ла

C:\Users\MSI\Desktop\Software_Engineering>
```

2.6 Подключение к удаленному репозиторию


```
C:\Users\MSI\Desktop\Software_Engineering>git log
commit 19d8d382c69ba2bd6e2eeacb4bda4fc727305b07 (HEAD -> master)
Author: daniil <undestoodsmallfrog86@gamil.com>
Date:   Mon Sep 15 03:41:58 2025 +0500

    ла-ла-ла

C:\Users\MSI\Desktop\Software_Engineering>git remote add https://github.com/understoodsmallfrog86-bit/Software_Engine
ering
usage: git remote add [<options>] <name> <url>

    -f, --[no-]fetch       fetch the remote branches
    --[no-]tags            import all tags and associated objects when fetching
                           or do not fetch any tag at all (--no-tags)
    -t, --[no-]track <branch>
                           branch(es) to track
    -m, --[no-]master <branch>
                           master branch
    --[no-]mirror[=(push|fetch)]
                           set up remote as a mirror to push to or fetch from


C:\Users\MSI\Desktop\Software_Engineering>git remote add origin https://github.com/understoodsmallfrog86-bit/Software
_Engineering

C:\Users\MSI\Desktop\Software_Engineering>git push origin main
error: src refspec main does not match any
error: failed to push some refs to 'https://github.com/understoodsmallfrog86-bit/Software_Engineering'

C:\Users\MSI\Desktop\Software_Engineering>git remote add origin https://github.com/understoodsmallfrog86-bit/Software
_Engineering.git
error: remote origin already exists.

C:\Users\MSI\Desktop\Software_Engineering>git branch -M main

C:\Users\MSI\Desktop\Software_Engineering>git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 218 bytes | 218.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/understoodsmallfrog86-bit/Software_Engineering
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.

C:\Users\MSI\Desktop\Software_Engineering>
C:\Users\MSI\Desktop\Software_Engineering>
```

2.7

```
C:\Users\MSI\Desktop\Software_Engineering>git branch tema1

C:\Users\MSI\Desktop\Software_Engineering>git checkouut tema1
git: 'checkouut' is not a git command. See 'git --help'.

The most similar command is
        checkout

C:\Users\MSI\Desktop\Software_Engineering>git checkout tema1
Switched to branch 'tema1'
```

2.8

```
C:\Users\MSI\Desktop\Software_Engineering>git fetch https://github.com/understoodsmallfrog86-bit/Software_Engineering

From https://github.com/understoodsmallfrog86-bit/Software_Engineering
 * branch            HEAD       -> FETCH_HEAD

C:\Users\MSI\Desktop\Software_Engineering>git fetch Software_Engineering
fatal: 'Software_Engineering' does not appear to be a git repository
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.

C:\Users\MSI\Desktop\Software_Engineering>_
```

2.9 Удаление файлов, веток в локальных, удаленных репозиториях

```
C:\Users\MSI\Desktop\Software_Engineering>git push -delete tema1
error: did you mean `--delete` (with two dashes)?

C:\Users\MSI\Desktop\Software_Engineering>git push --delete tema1
```

2.10 Отслеживание изменений в комитах

```
C:\Users\MSI\Desktop\Software_Engineering>git log
commit 19d8d382c69ba2bd6e2eeacb4bda4fc727305b07 (HEAD -> tema1, origin/main, main)
Author: daniil <undestoodsmallfrog86@gamil.com>
Date:   Mon Sep 15 03:41:58 2025 +0500
```

2.11 Возвращение файла к предыдущему (определенному) состоянию

```
C:\Users\MSI\Desktop\Software_Engineering>git log
commit 19d8d382c69ba2bd6e2eeacb4bda4fc727305b07 (HEAD -> tema1, origin/main, main)
Author: daniil <undestoodsmallfrog86@gamil.com>
Date:   Mon Sep 15 03:41:58 2025 +0500

    ла-ла-ла

C:\Users\MSI\Desktop\Software_Engineering>git checkout

C:\Users\MSI\Desktop\Software_Engineering>git checkout 19d8d382c69ba2bd6e2eeacb4bda4fc727305b07 --C:\Users\MSI\Deskto
p\Software_Engineering\try.txt
```

2.12. Возвращение к предыдущему коммиту

```
:\Users\MSI\Desktop\Software_Engineering>git reset --hard HEAD^
Продолжить?
Продолжить? yes
fatal: ambiguous argument 'HEAD
es': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
git <command> [<revision>...] -- [<file>...]'

:\Users\MSI\Desktop\Software_Engineering>
```

2.13 Исправление коммита

```
:\Users\MSI\Desktop\Software_Engineering>git commit --amend
 branch tema1

itial commit

 changes
ou asked to amend the most recent commit, but doing so would make
 empty. You can repeat your command with --allow-empty, or you can
emove the commit entirely with "git reset HEAD^".

:\Users\MSI\Desktop\Software_Engineering>_
```

2.14. Разрешение конфликтов при слиянии

```
C:\Users\MSI\Desktop\Software_Engineering>git merge tema1
Already up to date.

C:\Users\MSI\Desktop\Software_Engineering>.gitignore
".gitignore" не является внутренней или внешней
командой, исполняемой программой или пакетным файлом.

C:\Users\MSI\Desktop\Software_Engineering>
```

2.15 .gitihnore

```
.log
.env
temp/*
node_modules/*
```