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высшего образования
«СЕВЕРО-КАВКАЗСКИЙ ФЕДЕРАЛЬНЫЙ УНИВЕРСИТЕТ»

Институт цифрового развития
Кафедра инфокоммуникаций

ОТЧЕТ
ПО ЛАБОРАТОРНОЙ РАБОТЕ №1.2
дисциплины «Введение в специальность»
Вариант ____

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Отчет защищен с оценкой _____ Дата защиты _____

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Цель: исследовать базовые возможности системы контроля версий Git для работы с локальными репозиториями.


Порядок выполнения работы:

1. Создаем новый репозиторий

Create a new repository

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

Owner *

 Arsen445 ▾

Repository name *

LB1.2 ✓

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

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.

Initialize this repository with:

Skip this step if you're importing an existing repository.

☒ **Add a README file**

This is where you can write a long description for your project. [Learn more.](#)

☒ **Add .gitignore**


Choose which files not to track from a list of templates. [Learn more.](#)

.gitignore template: Python ▾

☒ **Choose a license**

A license tells others what they can and can't do with your code. [Learn more.](#)

License: MIT License ▾

This will set  **main** as the default branch. Change the default name in your [settings](#).

Create repository

2. Клонировем репозиторий

```
D:\>git clone https://github.com/Arsen445/LB1.2.git
Cloning into 'LB1.2'...
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (5/5), done.
D:\>
```

3. Редактируем gitignore

```

1
2 # Created by https://www.toptal.com/developers/gitignore/api/python
3 # Edit at https://www.toptal.com/developers/gitignore?templates=python
4
5 ### Python ###
6 # Byte-compiled / optimized / DLL files
7 __pycache__/
8 *.py[co]
9 *$py.class
10
11 # C extensions
12 *.so
13
14 # Distribution / packaging
15 .Python
16 build/
17 develop-eggs/
18 dist/
19 downloads/
20 eggs/
21 .eggs/
22 lib/
23 lib64/
24 parts/
25 sdist/
26 var/
27 wheels/
28 share/python-wheels/
29 *.egg-info/
30 .installed.cfg
31 *.egg
32 MANIFEST

```

```

Git CMD
hint: "git config advice.addEmptyPathsSpec false"
D:\LB1.2>git add .
D:\LB1.2>git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   .gitignore

D:\LB1.2>git commit -m"Commit #1"
[main 29d69e9] Commit #1
1 file changed, 32 insertions(+), 2 deletions(-)

D:\LB1.2>git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean

D:\LB1.2>git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 1012 bytes | 1012.00 KiB/s, done.

```

4. Добавляем readme с информацией о группе и ФИО

| Шрифт | Абзац |
|-------|-------|
| 1 | 2 |
| 3 | 4 |
| 5 | 6 |
| 7 | 8 |
| 9 | 10 |

```

# LB1.2
Эсеналиев Арсен ИБТ-6-о-21-1
Кроссплатформенное программирование

```

```

Git CMD
D:\LB1.2>git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 1012 bytes | 1012.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Arsen445/LB1.2.git
   de627ed..29d69e9  main -> main

D:\LB1.2>git add .
D:\LB1.2>git commit -m"Commit #2"
[main aac8c17] Commit #2
1 file changed, 3 insertions(+), 1 deletion(-)

D:\LB1.2>git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 320 bytes | 320.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Arsen445/LB1.2.git
   29d69e9..aac8c17  main -> main

D:\LB1.2>

```

5. Создаем комит с тэгом

```

a=3 D:\LB1.2>git tag -a v0.0 -m "my version 0.0"
D:\LB1.2>git tag --list
v0.0
D:\LB1.2>

```

```
a=3
b=4
D:\LB1.2>git tag -a v0.1 -m "my version 0.1"
D:\LB1.2>git tag --list
v0.0
v0.1
D:\LB1.2>
```

```
a=3
b=4
a, b = b, a
D:\LB1.2>git tag -a v0.2 -m "my version 0.2"
D:\LB1.2>git tag --list
v0.0
v0.1
v0.2
D:\LB1.2>
```

```
a=3
b=4
a, b = b, a
print(a)
D:\LB1.2>git tag -a v0.3 -m "my version 0.3"
D:\LB1.2>git tag --list
v0.0
v0.1
v0.2
v0.3
D:\LB1.2>
```

```
a=3
b=4
a, b = b, a
print(a)
print(b)
D:\LB1.2>git tag -a v0.4 -m "my version 0.4"
D:\LB1.2>git tag --list
v0.0
v0.1
v0.2
v0.3
v0.4
D:\LB1.2>
```

```
a=3
b=4
a, b = b, a
print(a) #a=4
print(b)
D:\LB1.2>git tag -a v0.5 -m "my version 0.5"
D:\LB1.2>git tag --list
v0.0
v0.1
v0.2
v0.3
v0.4
v0.5
D:\LB1.2>
```

```
a=3
b=4
a, b = b, a
print(a) #a=4
print(b) #b=3
D:\LB1.2>git tag -a v0.6 -m "my version 0.6"
D:\LB1.2>git tag --list
v0.0
v0.1
v0.2
v0.3
v0.4
v0.5
v0.6
D:\LB1.2>
```

```
D:\LB1.2>git push origin --tags
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 8 threads
Compressing objects: 100% (9/9), done.
Writing objects: 100% (9/9), 716 bytes | 716.00 KiB/s, done.
Total 9 (delta 6), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (6/6), done.
To https://github.com/Arsen445/LB1.2.git
* [new tag]          v0.0 -> v0.0
* [new tag]          v0.1 -> v0.1
* [new tag]          v0.2 -> v0.2
* [new tag]          v0.3 -> v0.3
* [new tag]          v0.4 -> v0.4
* [new tag]          v0.5 -> v0.5
* [new tag]          v0.6 -> v0.6
* [new tag]          v0.7 -> v0.7
* [new tag]          v0.8 -> v0.8
```

| Tags | | |
|------------------|-----------|----------------|
| v0.8 | ... | ... |
| 🕒 4 minutes ago | 🔗 6171aab | 📄 zip 📄 tar.gz |
| v0.7 | ... | ... |
| 🕒 5 minutes ago | 🔗 8fb83bc | 📄 zip 📄 tar.gz |
| v0.6 | ... | ... |
| 🕒 12 minutes ago | 🔗 aac8c17 | 📄 zip 📄 tar.gz |
| v0.5 | ... | ... |
| 🕒 12 minutes ago | 🔗 aac8c17 | 📄 zip 📄 tar.gz |
| v0.4 | ... | ... |
| 🕒 13 minutes ago | 🔗 aac8c17 | 📄 zip 📄 tar.gz |
| v0.3 | ... | ... |
| 🕒 14 minutes ago | 🔗 aac8c17 | 📄 zip 📄 tar.gz |
| v0.2 | ... | ... |
| 🕒 23 minutes ago | 🔗 aac8c17 | 📄 zip 📄 tar.gz |
| v0.1 | ... | ... |
| 🕒 24 minutes ago | 🔗 aac8c17 | 📄 zip 📄 tar.gz |

6. Смотрим содержимое коммитов с помощью команды git show <ref>

```
D:\LB1.2>git show HEAD
commit 6171aabb92e64abfdaa2deb3d2fbf5756fa27009 (HEAD -> main, tag: v0.8, origin/main, origin/HEAD)
Author: Arsen445 <arsen45454545@gmail.com>
Date:   Wed Mar 16 02:52:45 2022 +0300

    Commit #6

diff --git a/gg.py b/gg.py
index 4348ccc..c47df53 100644
--- a/gg.py
+++ b/gg.py
@@ -3,3 +3,5 @@ b=4
 a, b = b, a
 print(a) #a=4
 print(b) #b=3
+##f
+
```

git show HEAD

```

D:\LB1.2>git show HEAD~1
commit 8fb83bce6d5196a38e28440251b66db348185f57 (tag: v0.7)
Author: Arsen445 <arsen454545454@gmail.com>
Date:   Wed Mar 16 02:48:41 2022 +0300

    Commit #4

diff --git a/gg.py b/gg.py
new file mode 100644
index 0000000..4348ccc
--- /dev/null
+++ b/gg.py
@@ -0,0 +1,5 @@
+a=3
+b=4
+a, b = b, a
+print(a) #a=4
+print(b) #b=3
D:\LB1.2>

```

git show HEAD~1

```

D:\LB1.2>git show 29d69e9
commit 29d69e929cd45a40b24c9040225000e890a17e12
Author: Arsen445 <arsen454545454@gmail.com>
Date:   Wed Mar 16 01:29:20 2022 +0300

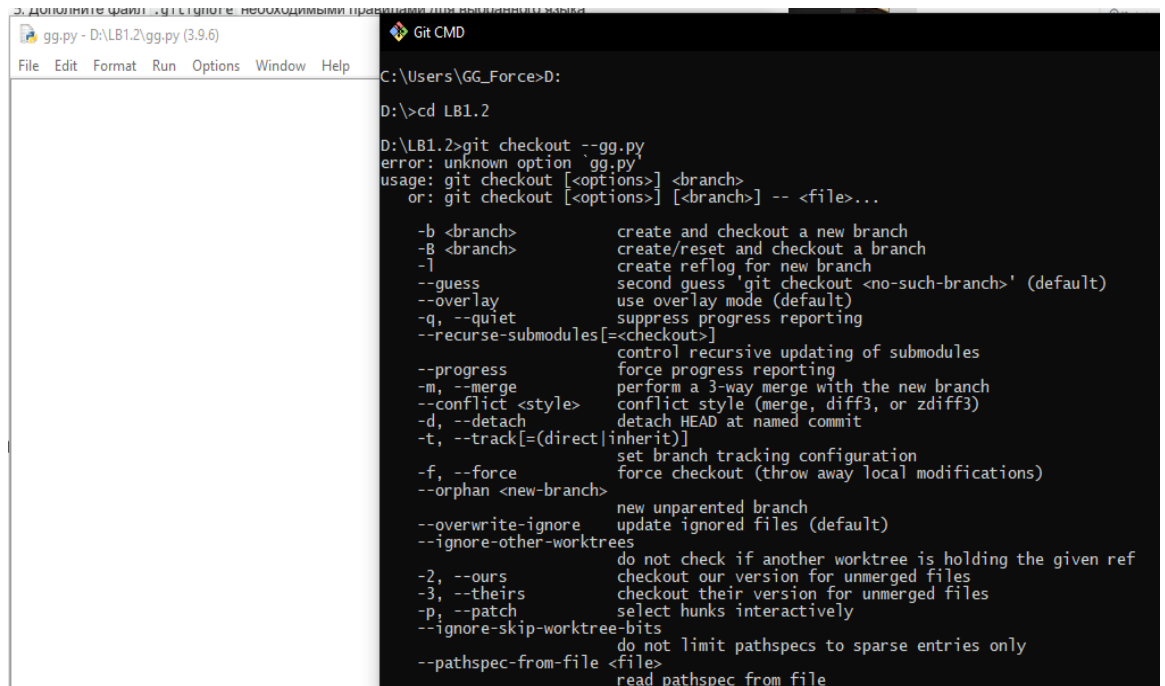
    Commit #1

diff --git a/.gitignore b/.gitignore
index b6e4761..9659373 100644
--- a/.gitignore
+++ b/.gitignore
@@ -1,3 +1,8 @@
+
+## Created by https://www.toptal.com/developers/gitignore/api/python
+## Edit at https://www.toptal.com/developers/gitignore?templates=python
+
+### Python ###
+ # Byte-compiled / optimized / DLL files
+ __pycache__/
+ *.py[co]
@@ -20,7 +25,6 @@ parts/
 sdist/
 var/
 wheels/
-!pip-wheel-metadata/

```

git show 29d69e9

7. Удаляем код из файла и удаляем все несохраненные изменения с помощью команды `git checkout --pp.py`





```
C:\Users\GG_Force>D:
D:\>cd LB1.2
D:\LB1.2>git checkout --gg.py
error: unknown option --gg.py
usage: git checkout [<options>] <branch>
       or: git checkout [<options>] [<branch>] -- <file>...

    -b <branch>          create and checkout a new branch
    -B <branch>          create/reset and checkout a branch
    -l                  create reflog for new branch
    --guess              second guess 'git checkout <no-such-branch>' (default)
    --overlay            use overlay mode (default)
    -q, --quiet          suppress progress reporting
    --recurse-submodules[=<checkout>] control recursive updating of submodules
    --progress           force progress reporting
    -m, --merge           perform a 3-way merge with the new branch
    --conflict <style>   conflict style (merge, diff3, or zdiff3)
    -d, --detach          detach HEAD at named commit
    -t, --track[=(direct|inherit)] set branch tracking configuration
    -f, --force           force checkout (throw away local modifications)
    --orphan <new-branch> new unparented branch
    --overwrite-ignore   update ignored files (default)
    --ignore-other-worktrees do not check if another worktree is holding the given ref
    -2, --ours            checkout our version for unmerged files
    -3, --theirs          checkout their version for unmerged files
    -p, --patch           select hunks interactively
    --ignore-skip-worktree-bits do not limit pathspecs to sparse entries only
    --pathspec-from-file <file> read pathspec from file
```

8. Делаем КОММИТ + НОВЫЙ ТЭГ

last commit

 main

 Arsen445 committed 4 minutes ago

Showing 1 changed file with 0 additions and 7 deletions.

7 gg.py

@@ -1,7 +0,0 @@

1 - a=3

2 - b=4

3 - a, b = b, a

4 - print(a) #a=4

5 - print(b) #b=3

6 - #f

7 -

```

D:\LB1.2>git add .
D:\LB1.2>git tag -a v0.9 -m "my version 0.9"
D:\LB1.2>git commit -m""
error: switch `m' requires a value
D:\LB1.2>git commit -m"last commit"
[main 7917946] last commit
1 file changed, 7 deletions(-)
D:\LB1.2>git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 250 bytes | 250.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Arsen445/LB1.2.git
6171aab..7917946 main -> main
D:\LB1.2>git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
D:\LB1.2>git tag --list
v0.0
v0.1
v0.2
v0.3
v0.4
v0.5
v0.6
v0.7
v0.8
v0.9
D:\LB1.2>_

```

9. Откатываемся на предыдущую версию с помощью команды `git reset --hard HEAD~1`

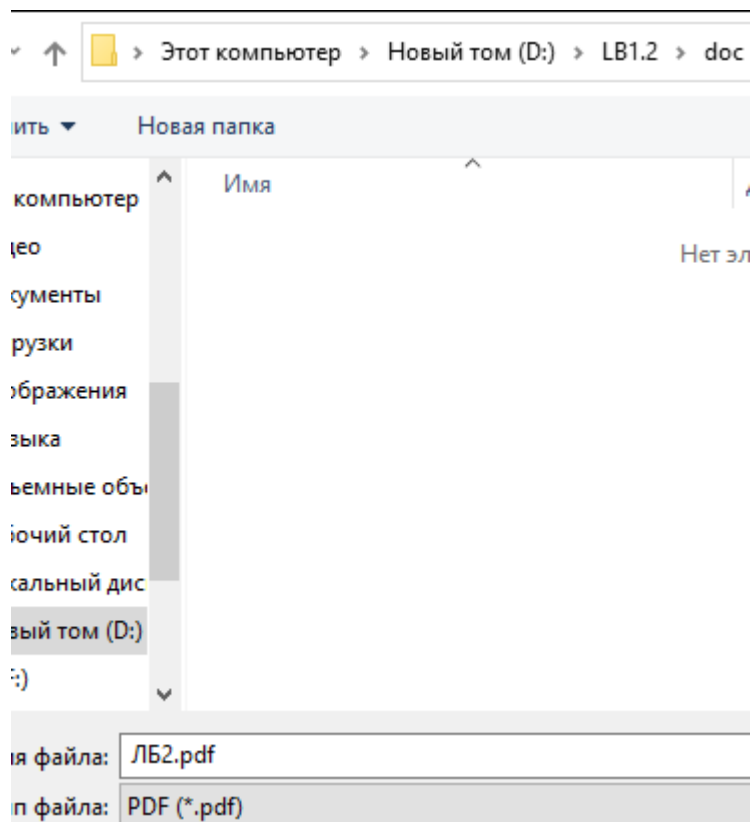
```

D:\LB1.2>git reset --hard
HEAD is now at 7917946 last commit
D:\LB1.2>git reset --hard HEAD~1
HEAD is now at 6171aab Commit #6
D:\LB1.2>_

```

| File | Edit | Format | Run | Options | Window |
|---------------|------|--------|-----|---------|--------|
| a=3 | | | | | |
| b=4 | | | | | |
| a, b = b, a | | | | | |
| print(a) #a=4 | | | | | |
| print(b) #b=3 | | | | | |
| #f | | | | | |

10. Проверяем все изменения и сохраняем работу в формате pdf



11.

12.

13.

14.

Ответы на контрольные вопросы:

Выводы: