Учреждение образования
«БЕЛОРУССКИЙ ГОСУДАРСТВЕННЫЙ ТЕХНОЛОГИЧЕСКИЙ
УНИВЕРСИТЕТ»

Отчёт по дисциплине:
«Введение в разработку программного обеспечения»

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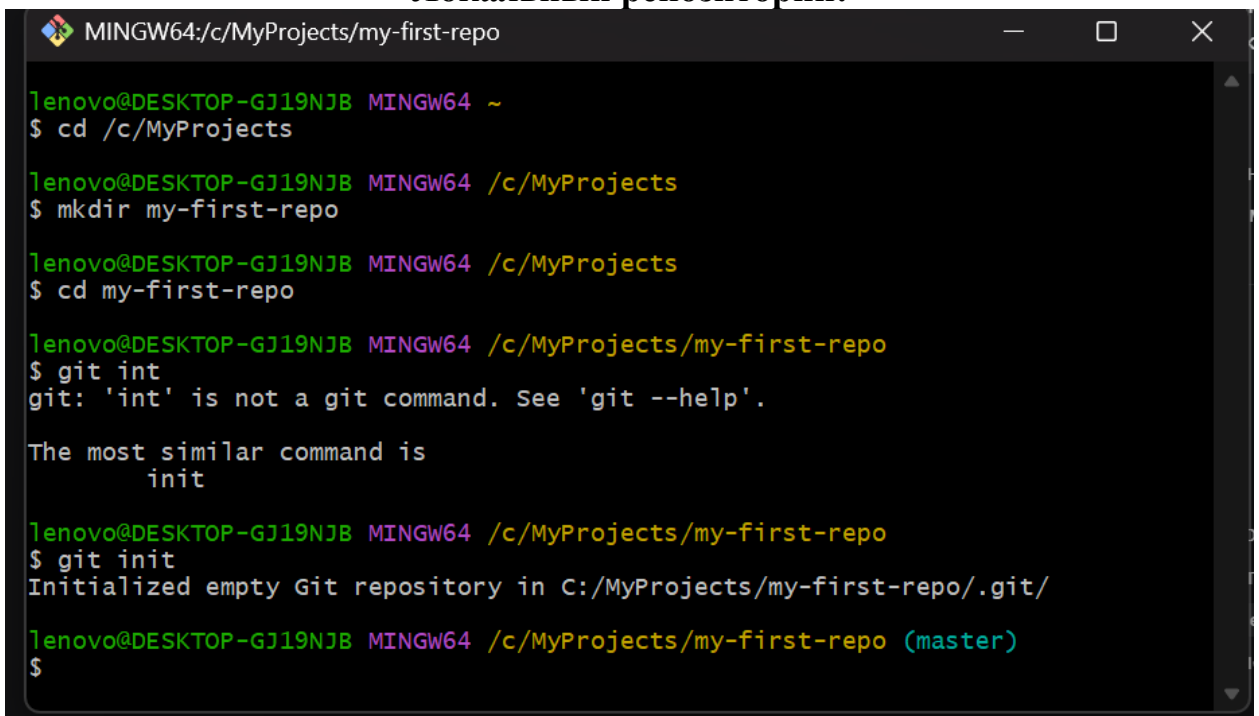ФИТ 1 курс 2 группа
Преподаватель: Лыкова Ю.Д.

Минск 2025

Версия GitHub

```
C:\Program Files\Git>git version
git version 2.52.0.windows.1
```

Получение справки по Git:
Команда для получения справки: git help

Локальный репозиторий:

Конфигурация Git

```
lenovo@DESKTOP-GJ19NJB MINGW64 ~
$ git config --global user.name "UmbrikTvorojniy"

lenovo@DESKTOP-GJ19NJB MINGW64 ~
$ 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=schannel
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=UmbrikTvorojniy

lenovo@DESKTOP-GJ19NJB MINGW64 ~
$
```

```
lenovo@DESKTOP-GJ19NJB MINGW64 ~
$ git config --global user.email "andrey_sergeenko@list.ru"

lenovo@DESKTOP-GJ19NJB MINGW64 ~
$ 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=schannel
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=UmbrikTvorojniy
user.email=andrey_sergeenko@list.ru
```

Инициализация репозитория и исследование изменений

Изменения в папке:
В рабочей папке появилась скрытая папка .git. В ней Git хранит всю служебную информацию: историю коммитов, настройки репозитория, указатели на разные версии файлов. Эту папку нельзя удалять, иначе вы уничтожите репозиторий.

Получение статуса

```
lenovo@DESKTOP-GJ19NJB MINGW64 ~
$ cd /c/MyProjects/my-first-repo

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Hello.txt

nothing added to commit but untracked files present (use "git add" to track)

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$
```

Индексация

```
lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git add Hello.txt

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git status
On branch master

No commits yet

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


lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$
```

Фиксация изменений

```
lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git commit -m "My first commit. Added Hello.txt"
[master (root-commit) 1f84954] My first commit. Added Hello.txt
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Hello.txt

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$
```

Просмотр журнала

```
lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git log
commit 1f849546db7cb6cf42c7fb3df74b5d85c6295d05 (HEAD -> master)
Author: UmbrikTvorojniy <andrey_sergeenko@list.ru>
Date:   Sun Nov 30 17:41:01 2025 +0300

    My first commit. Added Hello.txt

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$
```

После добавления текста в Hello.txt и добавления нового файла NewFile.txt

```
lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git log
commit 1f849546db7cb6cf42c7fb3df74b5d85c6295d05 (HEAD -> master)
Author: UmbrikTvorojniy <andrey_sergeenko@list.ru>
Date:   Sun Nov 30 17:41:01 2025 +0300

    My first commit. Added Hello.txt

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   Hello.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        NewFile.txt

no changes added to commit (use "git add" and/or "git commit -a")

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$
```

Индексируем и фиксируем

```
lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git add Hello.txt NewFile.txt

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git commit -m "Updated Hello.txt and added NewFile.txt"
[master a49e10a] Updated Hello.txt and added NewFile.txt
 2 files changed, 1 insertion(+)
 create mode 100644 NewFile.txt

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$
```

Файл .gitignore


```
.gitignore ●

C: > MyProjects > my-first-repo > .gitignore
    1    # Игнорировать все файлы .log
    2    *.log
    3
    4    # Игнорировать папку node_modules
    5    node_modules/
    6
    7    # Игнорировать системный файл Thumbs.db
    8    Thumbs.db
```

Новая ветка


```
create mode 100644 NewFile.txt

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git branch test

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git checkout test
Switched to branch 'test'
```

Создание файла в новой ветке


```
lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (test)
$ git add test.html

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (test)
$ git commit -m "Added test.html in test branch"
[test 4ef277c] Added test.html in test branch
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 test.html
```

Просмотр Веток


```
 create mode 100644 test.html

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (test)
$ git branch
  master
* test
```

Переход к ветке master

```
lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (test)
$ git checkout master
Switched to branch 'master'

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ |
```

Из файла исчез test.html т.к. он принадлежит другой ветке

Имя	Дата изменения	Тип	Размер
.git	30.11.2025 17:55	Папка с файлами	
.gitignore	30.11.2025 17:47	Исходный файл Git I...	1 КБ
Hello.txt	30.11.2025 17:42	Текстовый документ	1 КБ
NewFile.txt	30.11.2025 17:42	Текстовый документ	0 КБ

Слияние двух веток

```
Switched to branch 'master'

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git merge test
Updating a49e10a..4ef277c
Fast-forward
 test.html | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 test.html

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$
```

Файл снова в папке

.git	30.11.2025 17:56	Папка с файлами	
.gitignore	30.11.2025 17:47	Исходный файл Git I...	1 КБ
Hello.txt	30.11.2025 17:42	Текстовый документ	1 КБ
NewFile.txt	30.11.2025 17:42	Текстовый документ	0 КБ
test.html	30.11.2025 17:56	Chrome HTML Docu...	0 КБ

Добавляем текст в test.html вручную и фиксируем

```
lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git checkout master
Already on 'master'

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git add test.html

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git commit -m "Изменен test.html в master"
[master e8a679a] Изменен test.html в master
 1 file changed, 1 insertion(+)
```

Переходи на ветку test и меняем ту же строку в test.html

```
lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git checkout test
Switched to branch 'test'

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (test)
$ git add test.html

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (test)
$ git commit -m "Изменен test.html в test"
[test bcced0b] Изменен test.html в test
 1 file changed, 1 insertion(+)

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (test)
$
```

Переходим в папку Мастер и делаем слияние

```
lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (test)
$ git checkout master
Switched to branch 'master'

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master)
$ git merge test
Auto-merging test.html
CONFLICT (content): Merge conflict in test.html
Automatic merge failed; fix conflicts and then commit the result.
```

Статус

```
lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master|MERGING)
$ git status
On branch master
You have unmerged paths.
  (fix conflicts and run "git commit")
  (use "git merge --abort" to abort the merge)

Unmerged paths:
  (use "git add <file>..." to mark resolution)
        both modified:   test.html

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        .gitignore

no changes added to commit (use "git add" and/or "git commit -a")

lenovo@DESKTOP-GJ19NJB MINGW64 /c/MyProjects/my-first-repo (master|MERGING)
```

Текст в test.html

Оставляем текст из master

Проверка слияния