

МИНОБРНАУКИ РОССИИ

Федеральное государственное бюджетное образовательное учреждение высшего образования



НИЖЕГОРОДСКИЙ ГОСУДАРСТВЕННЫЙ ТЕХНИЧЕСКИЙ
УНИВЕРСИТЕТ им. Р.Е.АЛЕКСЕЕВА

Институт радиоэлектроники и информационных технологий
Кафедра информатики и систем управления

Знакомство с системой контроля версий git

(наименование темы проекта или работы)

ОТЧЕТ

по лабораторной работе

по дисциплине

Информатика и компьютерные технологии

(наименование дисциплины)

РУКОВОДИТЕЛЬ:

(подпись)

Шагалова П.А.
(фамилия, и.о.)

СТУДЕНТ:

(подпись)

Буковская П.С.
(фамилия, и.о.)

23-ВМз
(шифр группы)

Работа защищена « ____ » _____

С оценкой _____

Нижний Новгород 2024

ЗАДАНИЕ К ВЫПОЛНЕНИЮ ЛАБОРАТОРНОЙ РАБОТЫ № 3

ЗНАКОМСТВО С СИСТЕМОЙ КОНТРОЛЯ ВЕРСИЙ GIT

Задание на лабораторную работу:

Загрузить отчёты и материалы по предыдущим лабораторным работам в репозиторий на GitHub.

Цель работы:

Приобрести навыки работы с системой контроля версий и загрузить отчёты и материалы по предыдущим лабораторным работам в репозиторий на GitHub.

Ход работы:

Подготовка к выполнению лабораторной работы не понадобилась: заранее были проведены регистрация на GitHub, установка git, утилиты Git Bash, а также заданы имя и email для настройки git.

Далее копируем исходный репозиторий (https://github.com/OrangeRedeng/Spring_2024) себе на аккаунт с помощью команды **fork**

The screenshot displays the GitHub interface for the repository 'OrangeRedeng / Spring_2024'. The repository is public and has 1 watch, 137 forks, and 0 stars. The file list shows 'Lr1', 'Lr2', 'Lr3', and 'README.md'. The README content is visible, mentioning 'Spring_2024' and 'For LaboratoryWorks'. The repository was created by OrangeRedeng (Artem Savkin) and has 10 commits.

github.com Fork OrangeRedeng/Spring_2024

OrangeRedeng / Spring_2024

Search Type to search

Code Issues Pull requests 100 Actions Projects Security Insights

Create a new fork

A fork is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project. [View existing forks.](#)

Required fields are marked with an asterisk (*).

Owner * Repository name *

Polina-Bukovskaya / Spring_2024

Spring_2024 is available.

By default, forks are named the same as their upstream repository. You can customize the name to distinguish it further.

Description (optional)

For LaboratoryWorks

☒ Copy the main branch only

Contribute back to OrangeRedeng/Spring_2024 by adding your own branch. [Learn more.](#)

i You are creating a fork in your personal account.

Create fork

Создадим локальную копию репозитория **git clone https://github.com/Polina-Bukovskaya/Spring_2024:**

```
PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИиКТ
$ git clone https://github.com/Polina-Bukovskaya/Spring_2024
Cloning into 'Spring_2024'...
remote: Enumerating objects: 109, done.
remote: Counting objects: 100% (23/23), done.
remote: Compressing objects: 100% (19/19), done.
remote: Total 109 (delta 7), reused 4 (delta 4), pack-reused 86
Receiving objects: 100% (109/109), 36.46 MiB | 1.85 MiB/s, done.
Resolving deltas: 100% (15/15), done.

PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИиКТ
$
```

Переидем в каталог репозитория с помощью команды **cd Spring_2024:**

```
PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИиКТ
$ cd Spring_2024

PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИиКТ/Spring_2024 (main)
```

Добавление новых файлов в репозиторий:

```

PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИИКТ/Spring_2024 (main)
$ git add Lr1
warning: in the working copy of 'Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/src/Main.java', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/src/Main.java', LF will be replaced by CRLF the next time Git touches it

PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИИКТ/Spring_2024 (main)
$ 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)
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/.idea/.gitignore
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/.idea/.name
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/.idea/misc.xml
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/.idea/modules.xml
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/Bracket_balance.iml
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/out/production/Bracket_balance/Main.class
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/src/Main.java
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/.gitignore
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/.name
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/misc.xml
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/modules.xml
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/Bracket_balance_2.iml
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/out/production/Bracket_balance_2/Main.class
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/src/Main.java
    new file:   "Lr1/Bukovskaya_P_S_23VMz/320\230\320\270\320\232\320\242_23\320\222\320\234\320\267_\320\221\320\203\320\272\320\276\320\262\321\201\320\272\320\260\321\217_\320\237\320\276\320\273\320\270\320\275\320\260_\320\241\320\265\321\200\320\263\320\265\320\265\320\262\320\275\320\260_\320\233\320\240_1.docx"
    new file:   "Lr1/Bukovskaya_P_S_23VMz/320\230\320\270\320\232\320\242_23\320\222\320\234\320\267_\320\221\320\203\320\272\320\276\320\262\321\201\320\272\320\260\321\217_\320\237\320\276\320\273\320\270\320\275\320\260_\320\241\320\265\321\200\320\263\320\265\320\265\320\262\320\275\320\260_\320\233\320\240_1.pdf"

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Lr2/Bukovskaya_P_S_23VMz/

PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИИКТ/Spring_2024 (main)
$ git add Lr2

PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИИКТ/Spring_2024 (main)
$ 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)

```

MINGW64/c/Users/PolyB/Desktop/ИИКТ/Spring_2024

```

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/.idea/.gitignore
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/.idea/.name
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/.idea/misc.xml
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/.idea/modules.xml
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/Bracket_balance.iml
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/out/production/Bracket_balance/Main.class
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/src/Main.java
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/.gitignore
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/.name
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/misc.xml
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/modules.xml
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/Bracket_balance_2.iml
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/out/production/Bracket_balance_2/Main.class
    new file:   Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/src/Main.java
    new file:   "Lr1/Bukovskaya_P_S_23VMz/320\230\320\270\320\232\320\242_23_\320\222\320\234\320\267_\320\221\320\203\320\272\320\276\320\262\321\201\320\272\320\260\321\217_\320\237\320\276\320\273\320\270\320\275\320\260_\320\241\320\265\321\200\320\263\320\265\320\265\320\262\320\275\320\260_\320\233\320\240_1.docx"
    new file:   "Lr1/Bukovskaya_P_S_23VMz/320\230\320\270\320\232\320\242_23_\320\222\320\234\320\267_\320\221\320\203\320\272\320\276\320\262\321\201\320\272\320\260\321\217_\320\237\320\276\320\273\320\270\320\275\320\260_\320\241\320\265\321\200\320\263\320\265\320\265\320\262\320\275\320\260_\320\233\320\240_1.pdf"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\230\320\270\320\232\320\242_23_\320\222\320\234\320\267_\320\221\320\203\320\272\320\276\320\262\321\201\320\272\320\260\321\217_\320\237\320\276\320\273\320\270\320\275\320\260_\320\241\320\265\321\200\320\263\320\265\320\265\320\262\320\275\320\260_\320\233\320\240_2.docx"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\230\320\270\320\232\320\242_23_\320\222\320\234\320\267_\320\221\320\203\320\272\320\276\320\262\321\201\320\272\320\260\321\217_\320\237\320\276\320\273\320\270\320\275\320\260_\320\241\320\265\321\200\320\263\320\265\320\265\320\262\320\275\320\260_\320\233\320\240_2.pdf"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202\country.html"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202\Index.html"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202\Shuisky.html"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202\Tushino.html"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202/css/Style1.css"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202/css/Style2.css"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202/css/Style3.css"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202/css/Style4.css"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202/js/CodeScript1.js"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202/js/CodeScript2.js"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202/media/images/1.jpg"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202/media/images/2.jpg"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202/media/images/3.jpg"
    new file:   "Lr2/Bukovskaya_P_S_23VMz/320\241\320\260\320\271\321\202/media/images/4.ico"

PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИИКТ/Spring_2024 (main)
$ git commit -m "Test commit"
[main 6bf9fb] Test commit
32 files changed, 941 insertions(+)
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/.idea/.gitignore
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/.idea/.name
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/.idea/misc.xml
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/.idea/modules.xml
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/Bracket_balance.iml
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/out/production/Bracket_balance/Main.class
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance/src/Main.java
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/.gitignore
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/.name
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/misc.xml

```

```

create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/misc.xml
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/.idea/modules.xml
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/Bracket_balance_2.iml
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/out/production/Bracket_balance_2/Main.class
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Bracket_balance_2/src/Main.java
create mode 100644 "Lr1/Bukovskaya_P_S_23VMz/\320\230\320\270\320\232\320\242_23_\320\222\320\234\320\267_\320\221\321\203\320\272\320\276\320\262\321\201\320\272\320\260\321\217_\320\237\320\276\320\273\320\270\320\275\320\260_\320\241\320\265\321\200\320\263\320\265\320\265\320\262\320\275\320\260_\320\233\320\240_1.docx"
create mode 100644 "Lr1/Bukovskaya_P_S_23VMz/\320\230\320\270\320\232\320\242_23_\320\222\320\234\320\267_\320\221\321\203\320\272\320\276\320\262\321\201\320\272\320\260\321\217_\320\237\320\276\320\273\320\270\320\275\320\260_\320\241\320\265\321\200\320\263\320\265\320\265\320\262\320\275\320\260_\320\233\320\240_1.pdf"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\230\320\270\320\232\320\242_23_\320\222\320\234\320\267_\320\221\321\203\320\272\320\276\320\262\321\201\320\272\320\260\321\217_\320\237\320\276\320\273\320\270\320\275\320\260_\320\241\320\265\321\200\320\263\320\265\320\265\320\262\320\275\320\260_\320\233\320\240_2.docx"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\230\320\270\320\232\320\242_23_\320\222\320\234\320\267_\320\221\321\203\320\272\320\276\320\262\321\201\320\272\320\260\321\217_\320\237\320\276\320\273\320\270\320\275\320\260_\320\241\320\265\321\200\320\263\320\265\320\265\320\262\320\275\320\260_\320\233\320\240_2.pdf"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/Country.html"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/Index.html"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/Shuisky.html"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/Tushino.html"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/css/Style1.css"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/css/Style2.css"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/css/Style3.css"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/css/Style4.css"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/js/CodeScript1.js"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/js/CodeScript2.js"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/media/images/1.jpg"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/media/images/2.jpg"
create mode 100644 "Lr2/Bukovskaya_P_S_23VMz/\320\241\320\260\320\271\321\202/media/images/3.jpg"

```

Отправляем изменения в репозитории командой **git push**:

```

PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИИКТ/Spring_2024 (main)
$ git push
Enumerating objects: 53, done.
Counting objects: 100% (53/53), done.
Delta compression using up to 4 threads
Compressing objects: 100% (39/39), done.
Writing objects: 100% (50/50), 15.43 MiB | 4.51 MiB/s, done.
Total 50 (delta 7), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (7/7), completed with 2 local objects.
To https://github.com/Polina-Bukovskaya/Spring_2024
ca926cd..6bfb9fb main -> main

```

Добавим новый текстовый файл, сохраним его, сделаем коммит.

```

PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИИКТ/Spring_2024 (main)
$ git add .

PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИИКТ/Spring_2024 (main)
$ 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)
    new file:   Lr1/Bukovskaya_P_S_23VMz/Test.txt

PolyB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИИКТ/Spring_2024 (main)
$ git commit -m "Test commit"
[main d834c60] Test commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 Lr1/Bukovskaya_P_S_23VMz/Test.txt

```

Добавим текст в файл, и используем команду **git push**:

```
PolynB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИИКТ/Spring_2024 (main)
$ git commit -a -m "New text in test.txt"
[main 6627dbe] New text in test.txt
1 file changed, 1 insertion(+)

PolynB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИИКТ/Spring_2024 (main)
$ git push
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 4 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (5/5), 487 bytes | 243.00 KiB/s, done.
Total 5 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/Polina-Bukovskaya/Spring_2024
d834c60..6627dbe main -> main
```

[Spring_2024](#) / [Lr1](#) / [Bukovskaya_P_S_23VMz](#) / [Test.txt](#) 



Polina-Bukovskaya New text in test.txt

Code

Blame

1 lines (1 loc) · 9 Bytes



Code 55% faster with GitHub Copilot

1 new Test!

Изменим текст в файле:

[Spring_2024](#) / [Lr1](#) / [Bukovskaya_P_S_23VMz](#) / [Test.txt](#) 



Polina-Bukovskaya Update Test.txt

Code

Blame

2 lines (2 loc) · 19 Bytes



Code 55% faster with GitHub Copilot

1 new Test!

2 new Test

Получим изменения из главного репозитория, после используем **git pull**:

```
PolYuB@LAPTOP-8L8QE5AV MINGW64 ~/Desktop/ИиКТ/Spring_2024 (main)
$ git pull
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 5 (delta 2), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (5/5), 1.09 KiB | 38.00 KiB/s, done.
From https://github.com/Polina-Bukovskaya/Spring_2024
   6627dbe..6795e88  main      -> origin/main
Updating 6627dbe..6795e88
Fast-forward
 Lr1/Bukovskaya_P_S_23VMz/Test.txt | 3 ++-
1 file changed, 2 insertions(+), 1 deletion(-)
```

Создадим **Pull Request**, после добавления в репозиторий всех файлов.

Вывод

В ходе этой работы я узнала о базовых операциях, которыми необходимо владеть для работы с системой контроля версий Git. Научилась создавать главный репозиторий на GitHub, создавать локальную копию главного репозитория, добавлять новые файлы в репозиторий, сохранять изменения файлов, отправлять изменения в главный репозиторий, получать изменения из главного репозитория, создавать Pull Request.