

**МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ**

**Федеральное государственное автономное
образовательное учреждение высшего образования
«Северо-Кавказский федеральный университет»**

**Отчет по лабораторной работе №1
*«Исследование основных возможностей Git и GitHub»***

по дисциплине «Основы программной инженерии»

Выполнил студент группы ПИЖ-б-о-20-1

Бокань И.П. « » _____ 2021г.

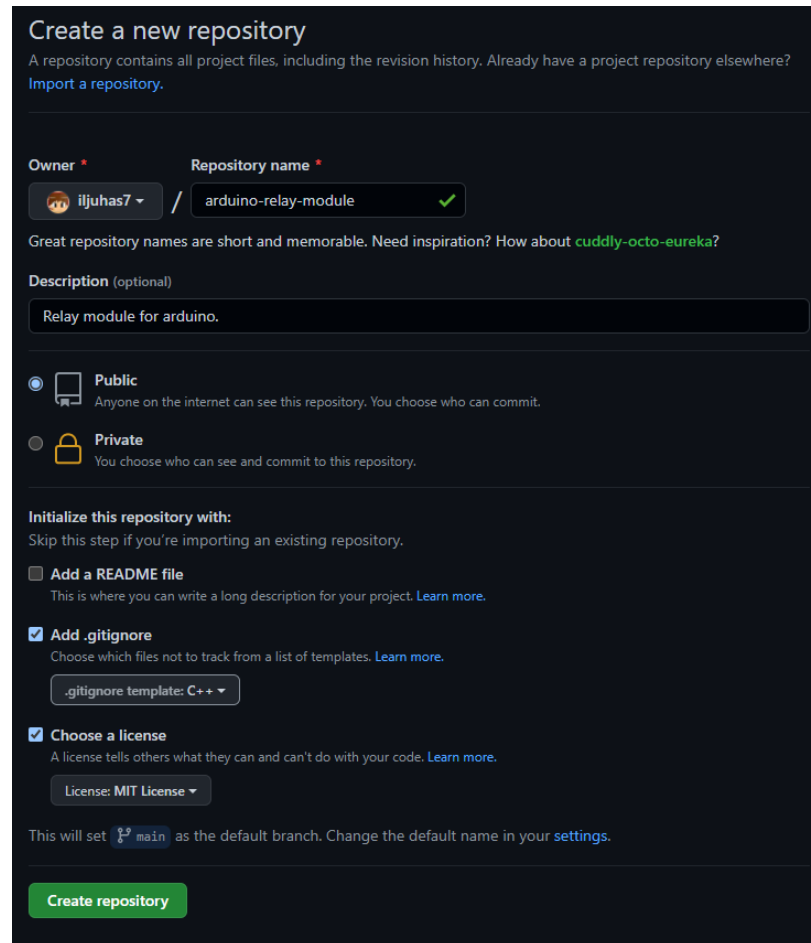
Подпись студента _____

Работа защищена « » _____ 2021г.

Проверил Воронкин Р.А. _____
(подпись)

Ставрополь 2021

1. Создания репозитория GitHub



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

Owner * **Repository name ***
iljuhas7 / arduino-relay-module ✓

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

Description (optional)
Relay module for arduino.

☒ **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: C++

☒ **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

Рисунок 1.1 - Заполнения параметров репозитория

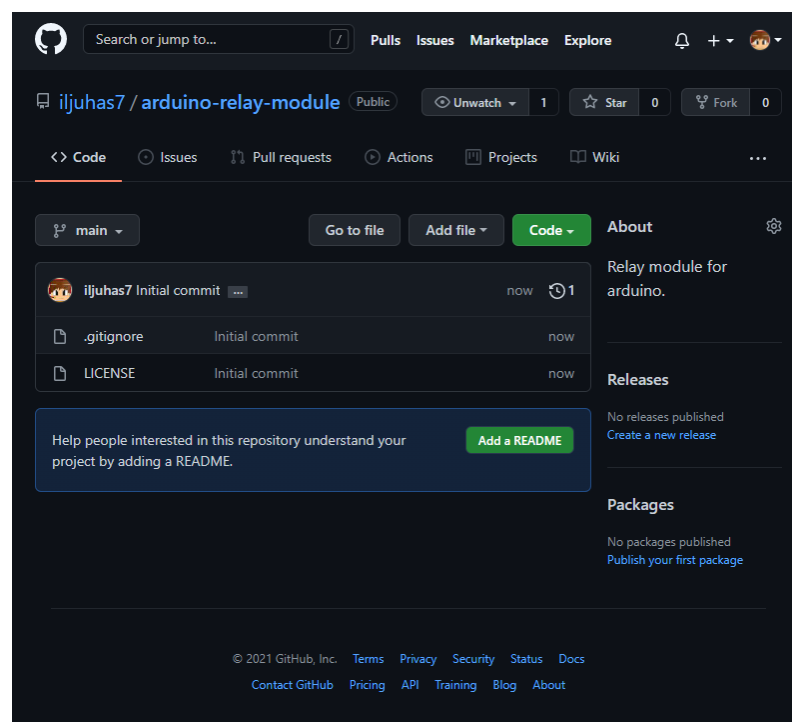


Рисунок 1.2 - После успешного создания репозитория

2. Локальное изменение содержимого

```
F:\Project\Git>git clone https://github.com/iljuhas7/arduino-relay-module
Cloning into 'arduino-relay-module'...
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (4/4), done.

F:\Project\Git>cd arduino-relay-module

F:\Project\Git\arduino-relay-module>git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

F:\Project\Git\arduino-relay-module>git status
On branch main
Your branch is up to date with 'origin/main'.

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:   .gitignore

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        CircuitDiagram.png
        README.md
        examples/
        src/

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

F:\Project\Git\arduino-relay-module>git add .
warning: LF will be replaced by CRLF in README.md.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in examples/InvertRelayBlink/InvertRelayBlink.ino.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in examples/RelayBlink/RelayBlink.ino.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in examples/RelayModule/RelayModule.ino.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in examples/Simple/Simple.ino.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/Relay.cpp.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/Relay.h.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/RelayModule.cpp.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/RelayModule.h.
The file will have its original line endings in your working directory
```

Рисунок 2.1.1 - Выполнения команда Git

```
F:\Project\Git\arduino-relay-module>git commit -m "Initial commit"
[main 508336d] Initial commit
11 files changed, 318 insertions(+)
create mode 100644 CircuitDiagram.png
create mode 100644 README.md
create mode 100644 examples/InvertRelayBlink/InvertRelayBlink.ino
create mode 100644 examples/RelayBlink/RelayBlink.ino
create mode 100644 examples/RelayModule/RelayModule.ino
create mode 100644 examples/Simple/Simple.ino
create mode 100644 src/Relay.cpp
create mode 100644 src/Relay.h
create mode 100644 src/RelayModule.cpp
create mode 100644 src/RelayModule.h

F:\Project\Git\arduino-relay-module>git push
Username for 'https://github.com': iljuhas7
Password for 'https://iljuhas7@github.com':
remote: Support for password authentication was removed on August 13, 2021. Please use a
personal access token instead.
remote: Please see https://github.blog/2020-12-15-token-authentication-requirements-for-
git-operations/ for more information.
fatal: Authentication failed for 'https://github.com/iljuhas7/arduino-relay-module/'

F:\Project\Git\arduino-relay-module>git remote set-url origin https://ghp_5rlyC87wQAojwd
NUbsgbyqhNGBwF8R0RDLuG@github.com/iljuhas7/arduino-relay-module

F:\Project\Git\arduino-relay-module>git push
Enumerating objects: 21, done.
Counting objects: 100% (21/21), done.
Delta compression using up to 4 threads
Compressing objects: 100% (15/15), done.
Writing objects: 100% (19/19), 103.56 KiB | 12.94 MiB/s, done.
Total 19 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), completed with 1 local object.
To https://github.com/iljuhas7/arduino-relay-module
   8f9e470..508336d  main -> main

F:\Project\Git\arduino-relay-module>
```

Рисунок 2.1.2 - Выполнения команда Git (Продолжения)

3. Вывод

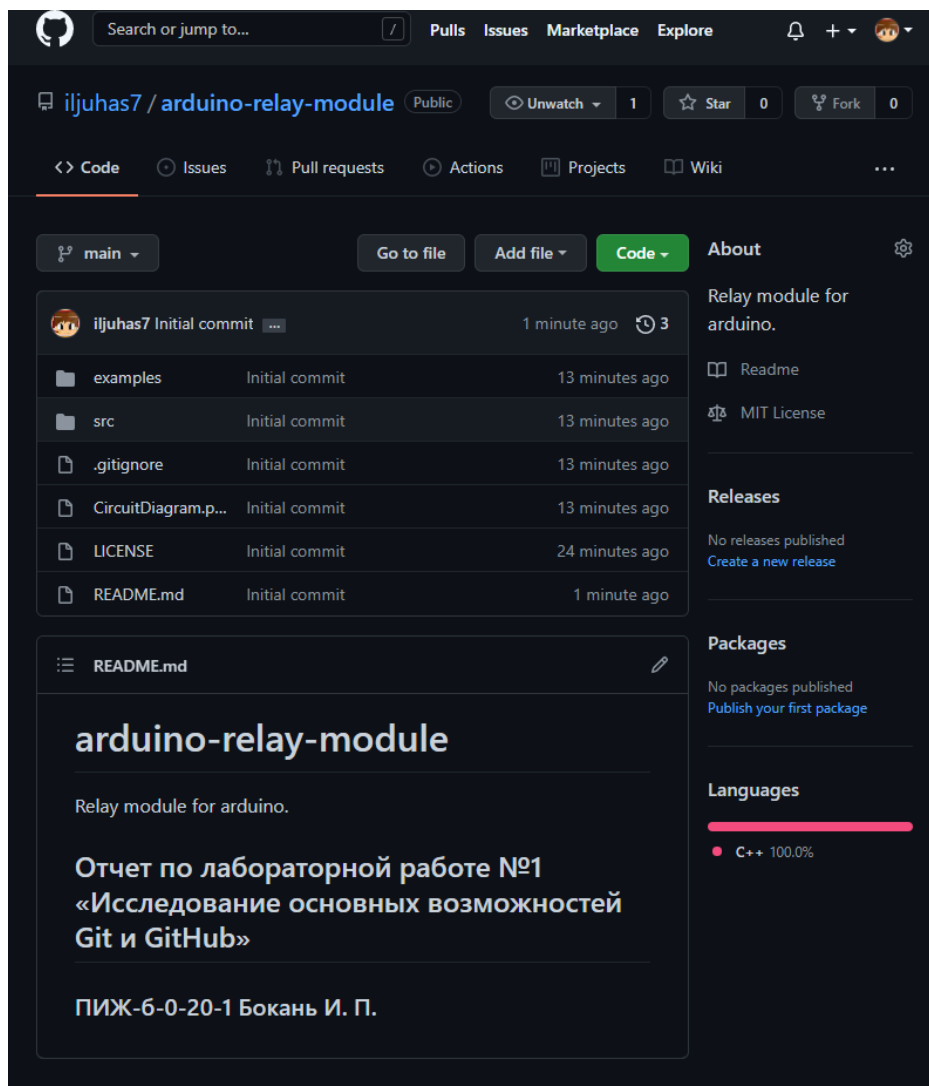


Рисунок 3.1 - Результаты Git репозитория