

РОССИЙСКИЙ УНИВЕРСИТЕТ ДРУЖБЫ НАРОДОВ

Факультет физико-математических и естественных наук

Кафедра прикладной информатики и теории вероятностей

ОТЧЕТ

ПО ЛАБОРАТОРНОЙ РАБОТЕ № 1

дисциплина: Введение в научное программирование

Тема: Управление версиями

Студент: Аминов Зулфикор

Группа: НФИбд-02-19

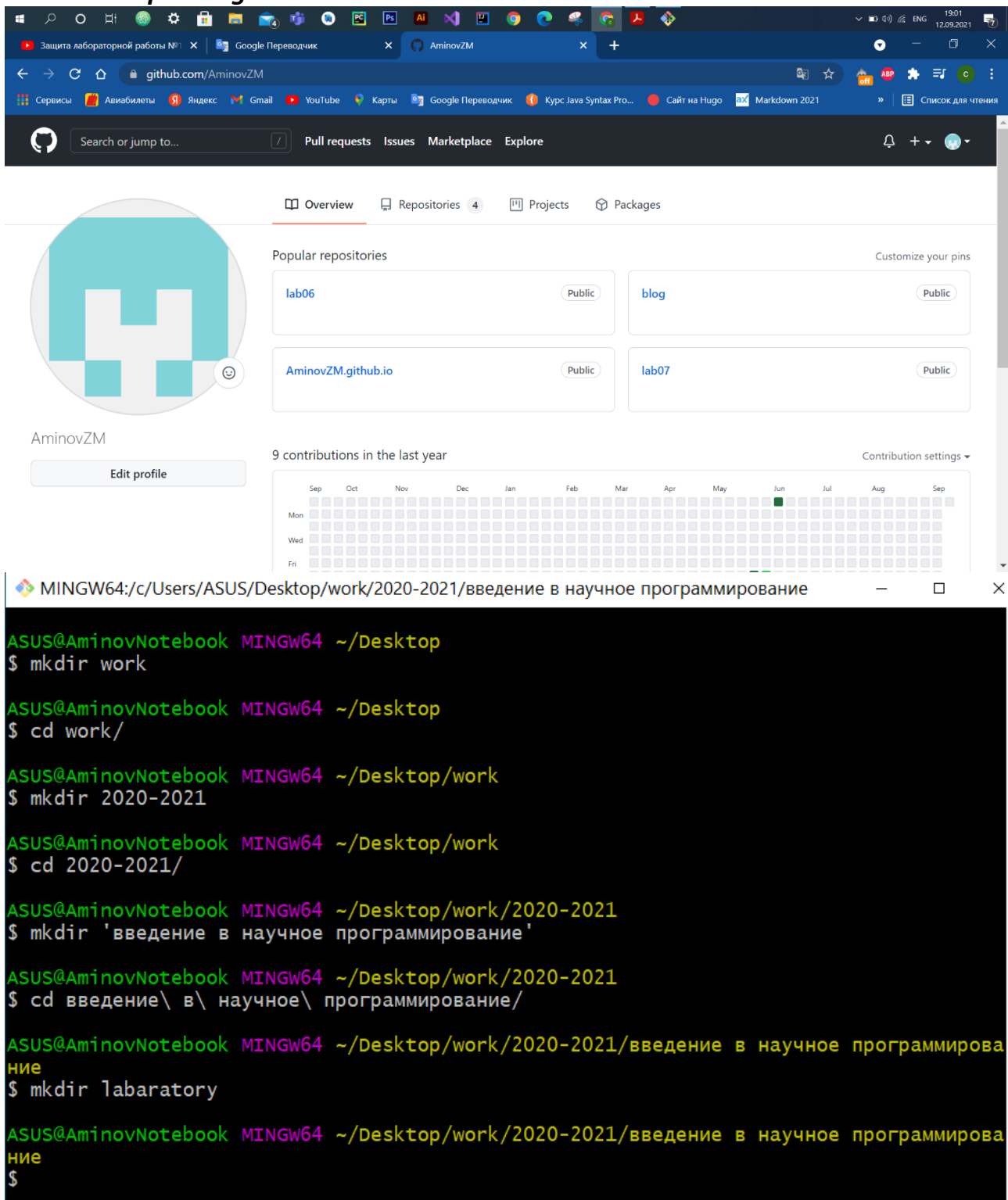
МОСКВА

2021 г.

Цель работы:

Ход работы:

1.5.1. Настройка git



The screenshot displays a Windows desktop environment. The top portion shows a web browser window with the GitHub profile of user 'AminovZM'. The profile includes a teal and white avatar, the username 'AminovZM', and a button to 'Edit profile'. It lists four public repositories: 'lab06', 'blog', 'AminovZM.github.io', and 'lab07'. A contribution graph shows 9 contributions in the last year, with a single green square on June 1st. The bottom portion of the screenshot shows a terminal window titled 'MINGW64:/c/Users/ASUS/Desktop/work/2020-2021/введение в научное программирование'. The terminal contains the following commands and their outputs:

```
ASUS@AminovNotebook MINGW64 ~/Desktop
$ mkdir work

ASUS@AminovNotebook MINGW64 ~/Desktop
$ cd work/

ASUS@AminovNotebook MINGW64 ~/Desktop/work
$ mkdir 2020-2021

ASUS@AminovNotebook MINGW64 ~/Desktop/work
$ cd 2020-2021/

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021
$ mkdir 'введение в научное программирование'

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021
$ cd введение\ в\ научное\ программирование/

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование
$ mkdir labaratory

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование
$
```

```

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние
$ git config --global user.name zmaminov

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние
$ git config --global user.email fczafebarabad@mail.ru

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние
$ git config --global core.quotepath false

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние
$ ssh-keygen -C "Aminov Zulfiqor <fczafebarabad@mail.ru>"
Generating public/private rsa key pair.
Enter file in which to save the key (/c/Users/ASUS/.ssh/id_rsa):
/c/Users/ASUS/.ssh/id_rsa already exists.
Overwrite (y/n)? y
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /c/Users/ASUS/.ssh/id_rsa
Your public key has been saved in /c/Users/ASUS/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:FhuL9oeixlRJWI4DONQD3EInZMQbmAap8Eo2taGPews Aminov Zulfiqor <fczafebarabad@mail.
ru>
The key's randomart image is:
+---[RSA 3072]-----+
|X@++ o.          |
|BB+=oo.          |
|*,* =...o        |
|.B.. .o. =       |
|o.= .o S         |
|.o o.. o .       |
|.o. . o .        |
|  Eo. . .        |
| ...             |
+-----[SHA256]-----+

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние
$ cat ~/.ssh/id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGCqcr+GWRzFrLtcvIRLJ0ams2zirHZxVISSv0cnbgSf91Lzp
B7GRI08J5sc6HS7ic706WPRtEcrrPmkF3DKbuJR3ZTBH3y9eFmn8hPZCfmn6cvx19CuB5xEQIqoL0L500rBbZ
xpPDNVbTlQHK7gtYpUjQe+CMDymeYB8AjKYxeeJ66vo9XglB0mPB2o0RY46xcrTxkvfXfqHgtIGGmcBDaHd31
T2uy6fvVS5WoyEms3GGBfs9Kb9uWEpexNzBmqRdbYTI/84P5Ri+ZVSMzyeOdndwnx/4MDmxNLioiasij9wt3
68g8Tjzf/cGAdM/xchYKC2iwou99YgX1bc00KKmQo6li6xaqG4auDzevms8UqyTzFLHawPpCo3NSz1ANZvyUJ
pb+I2VsRS0hzXwUeTiW06GxKxH3TI5vFRh29TpPVDew2VNU3skrHU0gR/77N4nPECF/1SSRbGY6HPmVbnACYK
kRn6ID8qhoze14QJqdzTcFs3ZoeG+ZujwqnDPQ9k= Aminov Zulfiqor <fczafebarabad@mail.ru>

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние
$

```



AminovZM
Your personal account

[Go to your personal profile](#)

Account settings

Profile

Account

Appearance

Account security

Billing & plans

SSH keys

[New SSH key](#)

This is a list of SSH keys associated with your account. Remove any keys that you do not recognize.



1_key ssh

SHA256:FhuL9oeix1RJWI4D0nQD3EInZMQbmAap8Eo2taGPeWs

Added on 12 Sep 2021

Never used — Read/write

[Delete](#)

1.5.2. Подключение репозитория к github

```
MINGW64:/c/Users/ASUS/Desktop/work/2020-2021/введение в научное программирование/ла...
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory
$ git init
Initialized empty Git repository in C:/Users/ASUS/Desktop/work/2020-2021/введение в научное программирование/labaratory/.git/
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory (master)
$ echo "# лабораторные работы" >> README.md
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory (master)
$ git add README.md
warning: LF will be replaced by CRLF in README.md.
The file will have its original line endings in your working directory
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory (master)
$ git add .
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory (master)
$ git commit -m "first commit"
[master (root-commit) 89149ec] first commit
1 file changed, 1 insertion(+)
create mode 100644 README.md
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory (master)
$ git remote add origin git@github.com:AminovZM/sciproc-intro.git
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory (master)
$ git push -u origin master
Enter passphrase for key '/c/Users/ASUS/.ssh/id_rsa':
Enter passphrase for key '/c/Users/ASUS/.ssh/id_rsa':
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 243 bytes | 81.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:AminovZM/sciproc-intro.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory (master)
$
```

master 1 branch 0 tags

Go to file

Add file

Code



Aminov-09 first commit

89149ec 3 minutes ago 1 commit



README.md

first commit

3 minutes ago

README.md



Лабораторные работы

```
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние/labaratory (master)
$ curl -L -s https://www.gitignore.io/api/c >> .gitignore

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние/labaratory (master)
$ git add .
warning: LF will be replaced by CRLF in .gitignore.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in LICENSE.
The file will have its original line endings in your working directory

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние/labaratory (master)
$ git add LICENSE
```

MINGW64:/c/Users/ASUS/Desktop/work/2020-2021/введение в научное программирование/la...

```
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
#
# On branch master
# Your branch is up to date with 'origin/master'.
#
# Changes to be committed:
#   new file:   .gitignore
#   new file:   LICENSE
#
~
```


```

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние/labaratory (master)
$ git commit -a
[master 6f48044] 1 commit
2 files changed, 455 insertions(+)
create mode 100644 .gitignore
create mode 100644 LICENSE

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние/labaratory (master)
$ git push
Enter passphrase for key '/c/Users/ASUS/.ssh/id_rsa':
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 6.42 KiB | 1.61 MiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:AminovZM/sciproc-intro.git
89149ec..6f48044 master -> master

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирова
ние/labaratory (master)
$ |

```


[AminovZM / sciproc-intro](#)
Public
Unwatch

[Code](#)
[Issues](#)
[Pull requests](#)
[Actions](#)
[Projects](#)
[Wiki](#)
[Security](#)
[Insights](#)
[Settings](#)

master
1 branch
0 tags
Go to file
Add file
Code

Commit	Files	Time
Aminov-09 1 commit		6f48044 5 minutes ago 2 commits
.gitignore	1 commit	5 minutes ago
LICENSE	1 commit	5 minutes ago
README.md	first commit	12 minutes ago

README.md

Лабораторные работы

1.5.3. Первичная конфигурация

```
MINGW64:/c/Users/ASUS/Desktop/work/2020-2021/введение в научное программирование/lab...
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/lab...
$ wget https://creativecommons.org/licenses/by/4.0/legalcode.txt -O LICENSE
--2021-09-12 19:14:43-- https://creativecommons.org/licenses/by/4.0/legalcode.txt
Resolving creativecommons.org (creativecommons.org)... 172.67.34.140, 104.20.151.16, 104.20.150.16
Connecting to creativecommons.org (creativecommons.org)|172.67.34.140|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [text/plain]
Saving to: 'LICENSE'

OK ..... 14,2M=0,001s

2021-09-12 19:14:44 (14,2 MB/s) - 'LICENSE' saved [18657]

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/lab...
$ curl -L -s https://www.gitignore.io/api/list
1c,1c-bitrix,a-frame,actionsript,ada
adobe,advancedinstaller,adventuregamestudio,agda,a1
alteraquartusii,altium,amplify,android,androidstudio
angular,anjuta,ansible,ansibletower,apachecordova
apachehadoop,appbuilder,appcelerator titanium,appcode,appcode+a11
appcode+iml,appengine,aptanastudio,arcanist,archive
archives,archlinuxpackages,aspnetcore,assembler,ate
atmelstudio,ats,audio,automationstudio,autotools
autotools+strict,awr,azurefunctions,azurite,backup
ballerina,basercms,basic,batch,bazaar

MINGW64:/c/Users/ASUS/Desktop/work/2020-2021/введение в научное программирование/lab...
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/lab...
$ curl -L -s https://www.gitignore.io/api/c >> .gitignore

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/lab...
$ git add .
warning: LF will be replaced by CRLF in .gitignore.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in LICENSE.
The file will have its original line endings in your working directory

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/lab...
$ git add LICENSE
```



```
MINGW64:/c/Users/ASUS/Desktop/work/2020-2021/введение в научное программирование/la...
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory (master)
$ git commit -a
[master 6f48044] 1 commit
2 files changed, 455 insertions(+)
create mode 100644 .gitignore
create mode 100644 LICENSE

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory (master)
$ git push
Enter passphrase for key '/c/Users/ASUS/.ssh/id_rsa':
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 6.42 KiB | 1.61 MiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:AminovZM/sciproc-intro.git
89149ec..6f48044 master -> master
```

1.5.4. Конфигурация git-flow

```
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory2
$ git flow init
Initialized empty Git repository in C:/Users/ASUS/Desktop/work/2020-2021/введение в научное программирование/labaratory2/.git/
No branches exist yet. Base branches must be created now.
Branch name for production releases: [master] master
Branch name for "next release" development: [develop] develop

How to name your supporting branch prefixes?
Feature branches? [feature/] feature/
Bugfix branches? [bugfix/] bugfix/
Release branches? [release/] release/
Hotfix branches? [hotfix/] hotfix/
Support branches? [support/] support/
Version tag prefix? [] v
Hooks and filters directory? [C:/Users/ASUS/Desktop/work/2020-2021/введение в научное программирование/labaratory2/.git/hooks]

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory2 (develop)
$ git branch
* develop
master
```


MINGW64:/c/Users/ASUS/Desktop/work/2020-2021/введение в научное программирование/la... - □ ×

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory2 (develop)

```
$ git flow release start 1.0.0
```

Switched to a new branch 'release/1.0.0'

Summary of actions:

- A new branch 'release/1.0.0' was created, based on 'develop'
- You are now on branch 'release/1.0.0'

Follow-up actions:

- Bump the version number now!
- Start committing last-minute fixes in preparing your release
- When done, run:

```
git flow release finish '1.0.0'
```

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory2 (release/1.0.0)

```
$ echo "1.0.0" >> VERSION
```

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory2 (release/1.0.0)

```
$ git add .
```

warning: LF will be replaced by CRLF in VERSION.

The file will have its original line endings in your working directory

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory2 (release/1.0.0)

```
$ git add VERSION
```

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory2 (release/1.0.0)

```
$ git commit -am 'chore(main): add version'
```

[release/1.0.0 83d91d6] chore(main): add version

1 file changed, 1 insertion(+)

create mode 100644 VERSION

MINGW64:/c/Users/ASUS/Desktop/work/2020-2021/введение в научное программирование/la... - □ ×

ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory2 (release/1.0.0)

```
$ git flow release finish 1.0.0
```

Switched to branch 'master'

Merge made by the 'recursive' strategy.

```
VERSION | 1 +
```

1 file changed, 1 insertion(+)

create mode 100644 VERSION

Already on 'master'

Switched to branch 'develop'

Merge made by the 'recursive' strategy.

```
VERSION | 1 +
```

1 file changed, 1 insertion(+)

create mode 100644 VERSION

Deleted branch release/1.0.0 (was 83d91d6).

Summary of actions:

- Release branch 'release/1.0.0' has been merged into 'master'
- The release was tagged 'v1.0.0'
- Release tag 'v1.0.0' has been back-merged into 'develop'
- Release branch 'release/1.0.0' has been locally deleted
- You are now on branch 'develop'

```
ASUS@AminovNotebook MINGW64 ~/Desktop/work/2020-2021/введение в научное программирование/labaratory (develop)
$ git push --all
Enter passphrase for key '/c/Users/ASUS/.ssh/id_rsa':
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 280 bytes | 140.00 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.
remote:
remote: Create a pull request for 'develop' on GitHub by visiting:
remote:   https://github.com/AminovZM/sciproc-intro/pull/new/develop
remote:
To github.com:AminovZM/sciproc-intro.git
 * [new branch]      develop -> develop
```

3.5. Вывод: *Научился работать с VCS.*