

Курс С++ && промышленное программирование

**Mail.Ru & МФТИ, 2017
Илья Дединский, МФТИ, ded@ded32.ru**

- Образовательные проекты Mail.Ru
 - Техноатом, Технотрек, Технопарк, Техносфера...
- Особенности
 - Преодоление разрыва между учебой и работой
 - Много практики и проектной подготовки
 - Современные технологии
 - Есть преимущества, но нет обязательств по работе в Mail.Ru
 - Ценится работодателями



Отметьтесь на ТЕХНОТРЕКЕ!

- Прямо сейчас
- Пожалуйста :)

<http://track.mail.ru>

Наш курс

- 14 занятий, 1 семестр, 1 раз в неделю, по $4+ \rightarrow \infty^*$ ак. часа
- C++ как развитие C
- Главный вопрос на букву «З»!

Особенности работы

- Баллы за каждое задание: [3..10] * (вес задания) \rightarrow [0..100]
- Итоговое задание – курсовой проект (вес = 50%)
 - Складывается из ранее сделанных заданий
 - ~~Слабоумие и отвага~~ Рефакторинг и перфекционизм
- Взаимодействие с ментором
- ДЗ и сроки – в конце лекции

* В меру, в меру :)

Общее и базовое

- Б. Керниган, Д. Ритчи, «Язык программирования С»
- Б. Керниган, Р. Пайк, «Практика программирования»
- С. Прата, «Язык С, лекции и упражнения» (толстая)
- С. МакКоннелл, «Совершенный код» (must read во многих компаниях)

Методология и философия :)

- М. Фаулер, «Рефакторинг»
- Ю. Хсих, «Наука отладки»
- Р. Брукс, «Мифический человеко-месяц»
- Э. Хант, Д. Томас, «Программист-прагматик»

- Софт-процессор (виртуальный CPU)
 - Ассемблер и дизассемблер для виртуального процессора
- Собственный язык программирования высокого уровня
 - ~~Сама производную считает!~~ Символьное дифференцирование
 - Генератор лаб по общему физику :)

• Что такое «Система контроля версий»?

- Ничего не стирается (не храните там пароли!)
- Любую версию можно восстановить
- Видны все изменения в коде, ~~которые сломали программу~~
- Репозиторий == «Папка с сохраненным проектом»
- Коммит == «Сохранить текущую версию проекта в эту папку»
- Push (или Sync) == «Залью-ка в облако. Вдруг потеряю ноут? O_o»
- Ветка == «Сохраню-ка это в другую папку, вдруг ерунда получится»
- Ревью кода == «Норм или не норм, вот в чем вопрос!
Ментор, скажи!»
- Слияние == «В новой папке не ерунда, а все ОК! Объединим-ка
с основной папкой, куда всё сохраняю»
- Релиз == «Я сделяль» :)



In case of fire



1. git commit

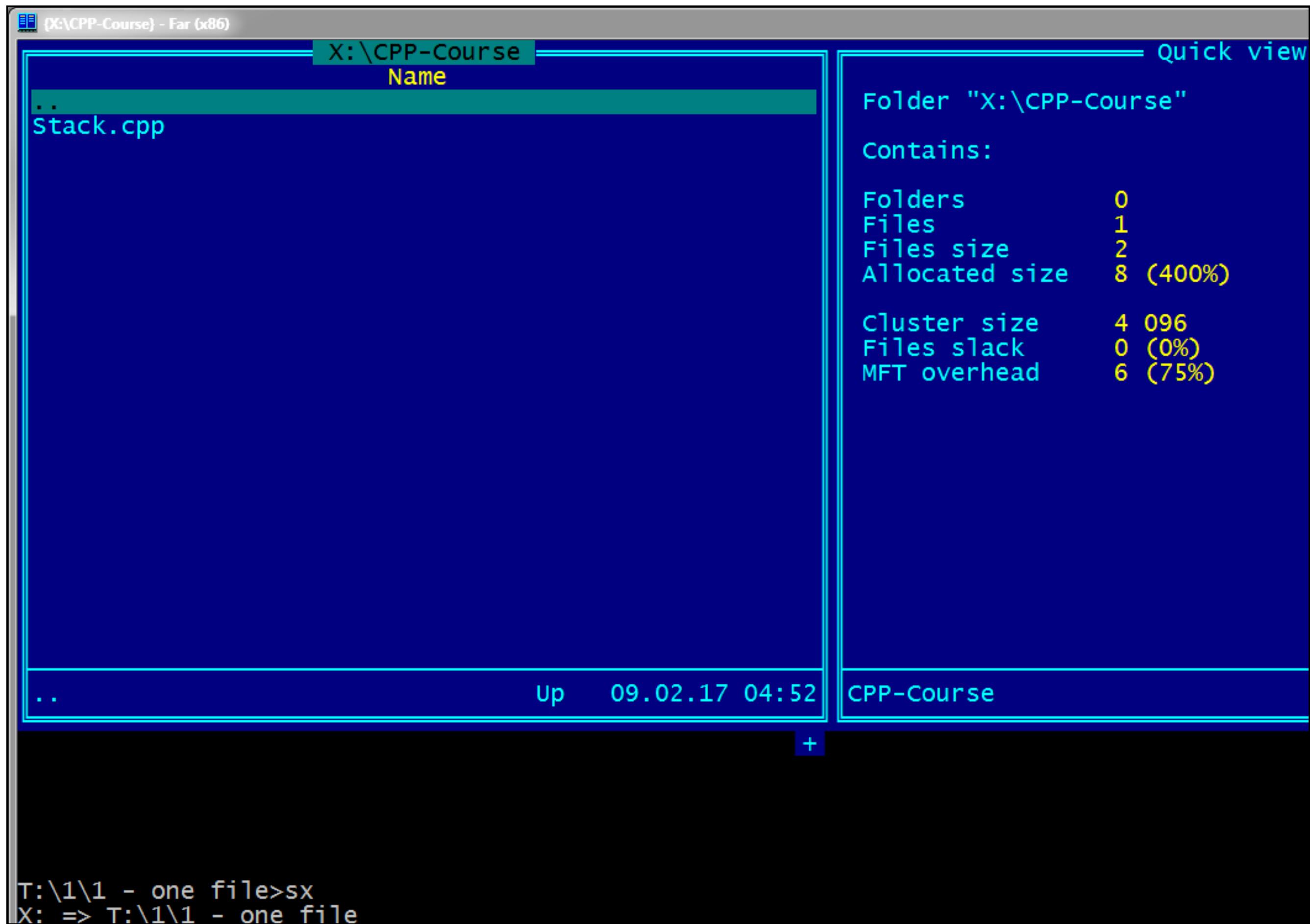


2. git push

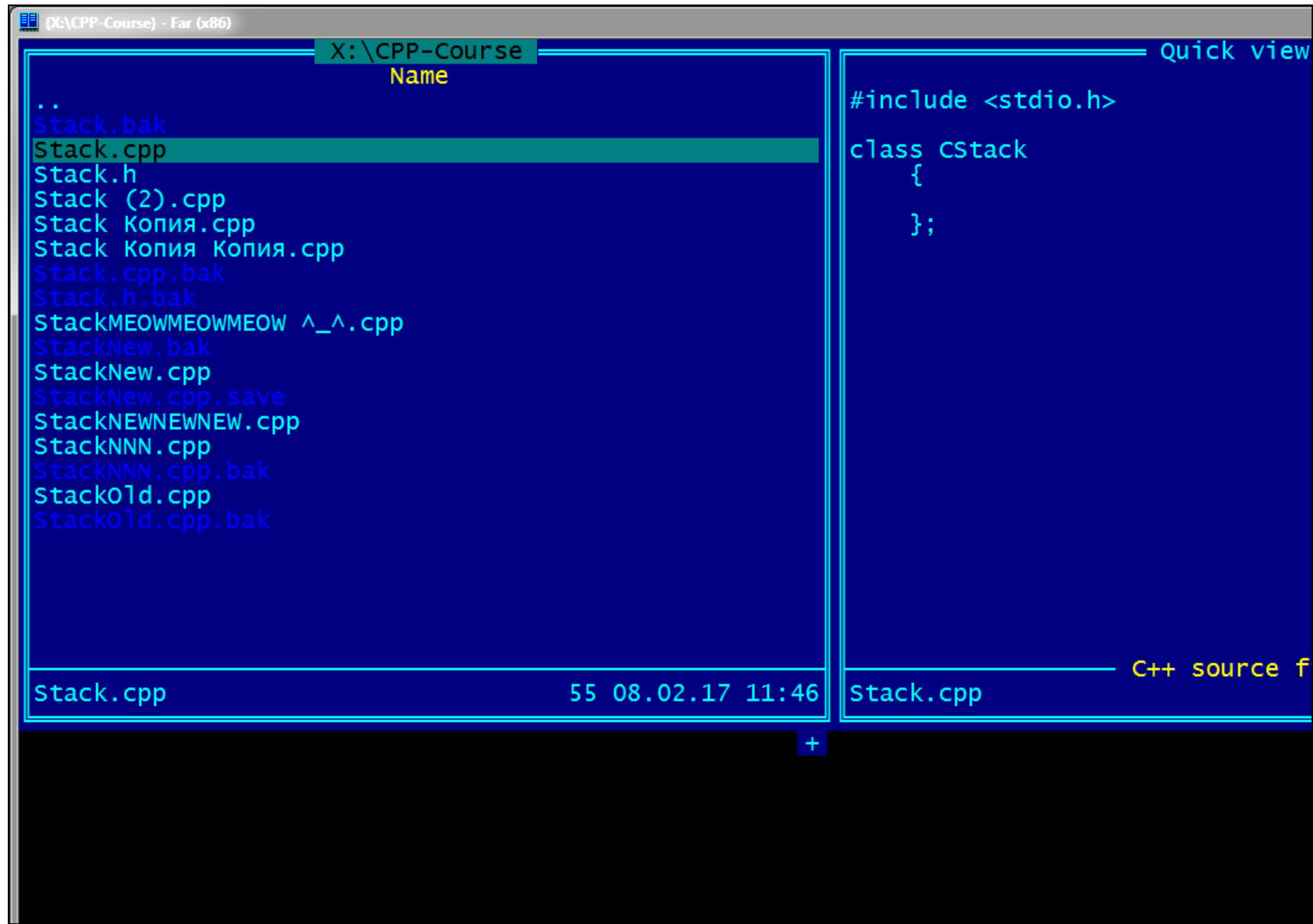


3. leave building

Рабочий процесс: Один файл, пока норм

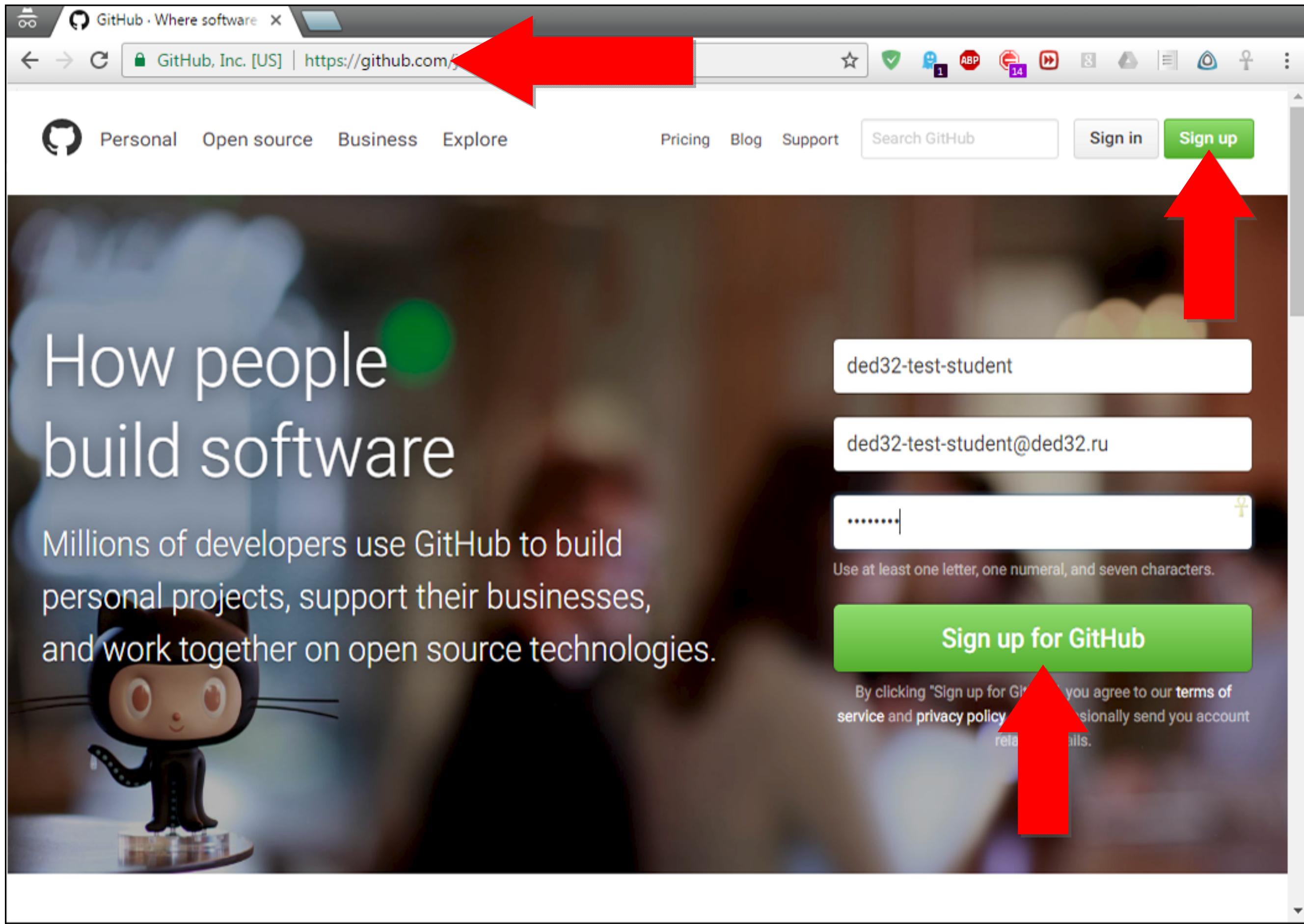


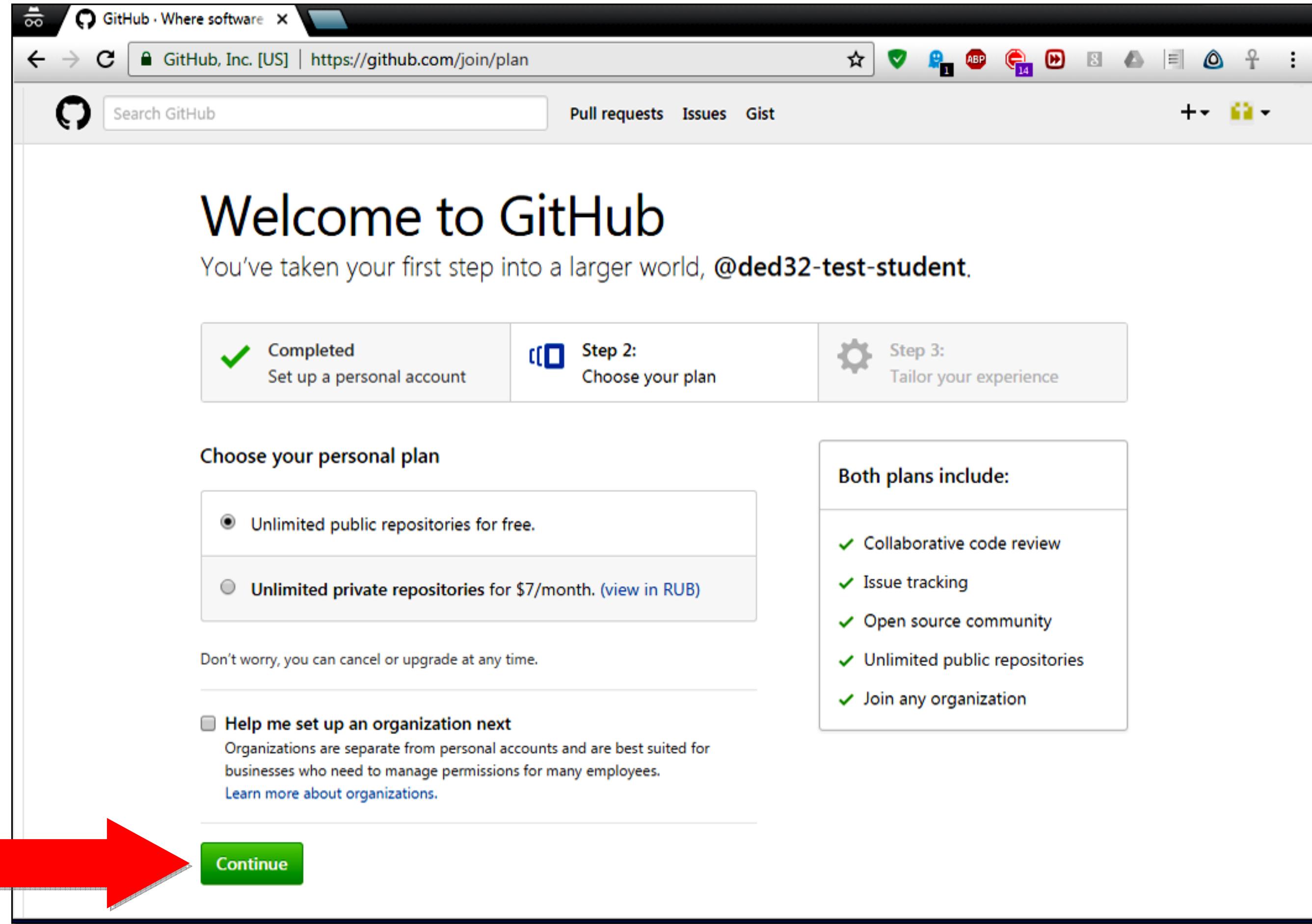
Рабочий процесс: Много файлов, кошмар



Рабочий процесс: Репозиторий на GitHub.com

ТЕХНОАТОМ 





The screenshot shows the GitHub registration process at the "Choose your personal plan" step. At the top, it says "Welcome to GitHub" and "You've taken your first step into a larger world, @ded32-test-student.". There are three steps indicated: "Completed Set up a personal account" (with a green checkmark), "Step 2: Choose your plan" (with a blue square icon), and "Step 3: Tailor your experience" (with a gear icon).

The "Choose your personal plan" section contains two options:

- Unlimited public repositories for free.
- Unlimited private repositories for \$7/month. ([view in RUB](#))

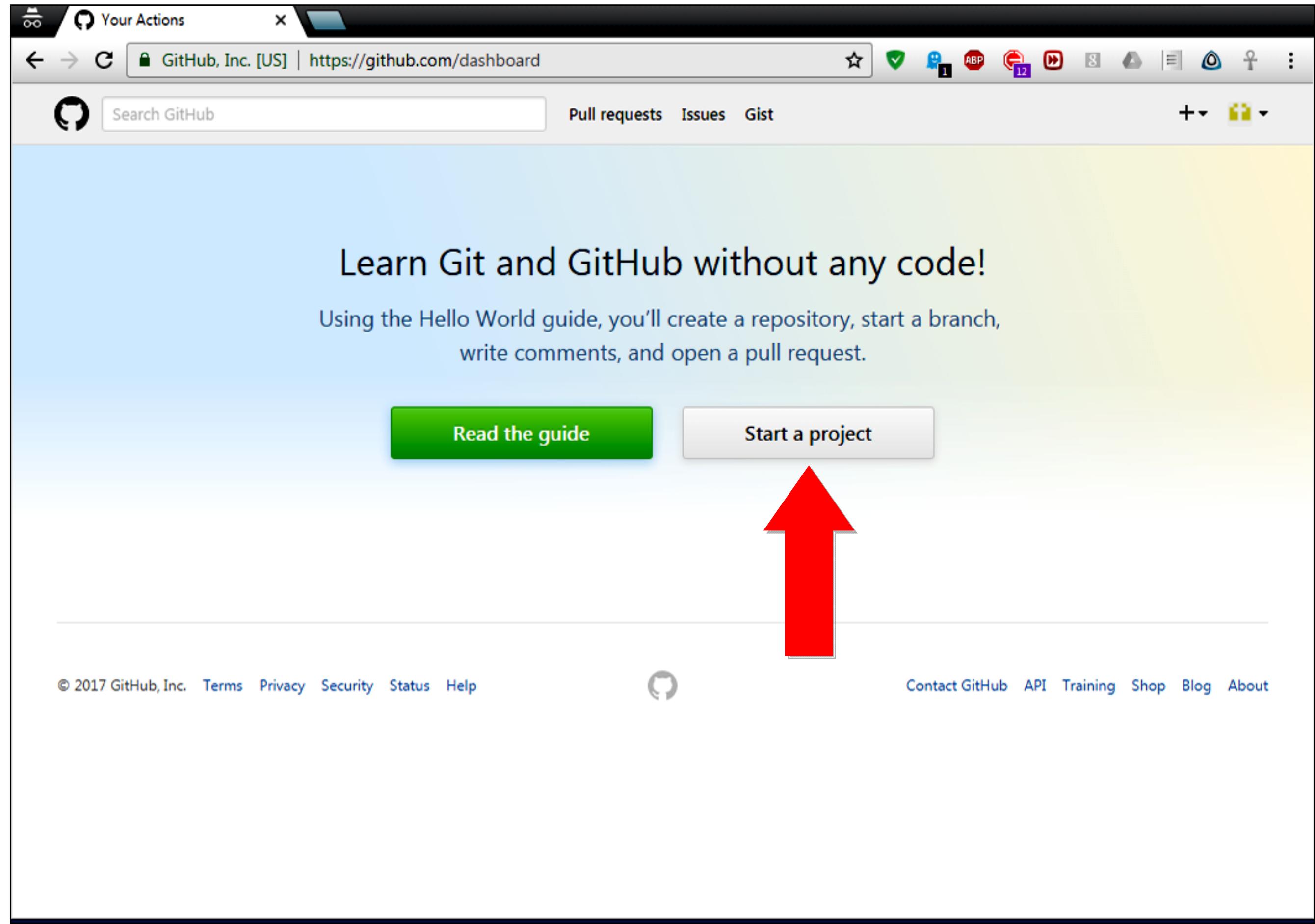
A note below says "Don't worry, you can cancel or upgrade at any time."

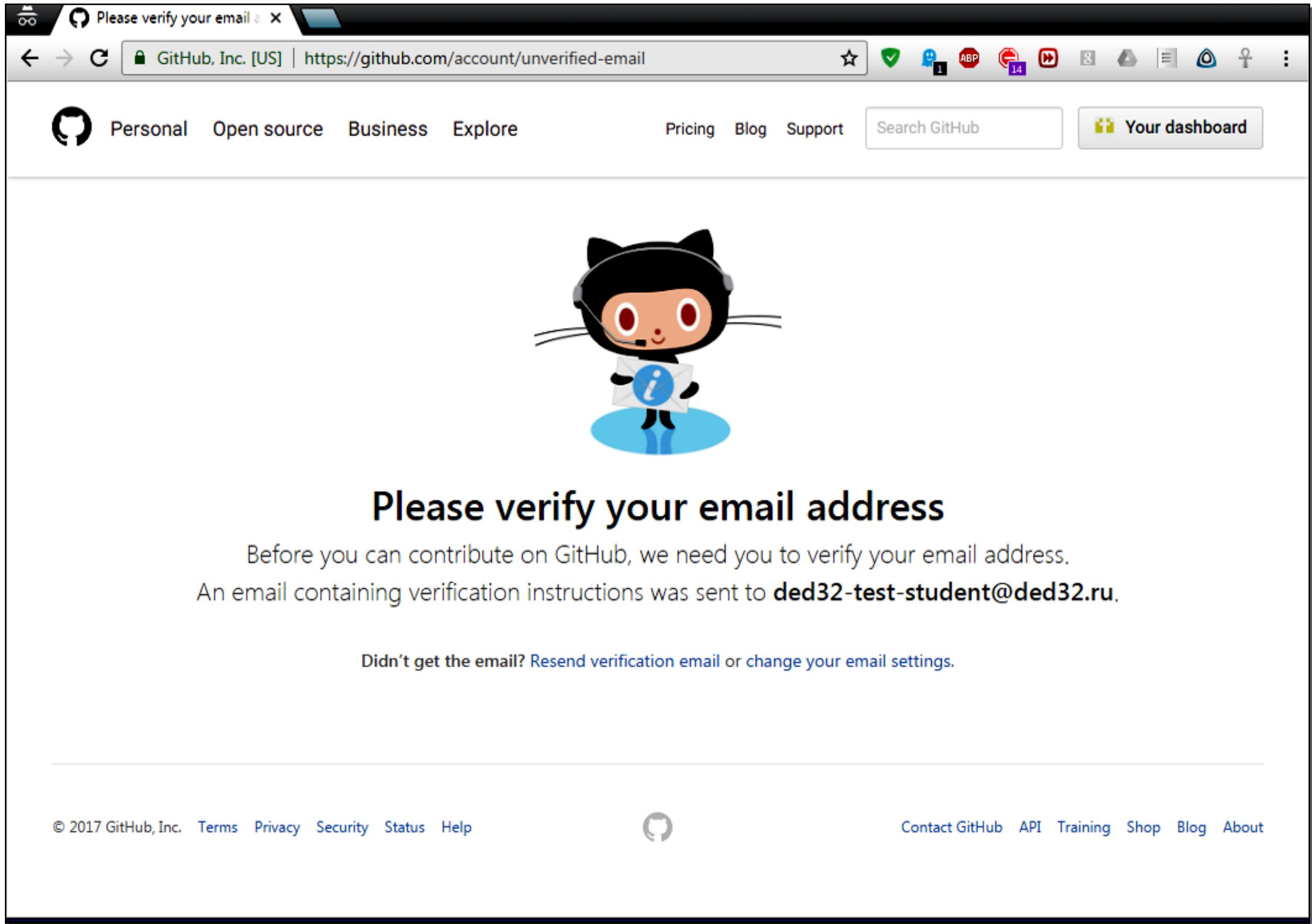
Below the plan selection is a checkbox for "Help me set up an organization next" with descriptive text about organizations and a link to "Learn more about organizations".

A large red arrow points to the "Continue" button at the bottom left, and a green "Continue" button is visible at the bottom right.

On the right side, a box lists "Both plans include:" features:

- ✓ Collaborative code review
- ✓ Issue tracking
- ✓ Open source community
- ✓ Unlimited public repositories
- ✓ Join any organization





Please verify your email

GitHub, Inc. [US] | https://github.com/account/unverified-email

Personal Open source Business Explore Pricing Blog Support Search GitHub Your dashboard



Please verify your email address

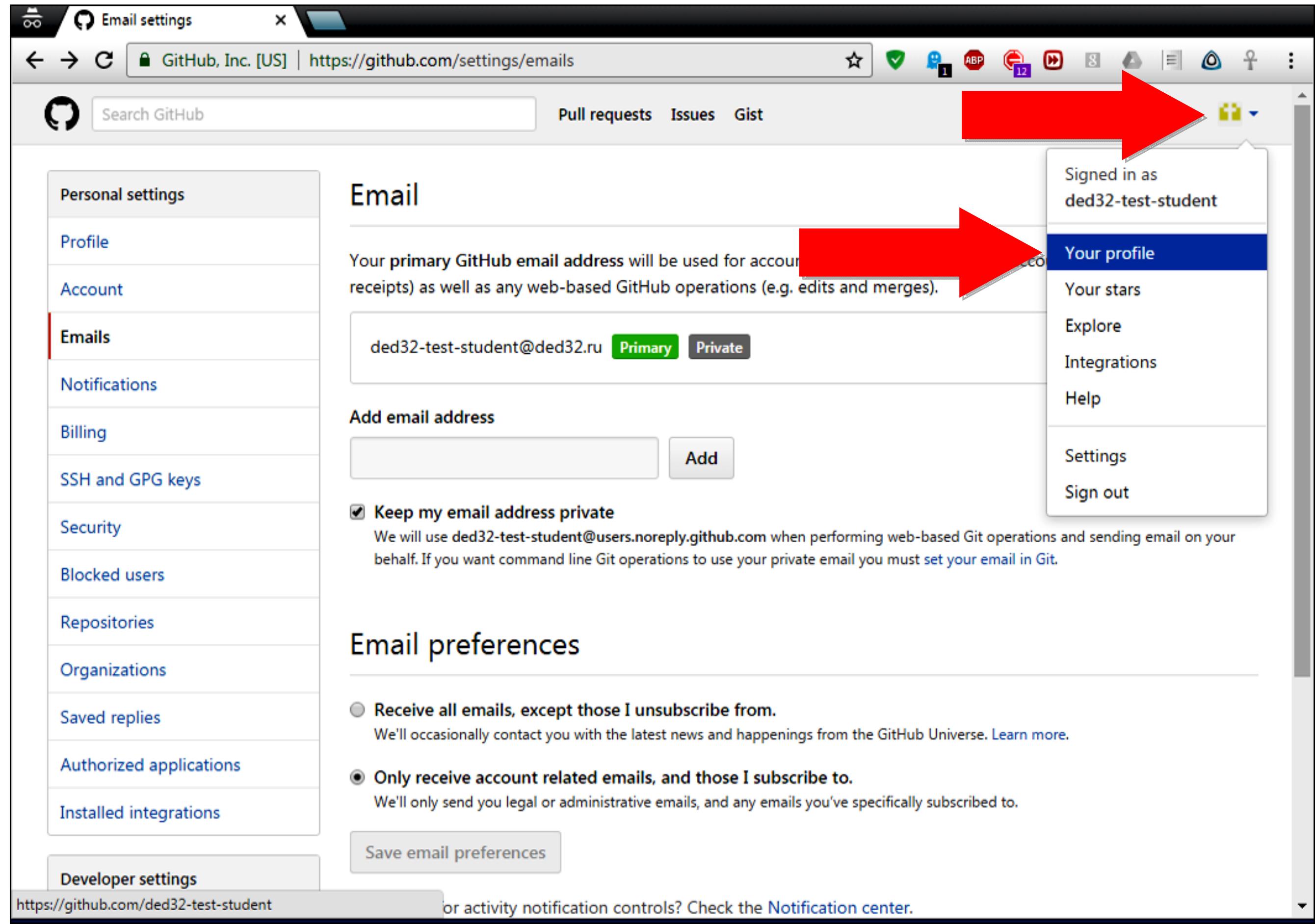
Before you can contribute on GitHub, we need you to verify your email address.

An email containing verification instructions was sent to **ded32-test-student@ded32.ru**.

Didn't get the email? [Resend verification email](#) or [change your email settings](#).

© 2017 GitHub, Inc. [Terms](#) [Privacy](#) [Security](#) [Status](#) [Help](#)

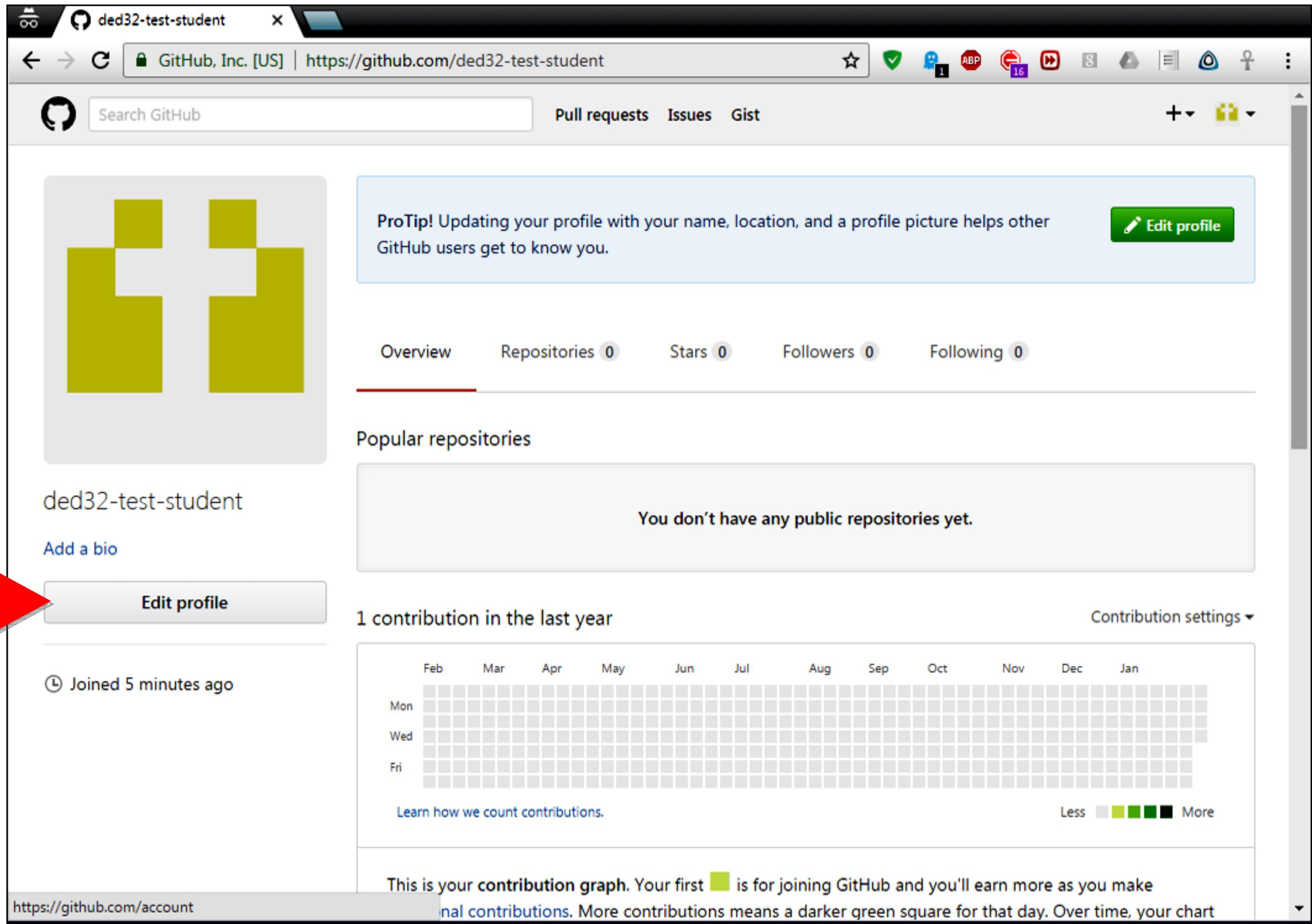
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The screenshot shows the GitHub 'Email settings' page. On the left, a sidebar lists various personal settings options: Profile, Account, **Emails**, Notifications, Billing, SSH and GPG keys, Security, Blocked users, Repositories, Organizations, Saved replies, Authorized applications, Installed integrations, and Developer settings. The 'Emails' option is currently selected. The main content area is titled 'Email' and contains a section for managing email addresses. It shows one primary email address: ded32-test-student@ded32.ru, which is marked as 'Primary' and 'Private'. Below this, there's a form to 'Add email address' with an 'Add' button. A checkbox labeled 'Keep my email address private' is checked, with a note explaining that GitHub will use a generic email for web-based Git operations and command line operations if the private email is set. The right side of the screen features a vertical navigation bar with links: Signed in as ded32-test-student, Your profile (which is highlighted in blue), Your stars, Explore, Integrations, Help, Settings, and Sign out. A large red arrow points from the top right towards the 'Your profile' link in the sidebar. Another red arrow points from the bottom right towards the 'Primary' button next to the listed email address.

Github: Настраиваем аккаунт

TEXHOATOM 



ded32-test-student

GitHub, Inc. [US] | https://github.com/ded32-test-student

Search GitHub

Pull requests Issues Gist

ProTip! Updating your profile with your name, location, and a profile picture helps other GitHub users get to know you. [Edit profile](#)

Overview Repositories 0 Stars 0 Followers 0 Following 0

Popular repositories

You don't have any public repositories yet.

ded32-test-student

Add a bio

[Edit profile](#)

Joined 5 minutes ago

1 contribution in the last year [Contribution settings](#)

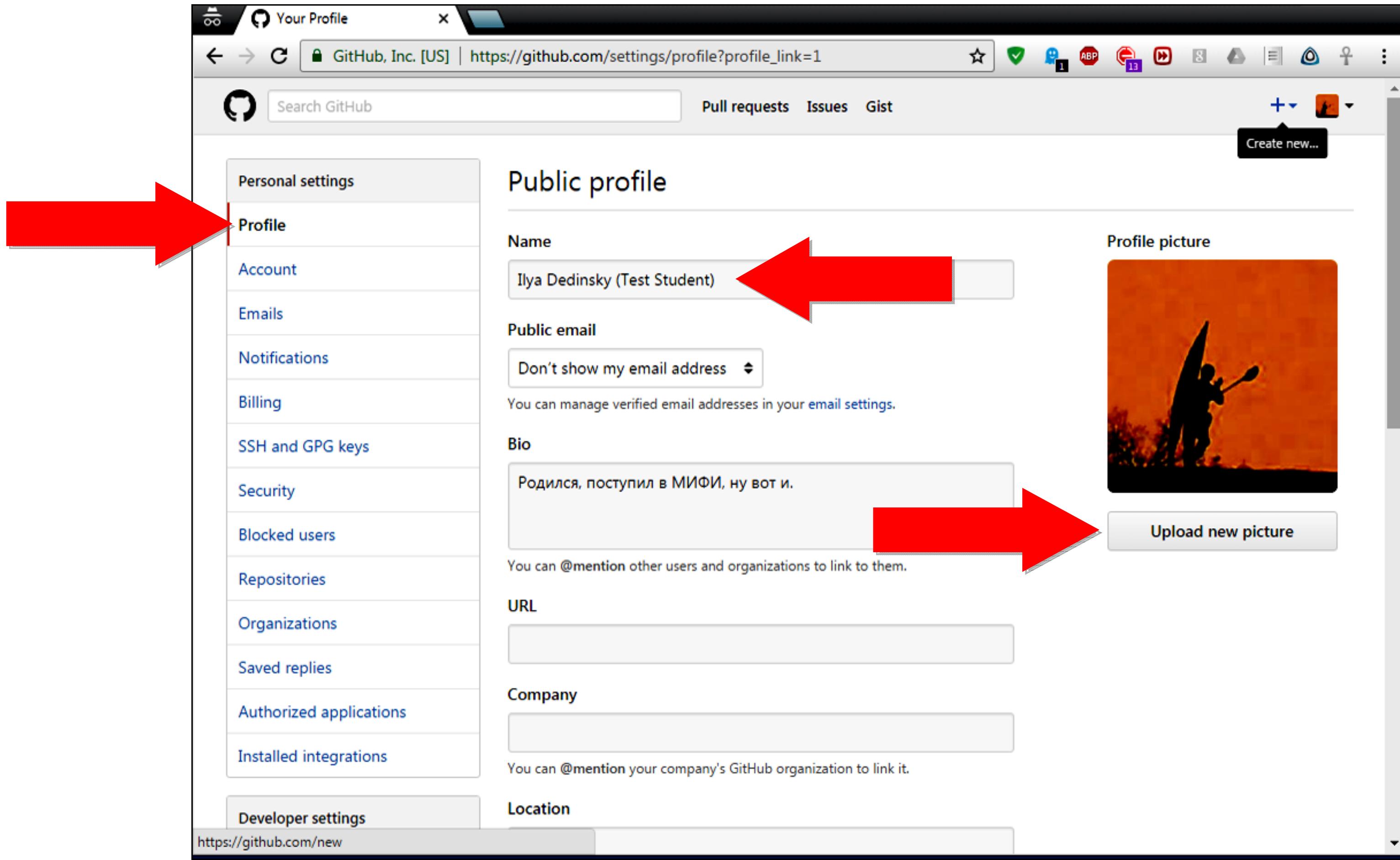
Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan

Mon Wed Fri

Learn how we count contributions. Less More

This is your contribution graph. Your first is for joining GitHub and you'll earn more as you make final contributions. More contributions means a darker green square for that day. Over time, your chart

<https://github.com/account>



The screenshot shows the GitHub 'Your Profile' settings page. A vertical sidebar on the left lists various settings categories. A large red arrow points to the 'Profile' category in the sidebar. Another red arrow points to the 'Name' input field, which contains the text 'Ilya Dedinsky (Test Student)'. A third red arrow points to the bio text area, which contains the Russian text 'Родился, поступил в МИФИ, ну вот и.'.

Personal settings

Profile (highlighted)

Account

Emails

Notifications

Billing

SSH and GPG keys

Security

Blocked users

Repositories

Organizations

Saved replies

Authorized applications

Installed integrations

Developer settings

Location

Public profile

Name
Ilya Dedinsky (Test Student)

Profile picture


Public email
Don't show my email address

You can manage verified email addresses in your [email settings](#).

Bio
Родился, поступил в МИФИ, ну вот и.

You can @mention other users and organizations to link to them.

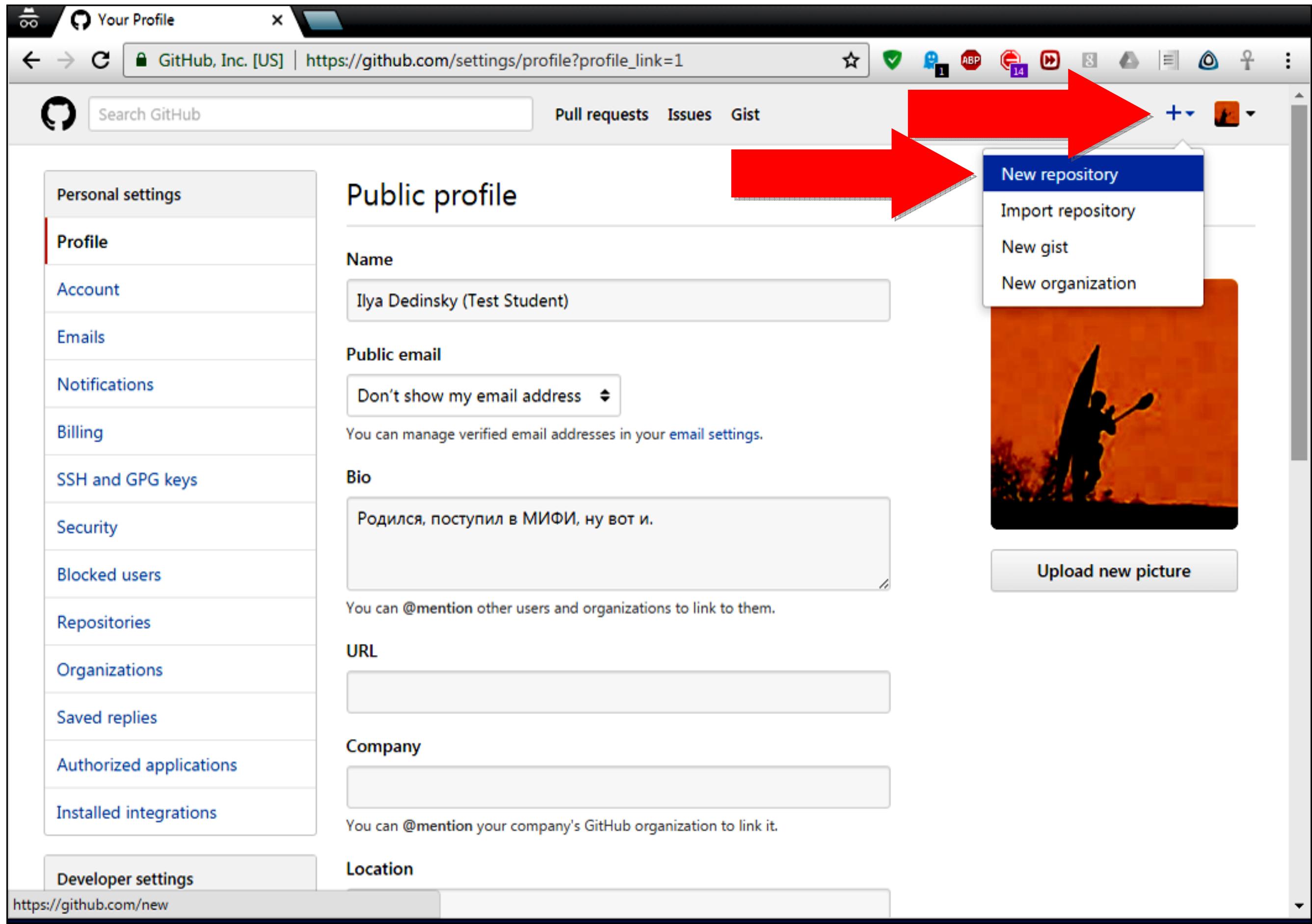
URL

Company

You can @mention your company's GitHub organization to link it.

Create new...

<https://github.com/new>



The screenshot shows the GitHub 'Your Profile' settings page. On the left, there's a sidebar with links like Personal settings, Profile (which is selected), Account, Emails, Notifications, Billing, SSH and GPG keys, Security, Blocked users, Repositories, Organizations, Saved replies, Authorized applications, Installed integrations, Developer settings, and Location. The main area is titled 'Public profile' and contains fields for Name (Ilya Dedinsky (Test Student)), Public email (with a dropdown menu showing 'Don't show my email address'), Bio (with the text 'Родился, поступил в МИФИ, ну вот и.'), URL, Company, and Location. To the right of the bio field is a placeholder image of a person in a sunset and a 'Upload new picture' button. A large red arrow points from the top right towards the 'New repository' option in a dropdown menu that appears when clicking the '+' icon in the top right corner of the main area.

New repository

Import repository

New gist

New organization

Upload new picture

Public profile

Name

Ilya Dedinsky (Test Student)

Public email

Don't show my email address

You can manage verified email addresses in your [email settings](#).

Bio

Родился, поступил в МИФИ, ну вот и.

You can @mention other users and organizations to link to them.

URL

Company

You can @mention your company's GitHub organization to link it.

Location

Developer settings

Personal settings

Profile

Account

Emails

Notifications

Billing

SSH and GPG keys

Security

Blocked users

Repositories

Organizations

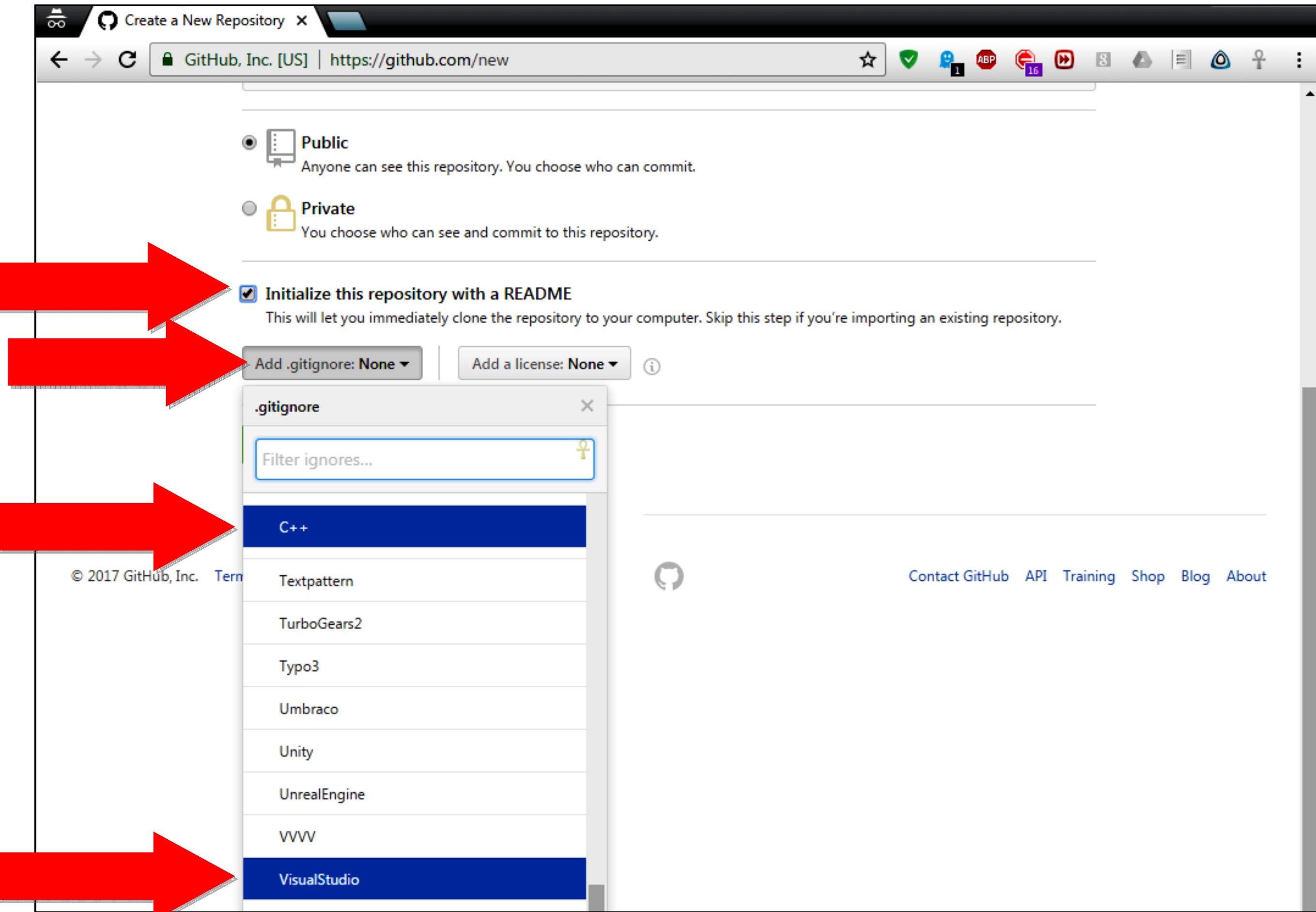
Saved replies

Authorized applications

Installed integrations

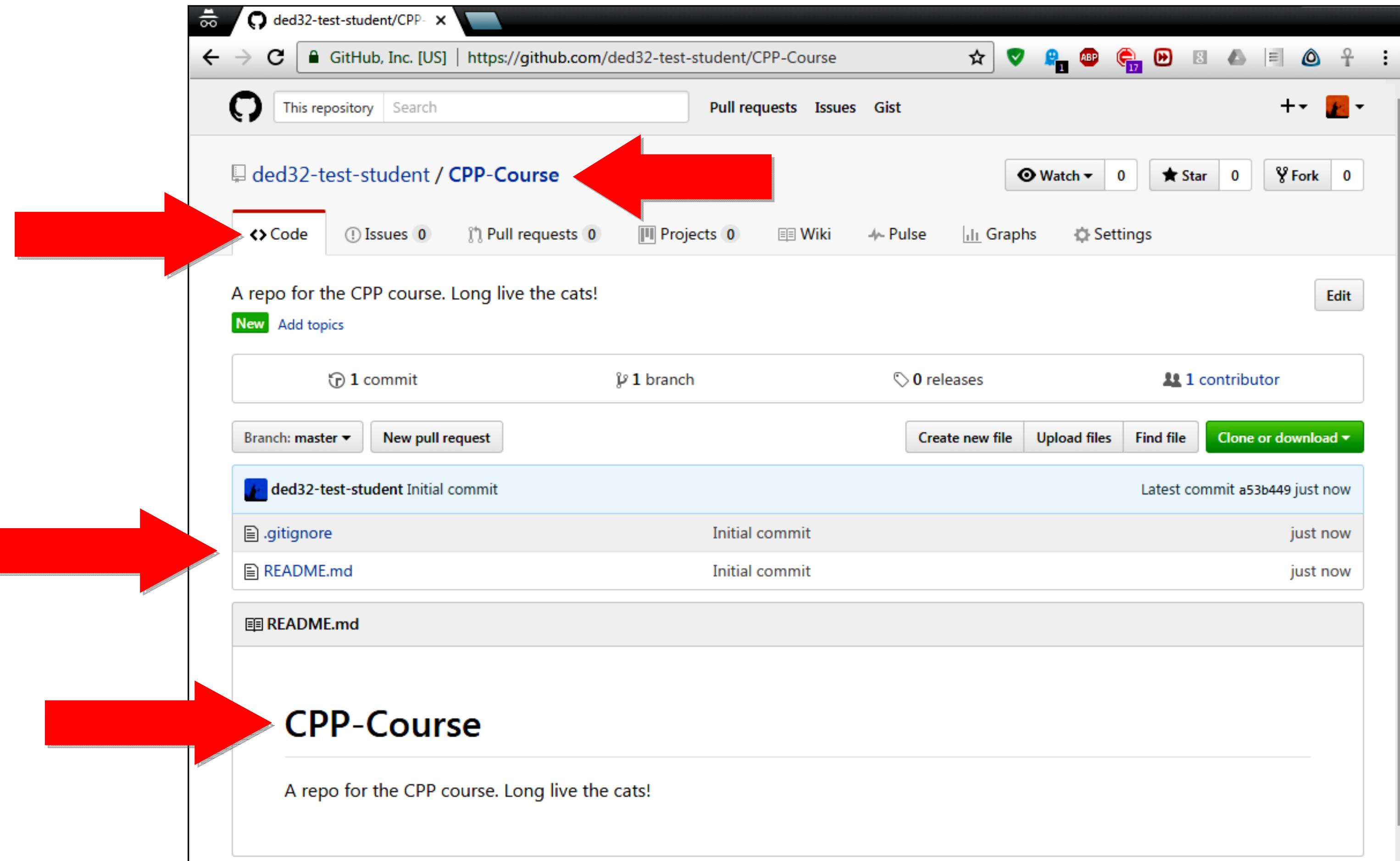
https://github.com/new

Github: Настраиваем репозиторий



Github: Пустой репозиторий

TEXHOATOM 



ded32-test-student / CPP-Course

A repo for the CPP course. Long live the cats!

New Add topics

1 commit 1 branch 0 releases 1 contributor

Branch: master New pull request Create new file Upload files Find file Clone or download

ded32-test-student Initial commit	Latest commit a53b449 just now
.gitignore	Initial commit just now
README.md	Initial commit just now
README.md	

CPP-Course

A repo for the CPP course. Long live the cats!

Репозиторий: Добавляем соавтора и ~~большого брата~~ ментора

The screenshot shows the GitHub repository settings page for 'ded32-test-student / CPP-Course'. A red arrow points to the 'Collaborators' tab in the sidebar. Another red arrow points to the search input field where 'ded32' is typed. A third red arrow points to the 'Add collaborator' button. The 'Collaborators' section displays a list of users: 'ded32 Ilya Dedinsky' (selected), 'ded32-test-student Ilya Dedinsky (Test Student)', 'ded32-tutor', and 'ded32-student'. The top right of the page shows repository statistics: Watch (0), Star (0), Fork (0).

ded32-test-student / CPP-Course

Watch 0 | Star 0 | Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Pulse Graphs Settings

Collaborators

This repository doesn't have any collaborators yet. Use the form below to add a collaborator.

Search by username, full name or email address

You'll only be able to find a GitHub user by their email address if they've chosen to list it publicly. Otherwise, use their username instead.

ded32

ded32 Ilya Dedinsky

ded32-test-student Ilya Dedinsky (Test Student)

ded32-tutor

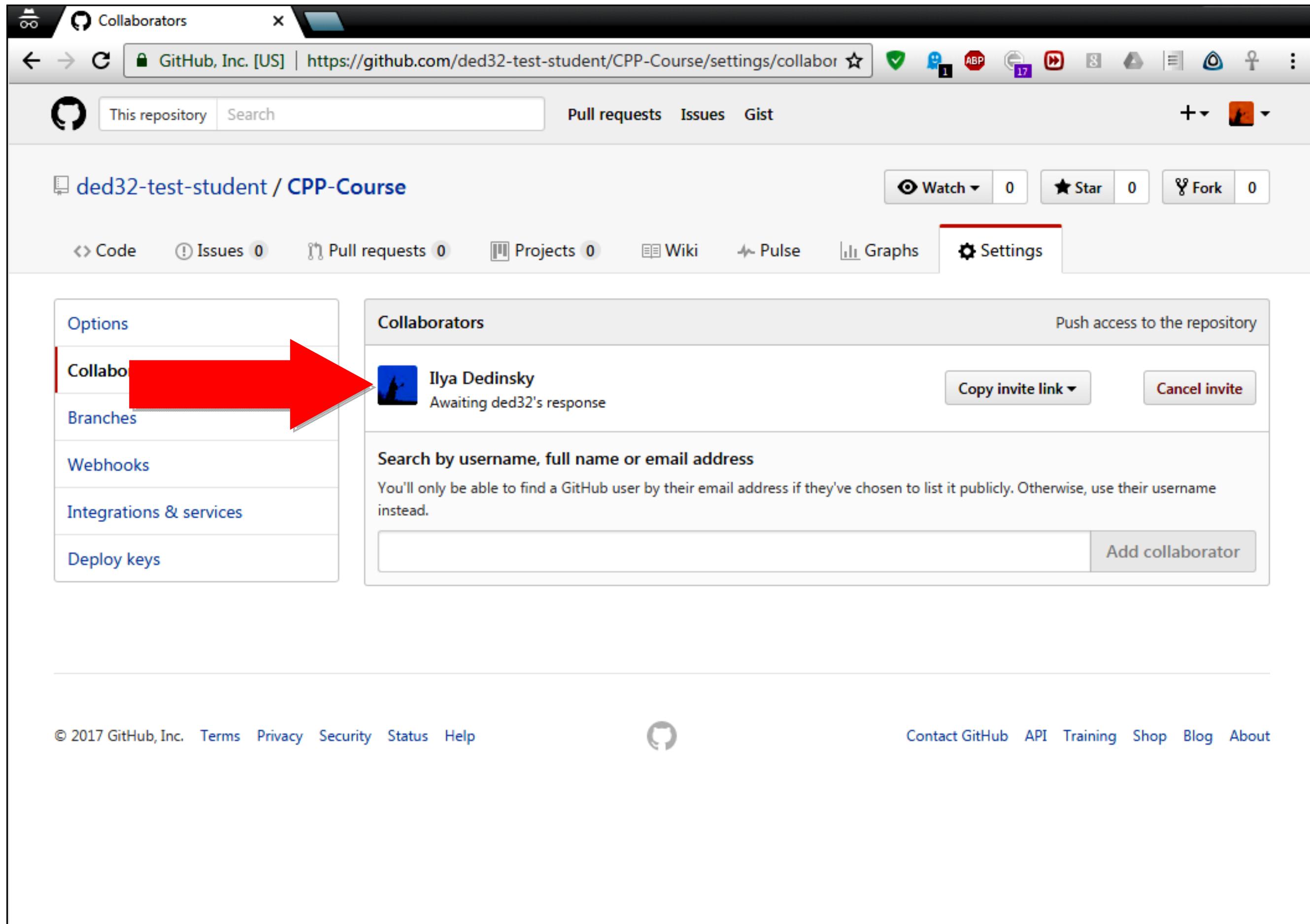
ded32-student

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Репозиторий: Добавляем соавтора

TEXHOATOM 



The screenshot shows the GitHub repository settings page for 'ded32-test-student / CPP-Course'. The 'Collaborators' tab is selected in the sidebar. A large red arrow points to the 'Collaborators' section, which displays a single user entry: 'Ilya Dedinsky' with the status 'Awaiting ded32's response'. There are buttons for 'Copy invite link' and 'Cancel invite'. Below this, there is a search bar and an 'Add collaborator' button.

Collaborators

This repository Search

Pull requests Issues Gist

Watch 0 Star 0 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Pulse Graphs Settings

Options

Collaborators

Branches

Webhooks

Integrations & services

Deploy keys

Ilya Dedinsky
Awaiting ded32's response

Push access to the repository

Copy invite link Cancel invite

Search by username, full name or email address

You'll only be able to find a GitHub user by their email address if they've chosen to list it publicly. Otherwise, use their username instead.

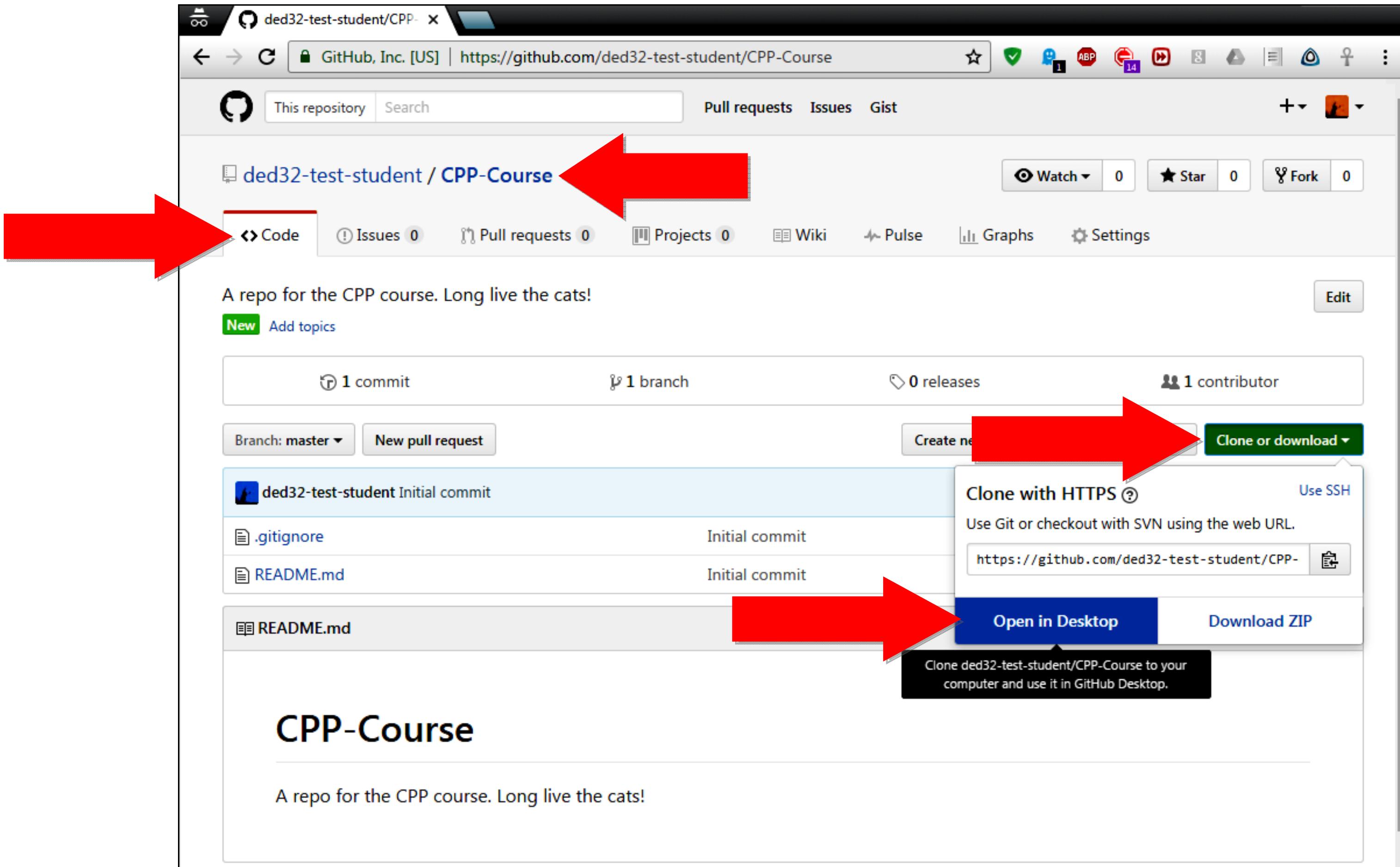
Add collaborator

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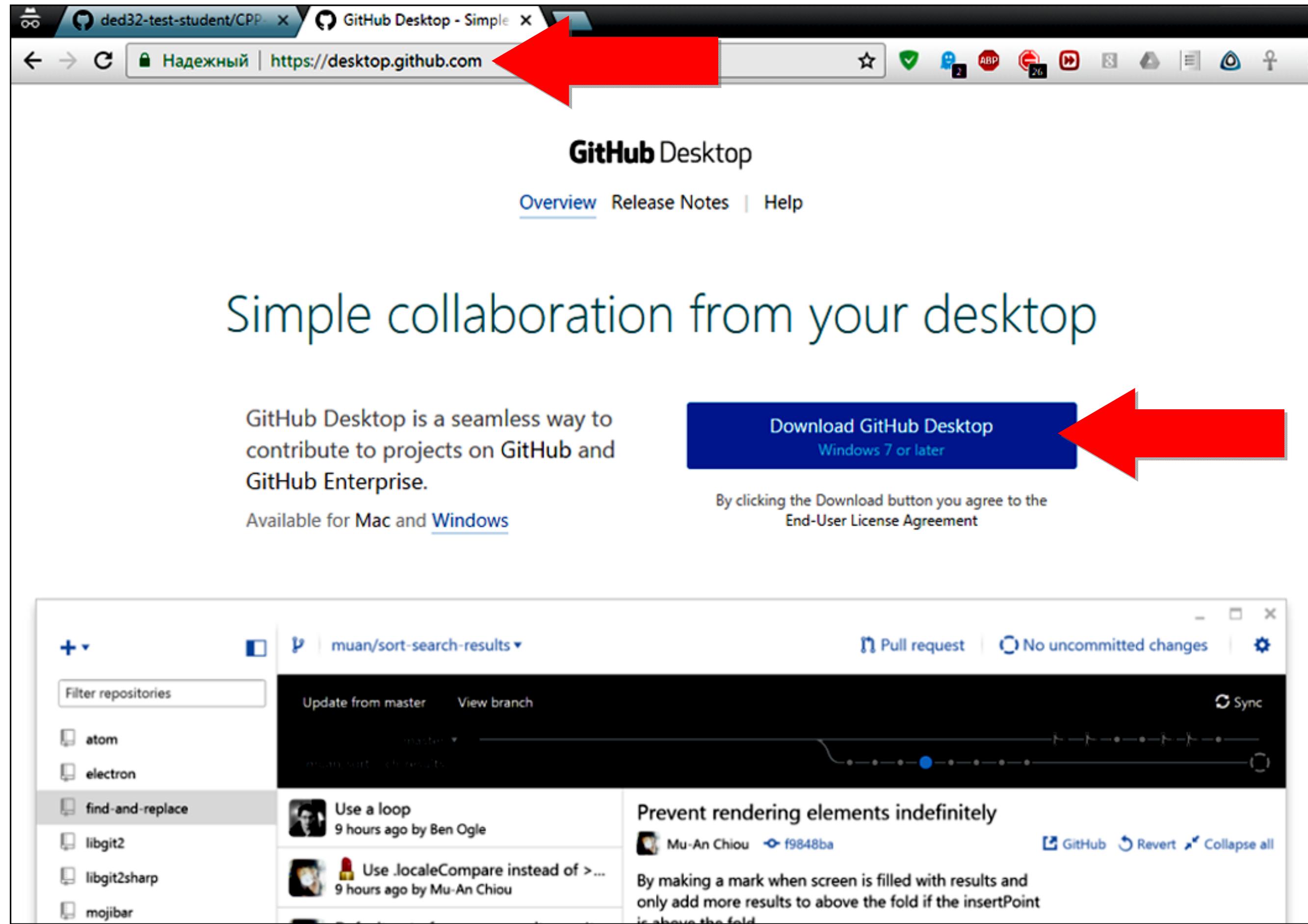
Репозиторий: Github Desktop

TEXHOATOM 

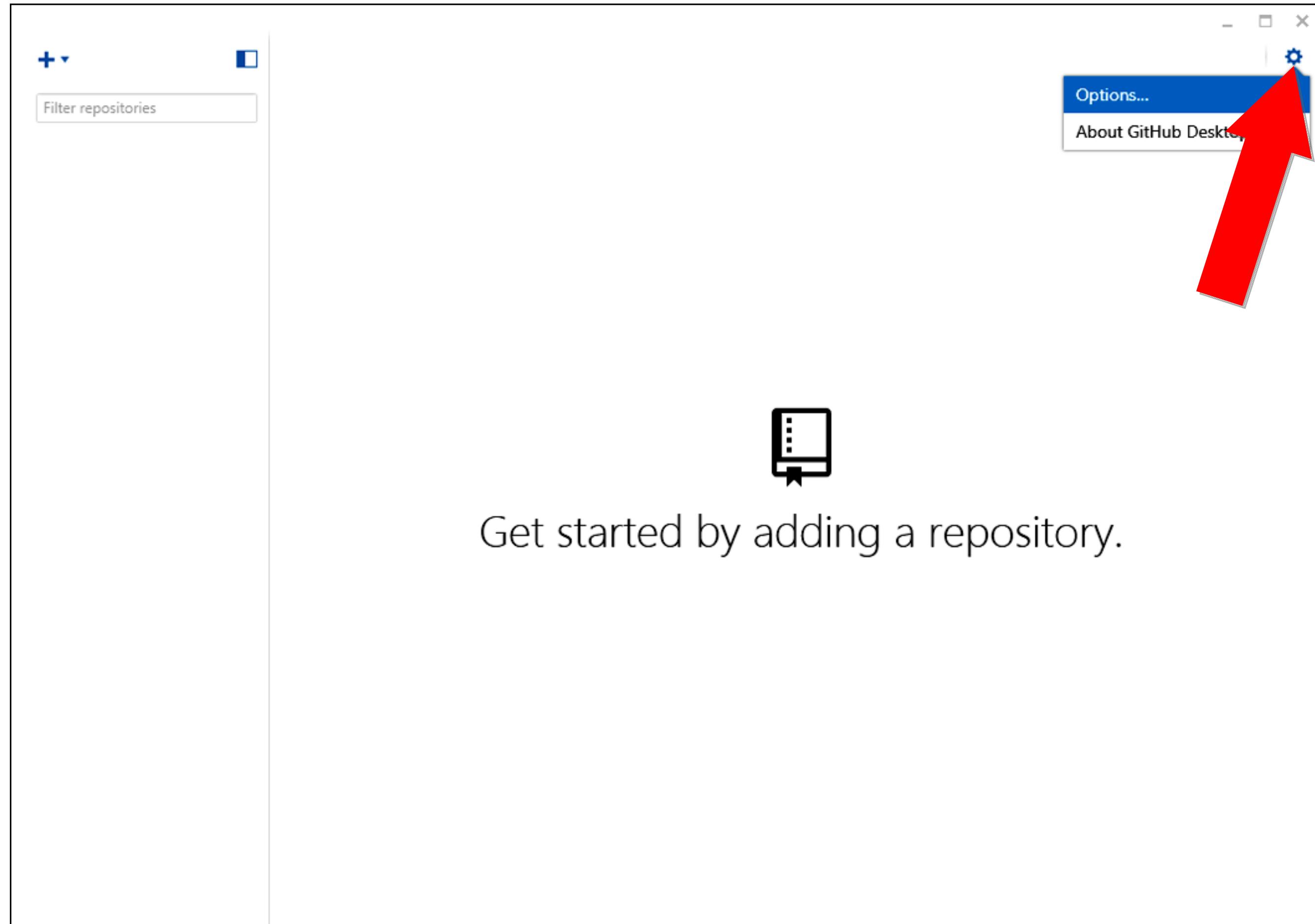


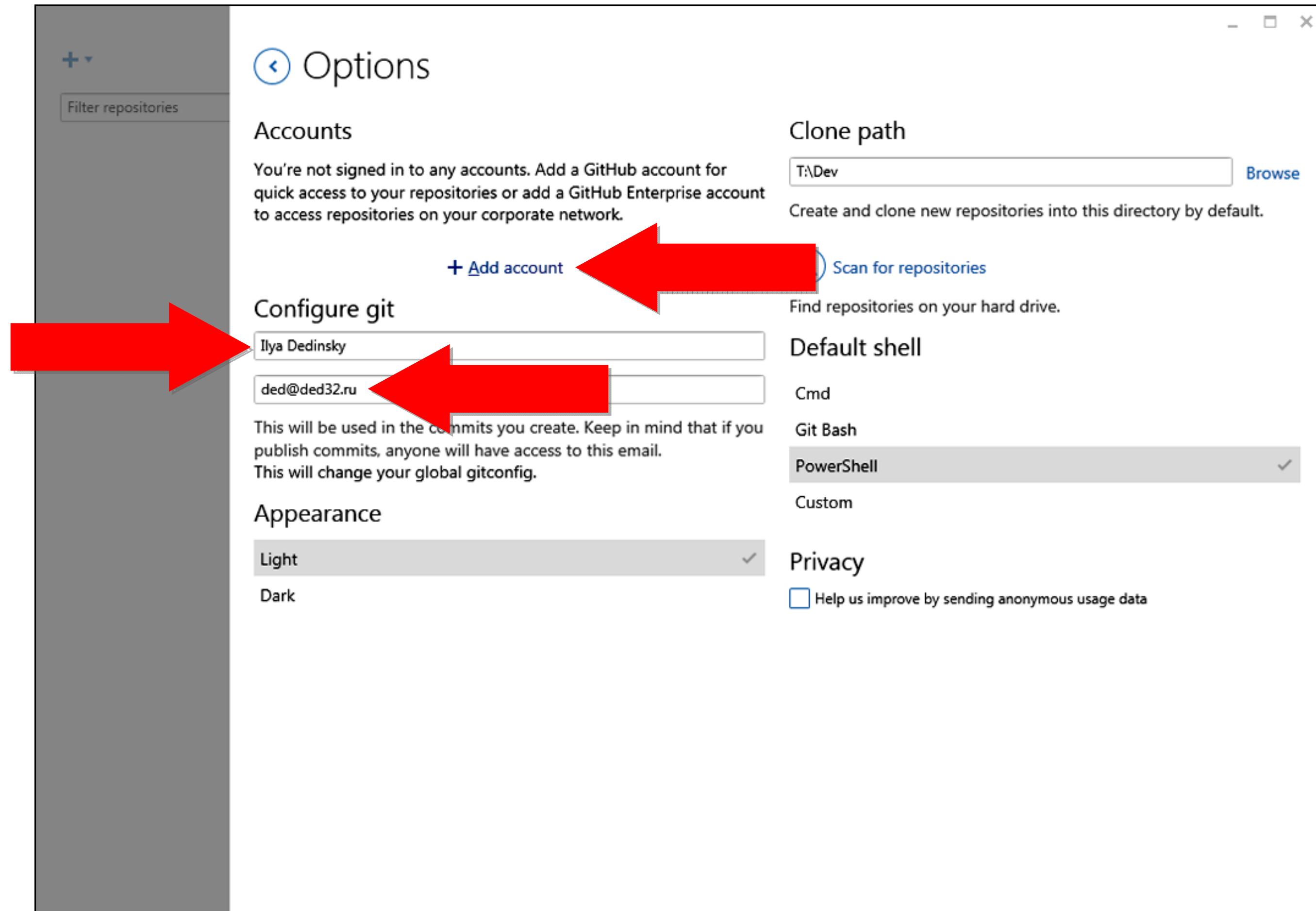
Github Desktop: Скачиваем

TEXHOATOM 

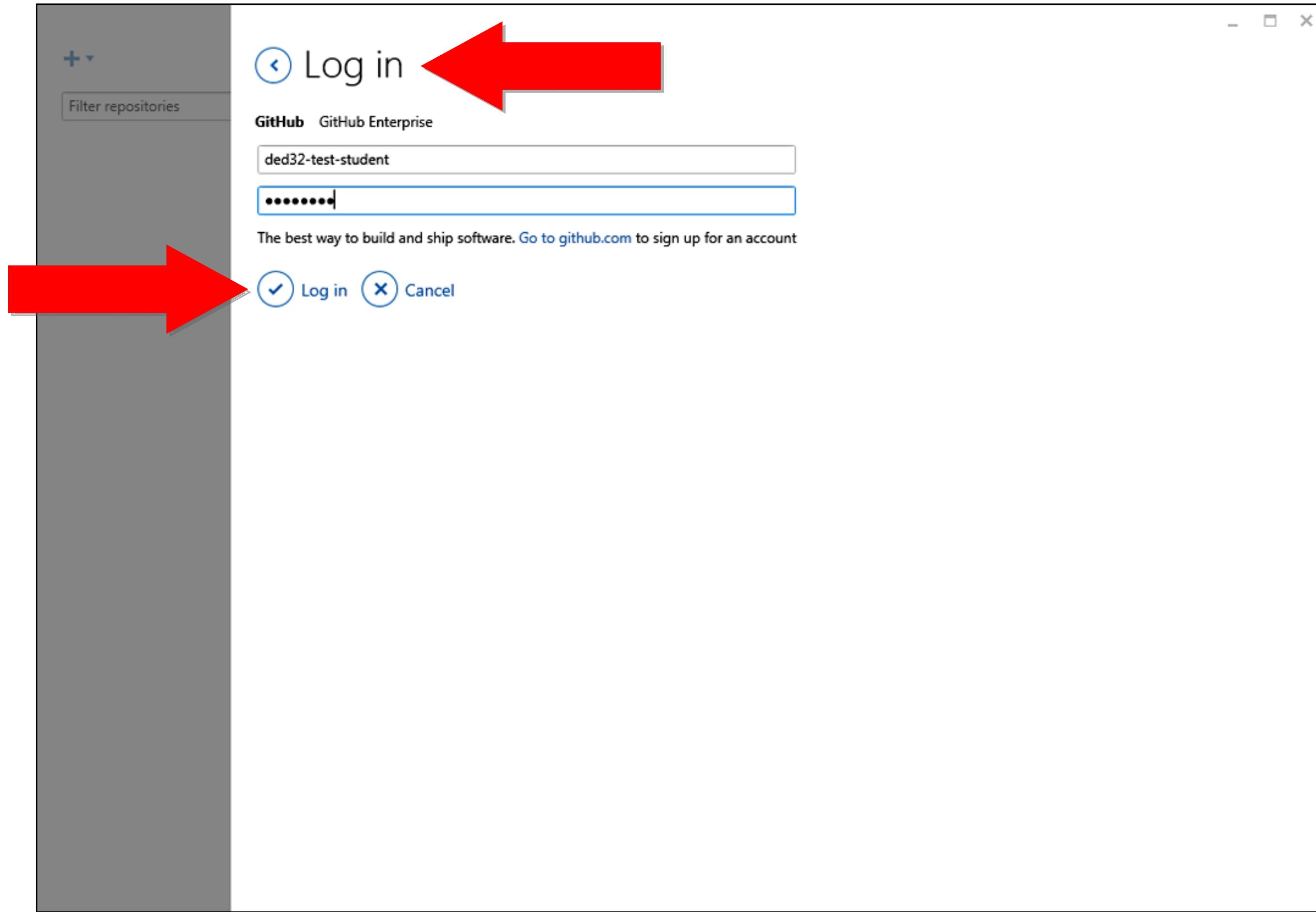


Github Desktop: Запускаем и логинимся

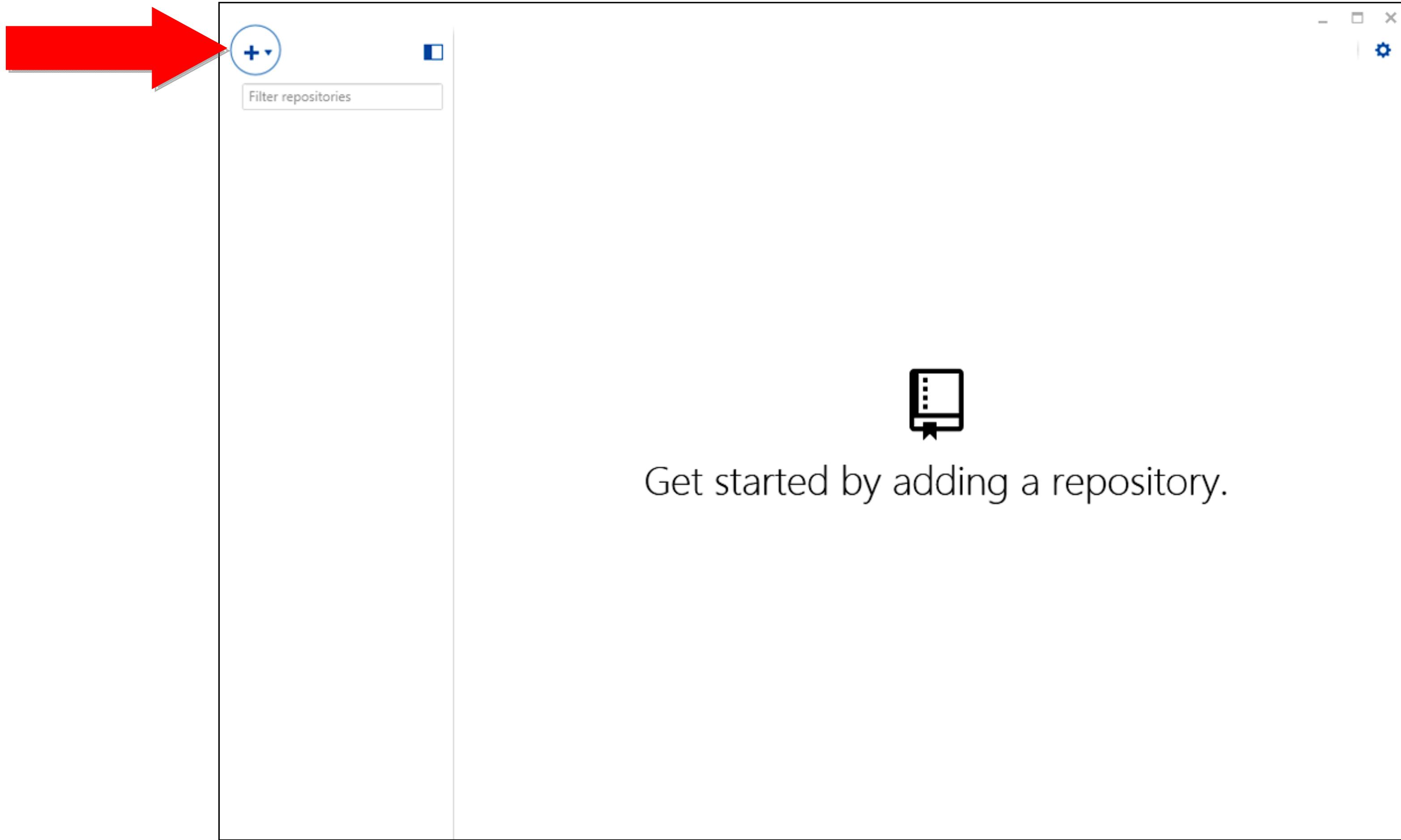




Github Desktop: Логинимся

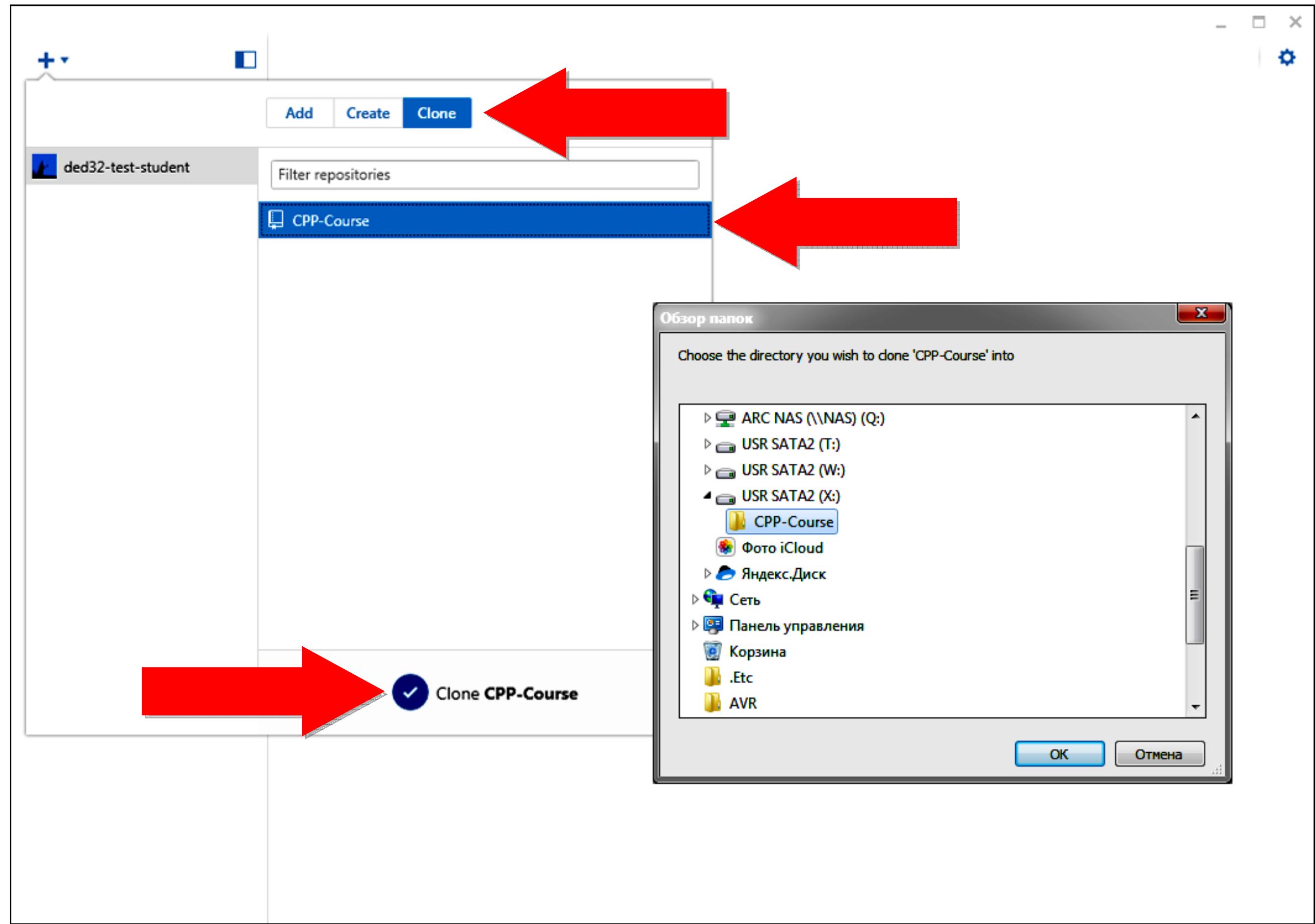


Github Desktop: Клонируем репозиторий с сайта

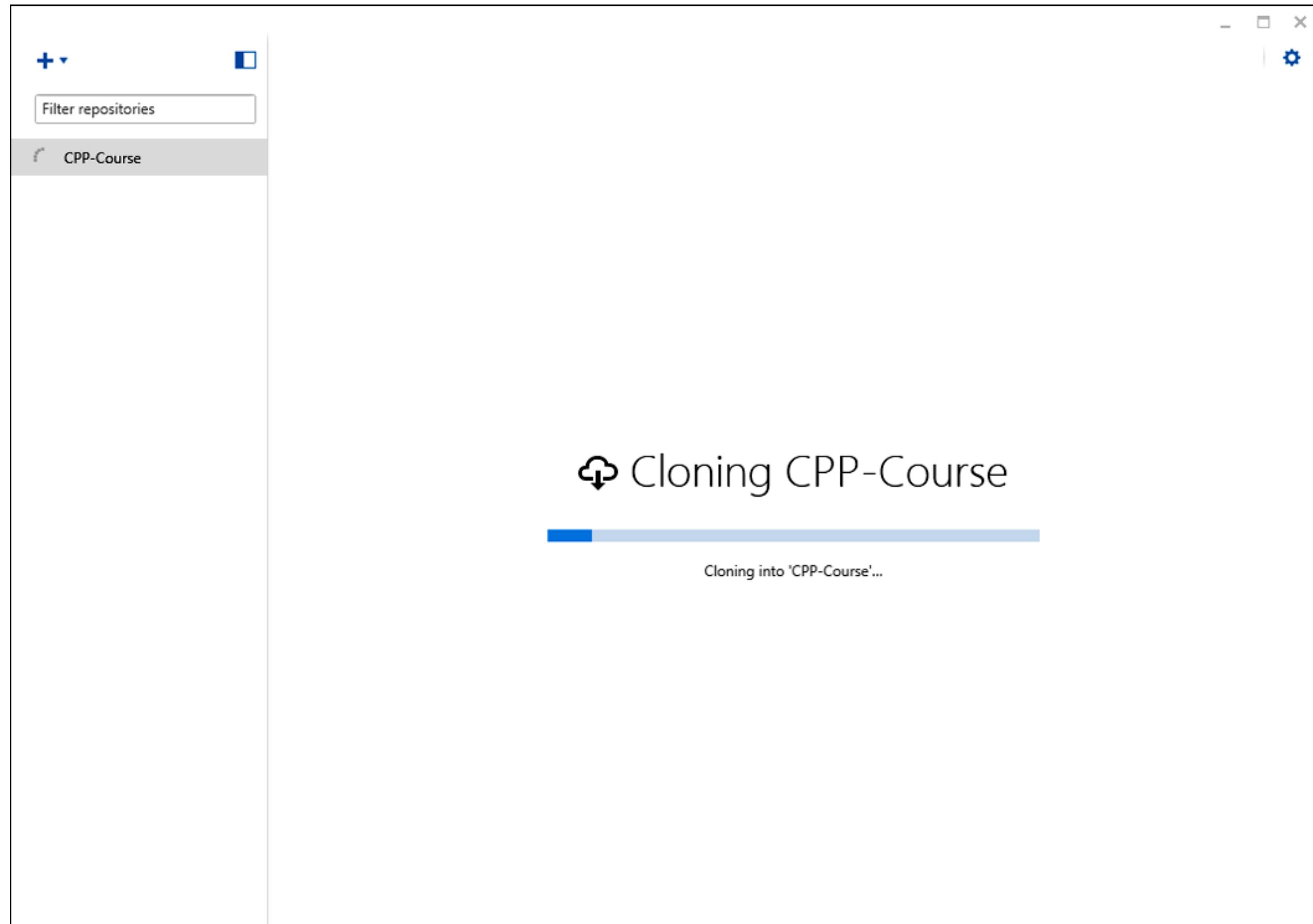


Github Desktop: Клонируем репозиторий с сайта

ТЕХНОАТОМ

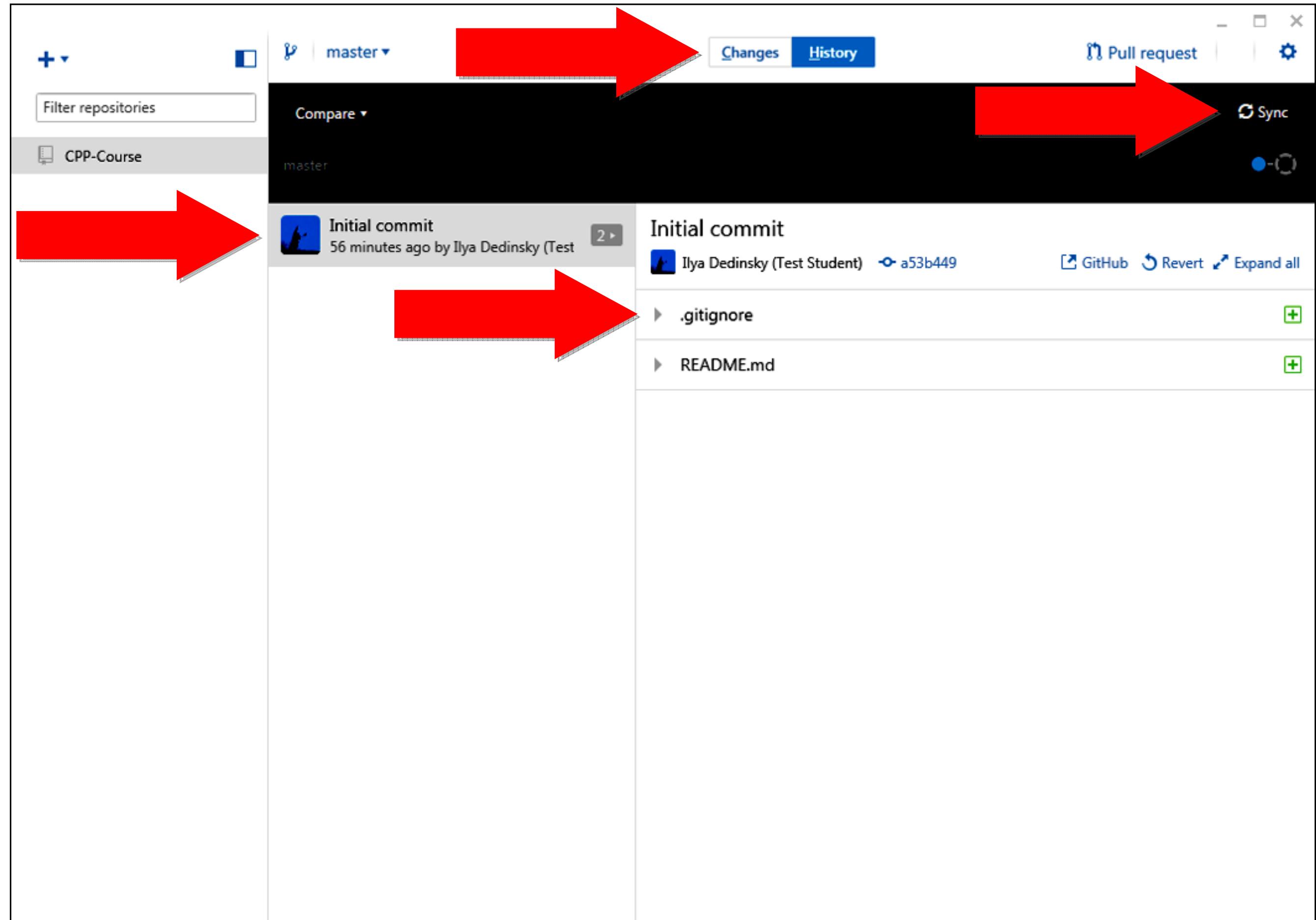


Github Desktop: Клонируем репозиторий с сайта

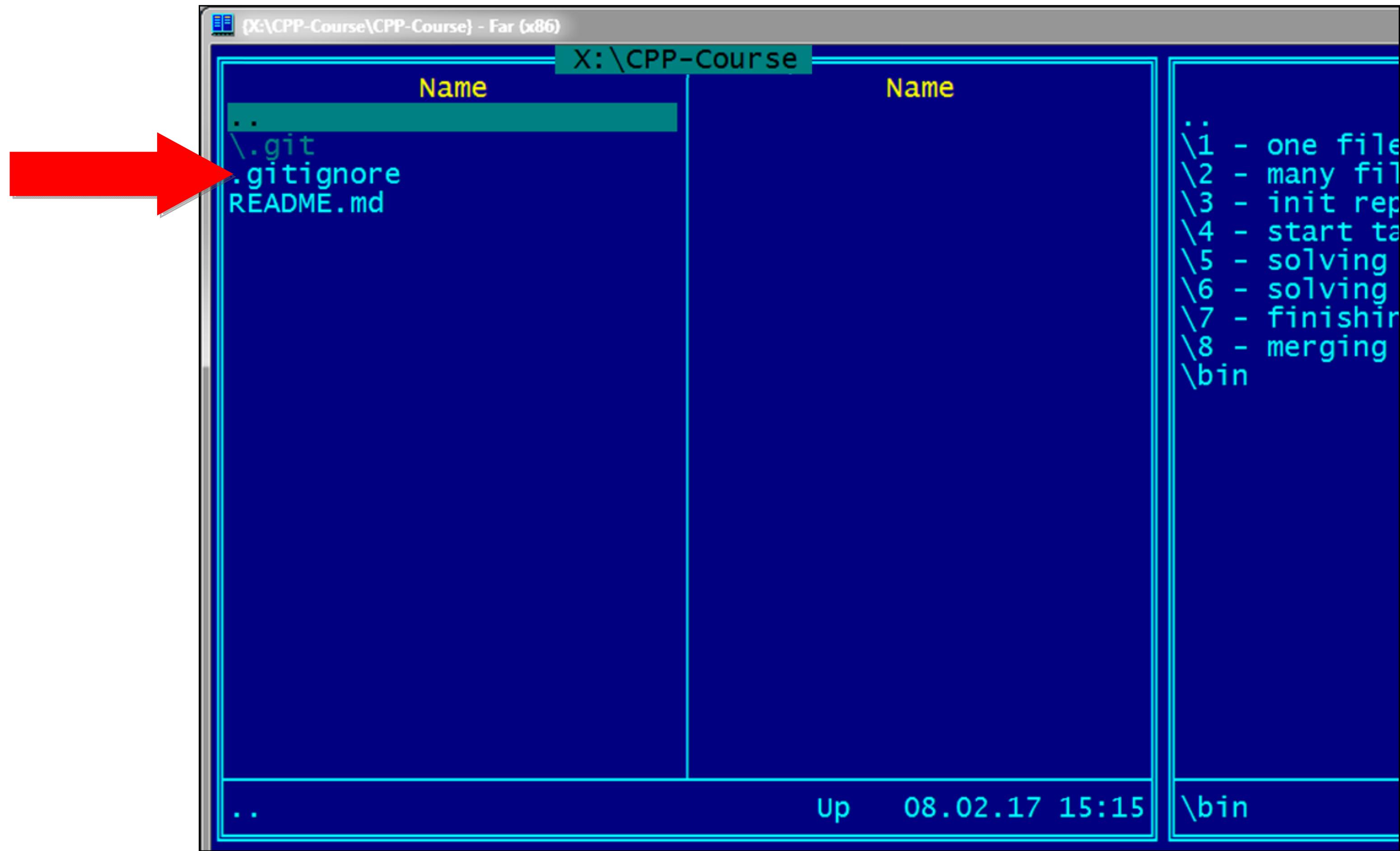


Github Desktop: Локальный репозиторий на диске

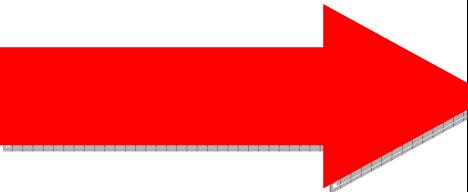
ТЕХНОАТОМ 



Github Desktop: Локальный репозиторий на диске



Github Desktop: Локальный репозиторий, .gitignore

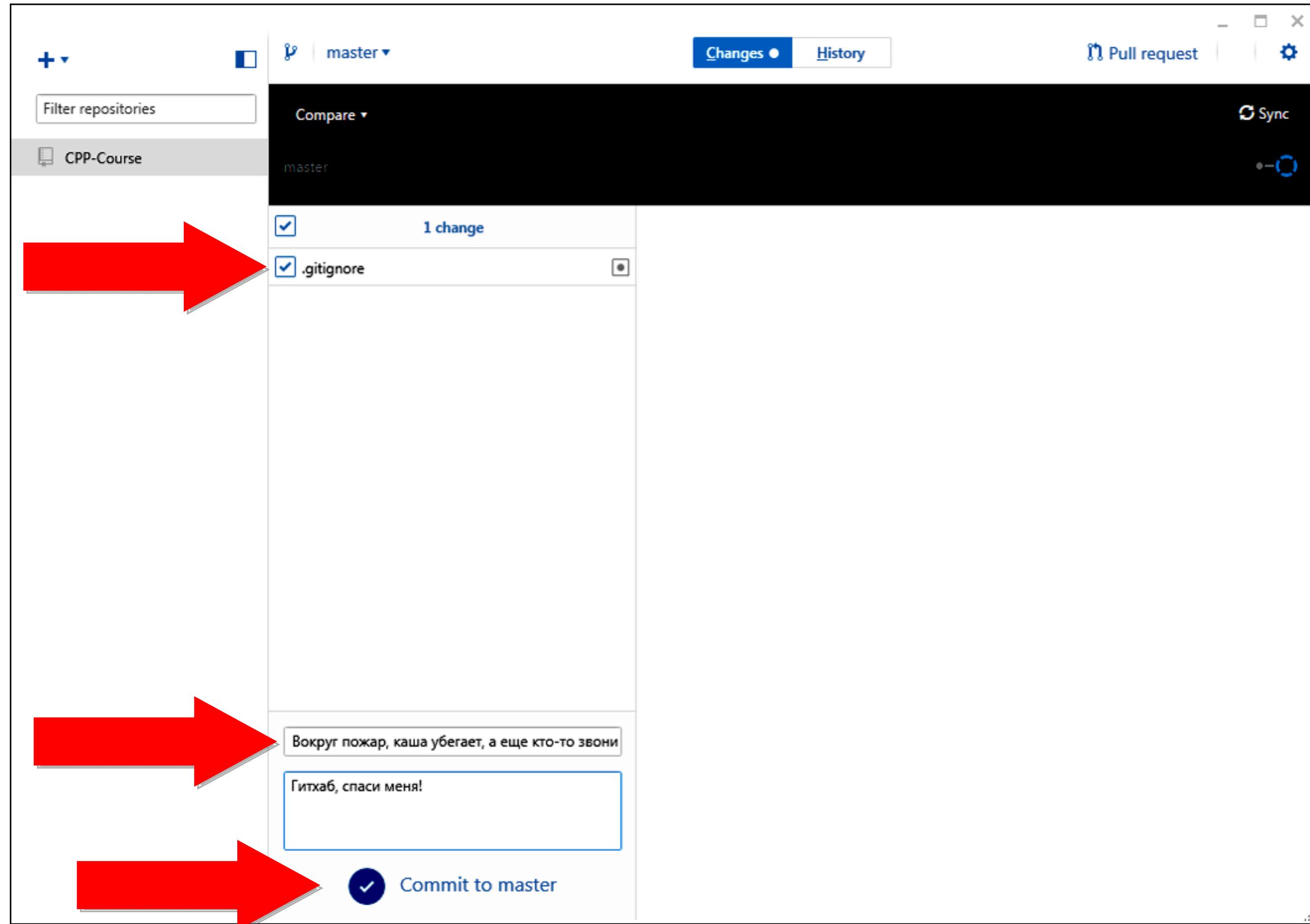


```
# FAKE - F# Make
.fake/

# JetBrains Rider
.idea/
*.sln.iml

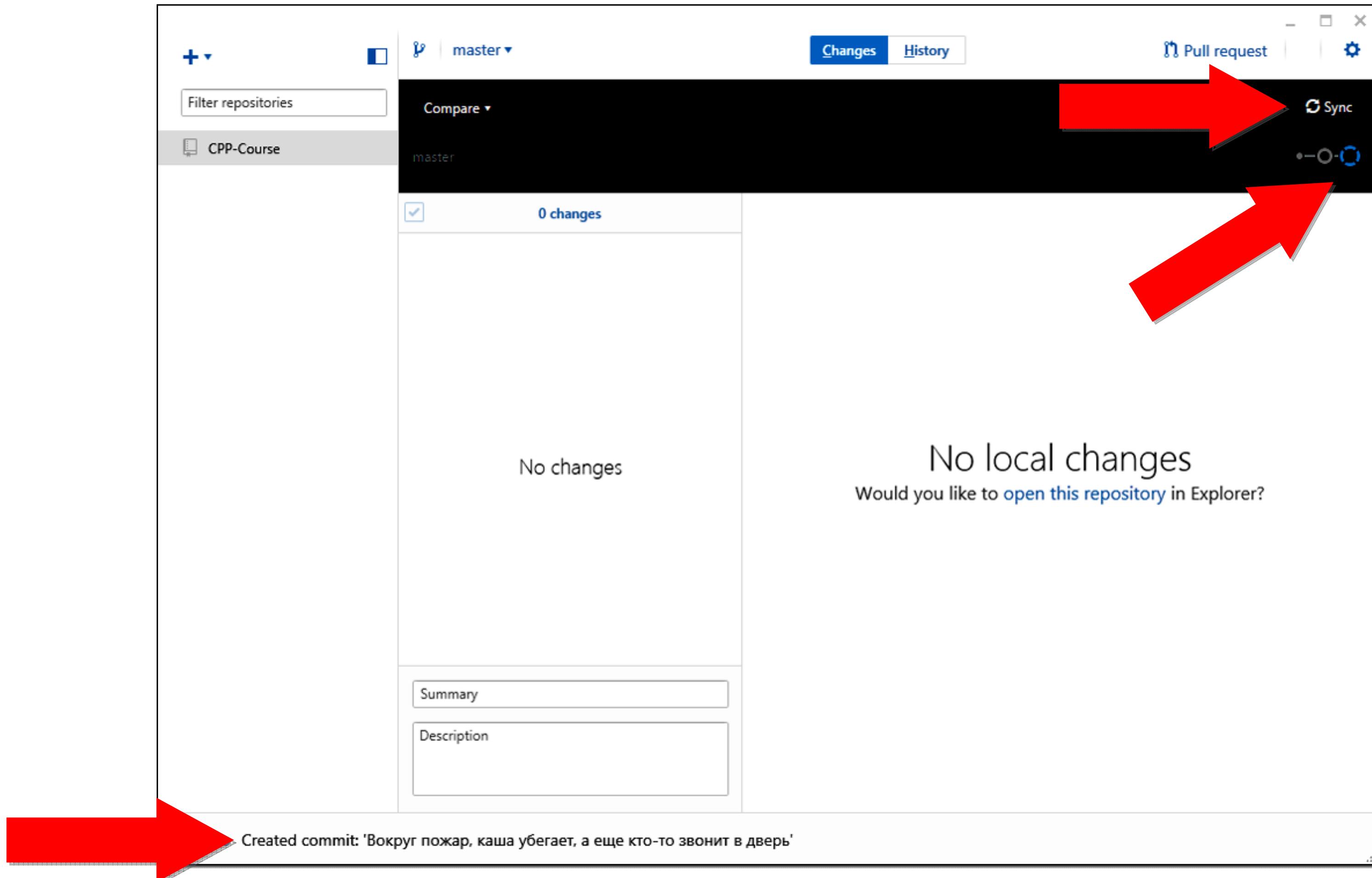
# CodeBlocks
*.save
*.bak
```

Github Desktop: Первый коммит!

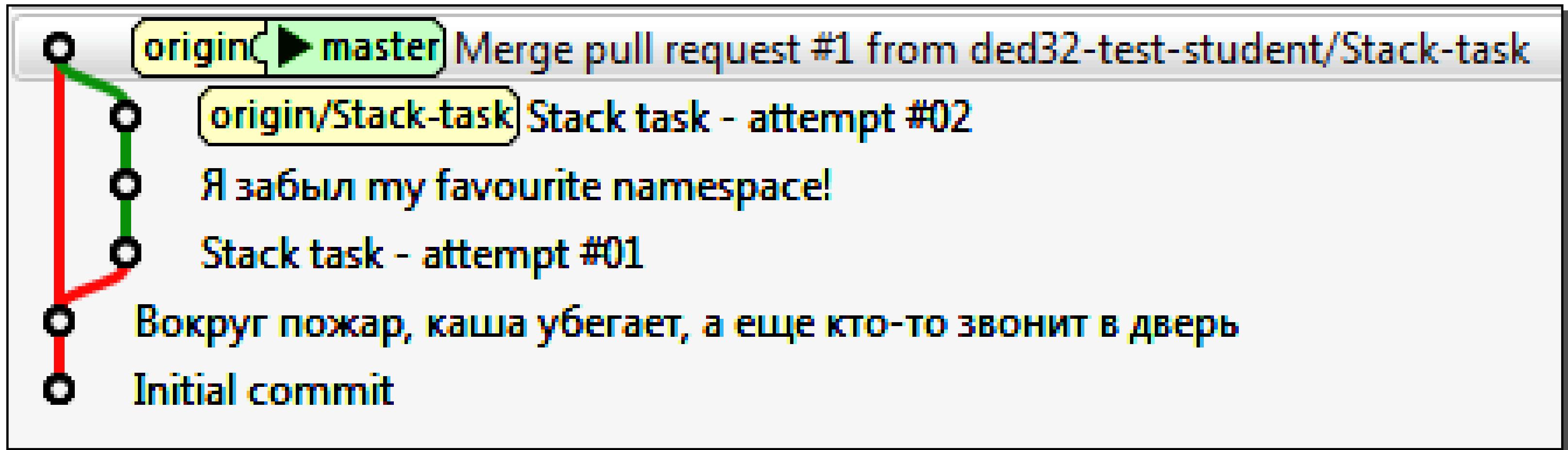


Github Desktop: Первый коммит успешен! (Ура)

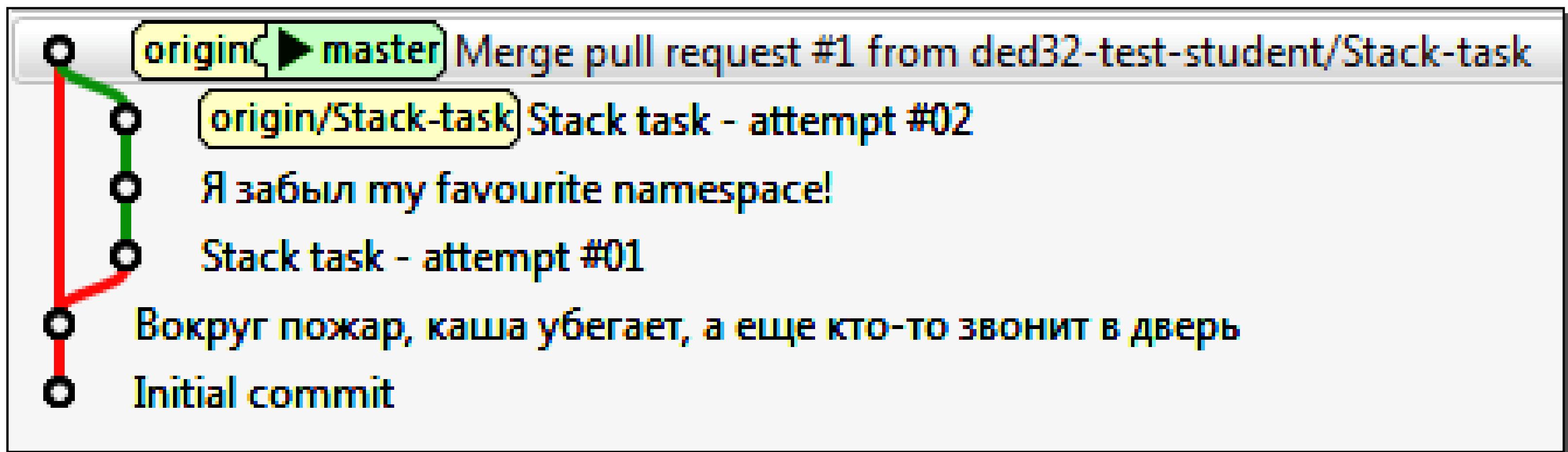
ТЕХНОАТОМ



- Master – главная ветка, в ней все всегда отлажено и работает :)
- Stack-task – ветка текущего задания (чтобы не портить Master)
- Origin – обобщенное имя для репозиториев на сервере

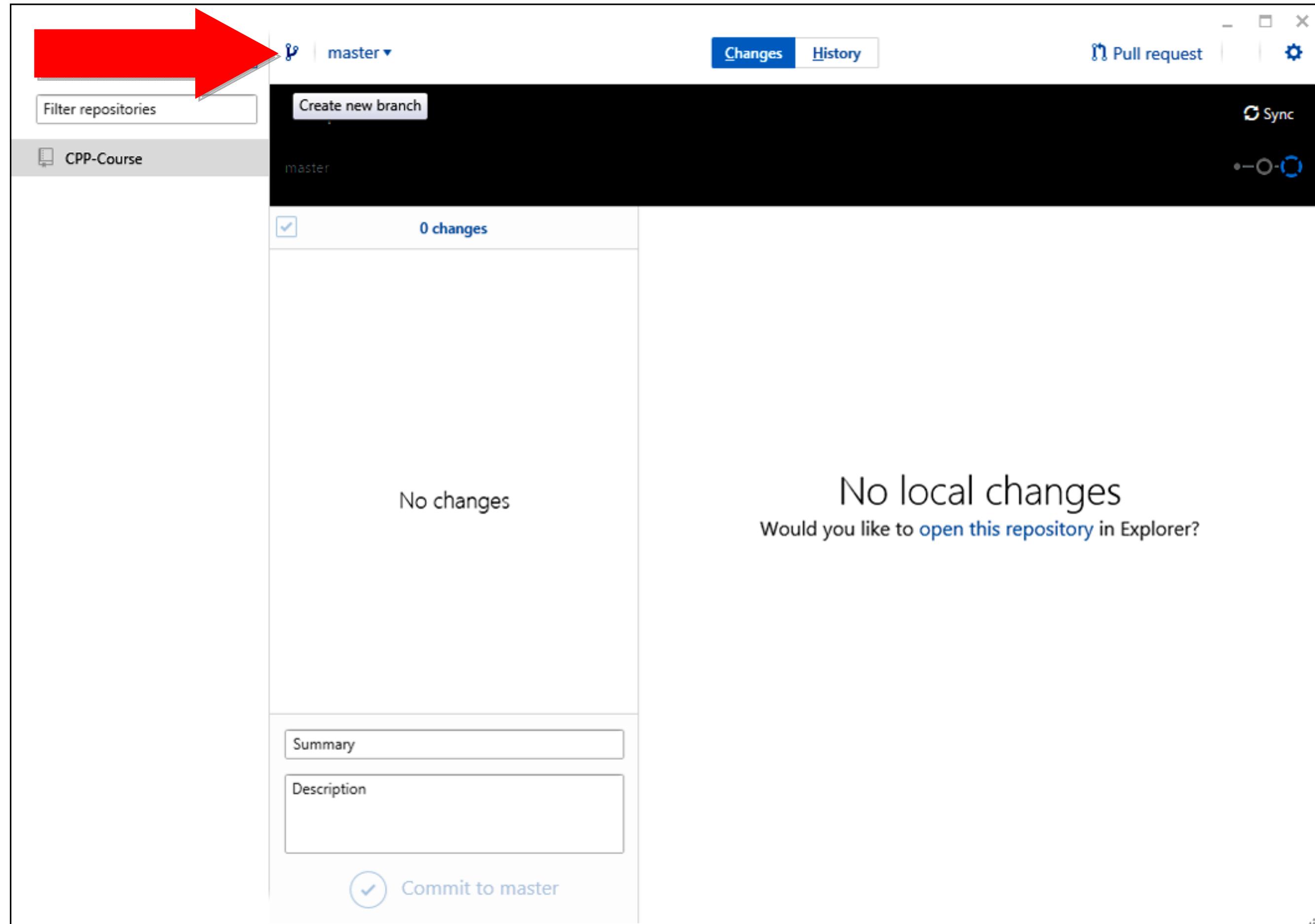


- ~~В любой непонятной ситуации~~ Получив задание (запланировав фичу, обнаружив баг) → делай новую ветку
- Пока не уверен → работай в созданной ветке
- Сделал → отправь pull request ментору
- Работа одобрена → слей (merge) ветку с Master



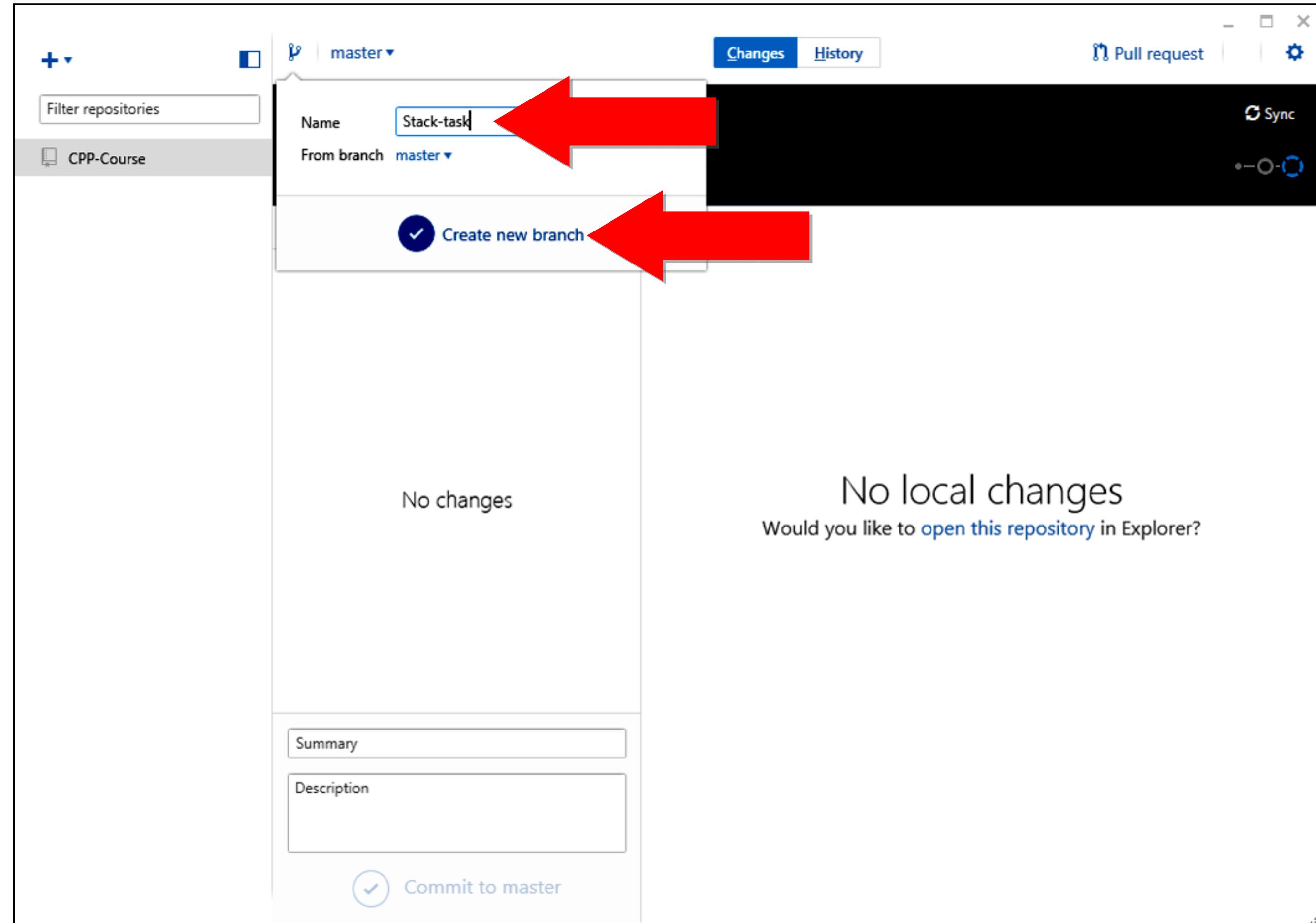
Github Desktop: Создаем ветку очередной задачи

ТЕХНОАТОМ 



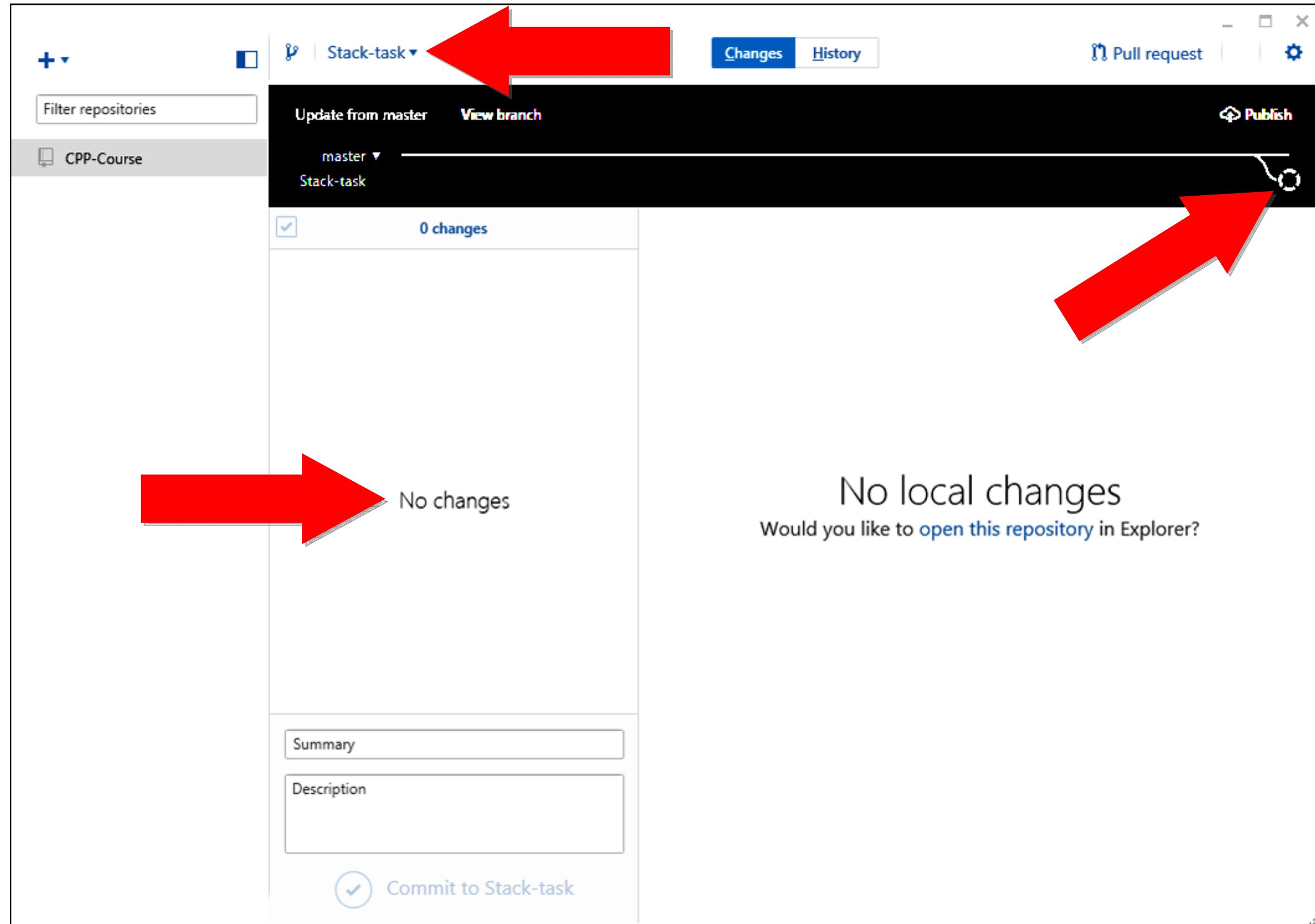
Github Desktop: Создаем ветку очередной задачи

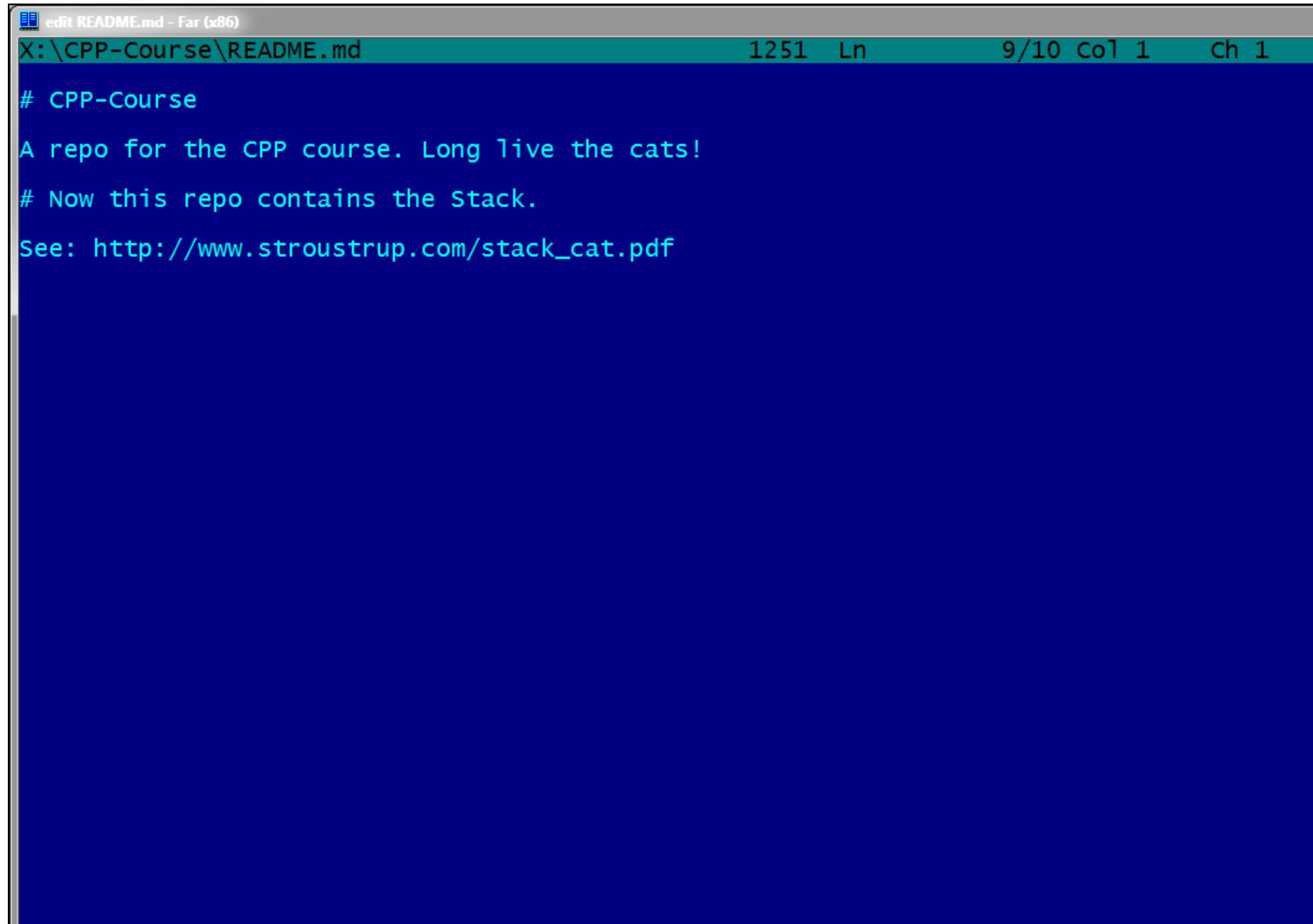
ТЕХНОАТОМ 



Github Desktop: Создаем ветку очередной задачи

ТЕХНОАТОМ 





The screenshot shows a window titled "edit README.md - Far (x86)". The status bar at the top indicates the file path "X:\CPP-Course\README.md", line count "1251 Ln", and current position "9/10 Col 1 Ch 1". The main text area contains the following content:

```
# CPP-Course
A repo for the CPP course. Long live the cats!
# Now this repo contains the Stack.
See: http://www.stroustrup.com/stack\_cat.pdf
```

```
#include <stdio.h>

//=====

#define ASSERT_OK()  if (!ok()) { dump(); assert (!"stack Error"); }

//=====

class CStack
{
public:

    bool ok() const;
    bool dump() const;

    bool push (int value);
    int pop();

    int clear();
    int size() const;

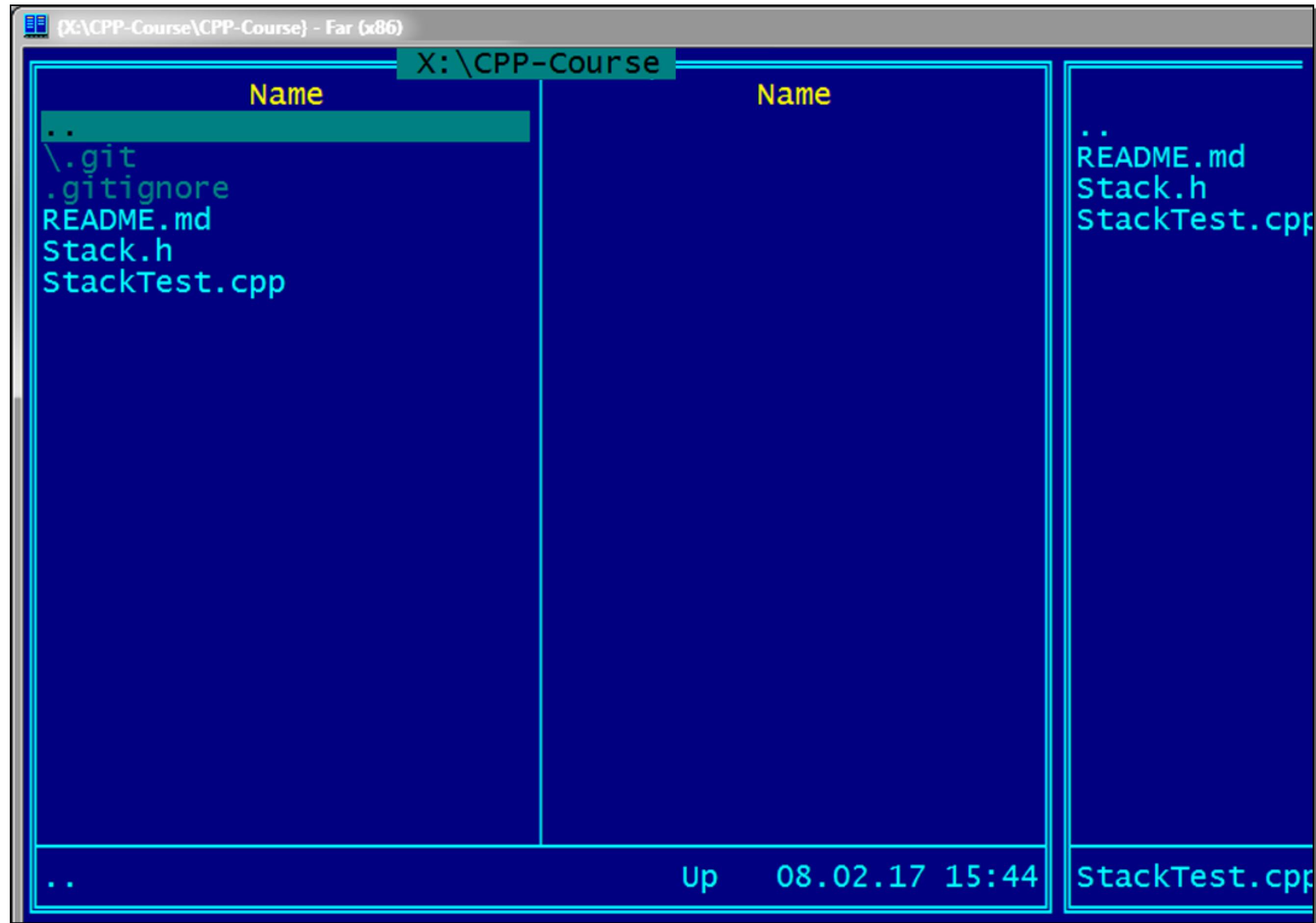
    static const int CStackCapacity = 100;

private:

    int data_ [CStackCapacity] = {};
    int size_
        = 0;

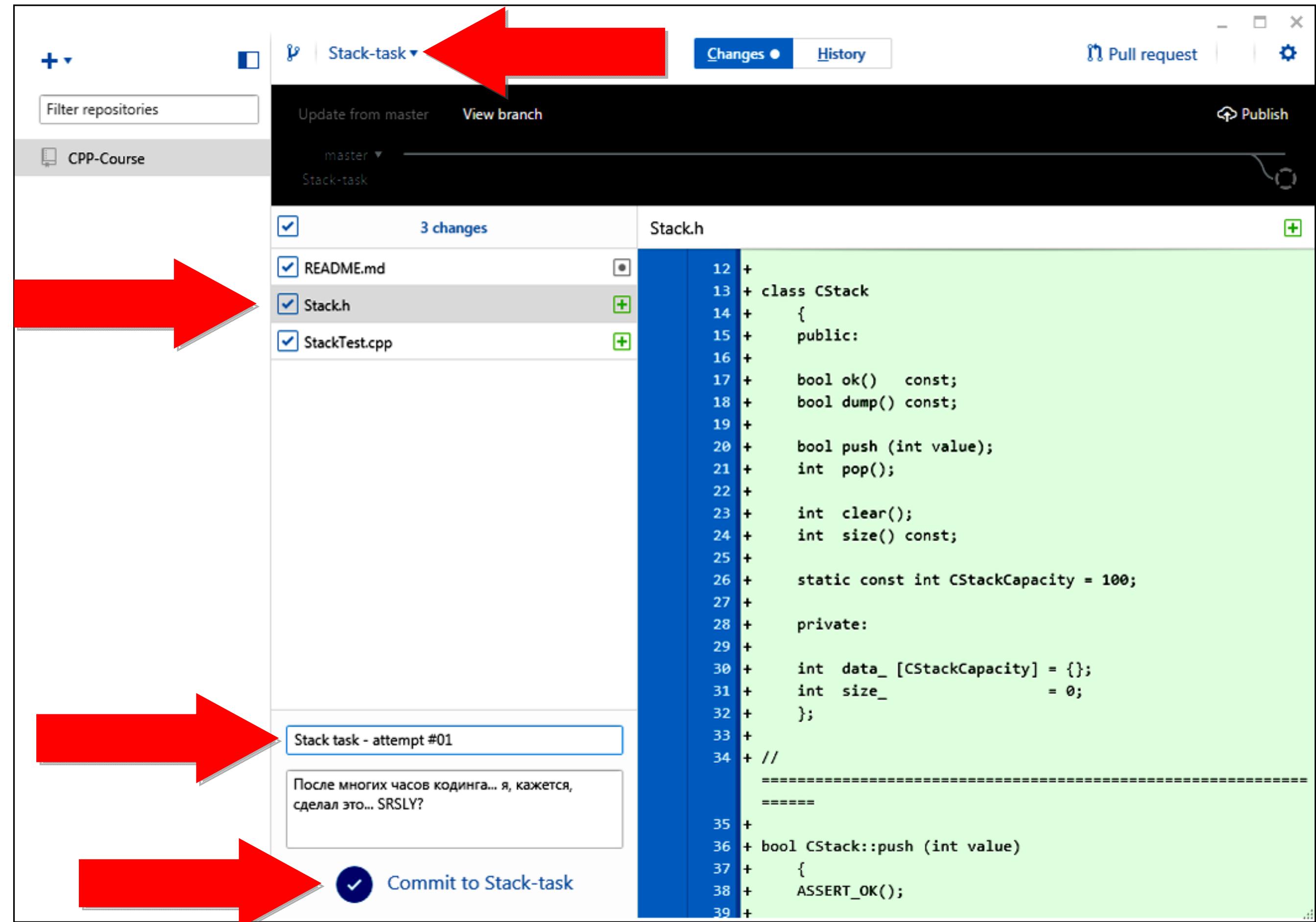
//=====
```

Github Desktop: Работаем в ветке задачи



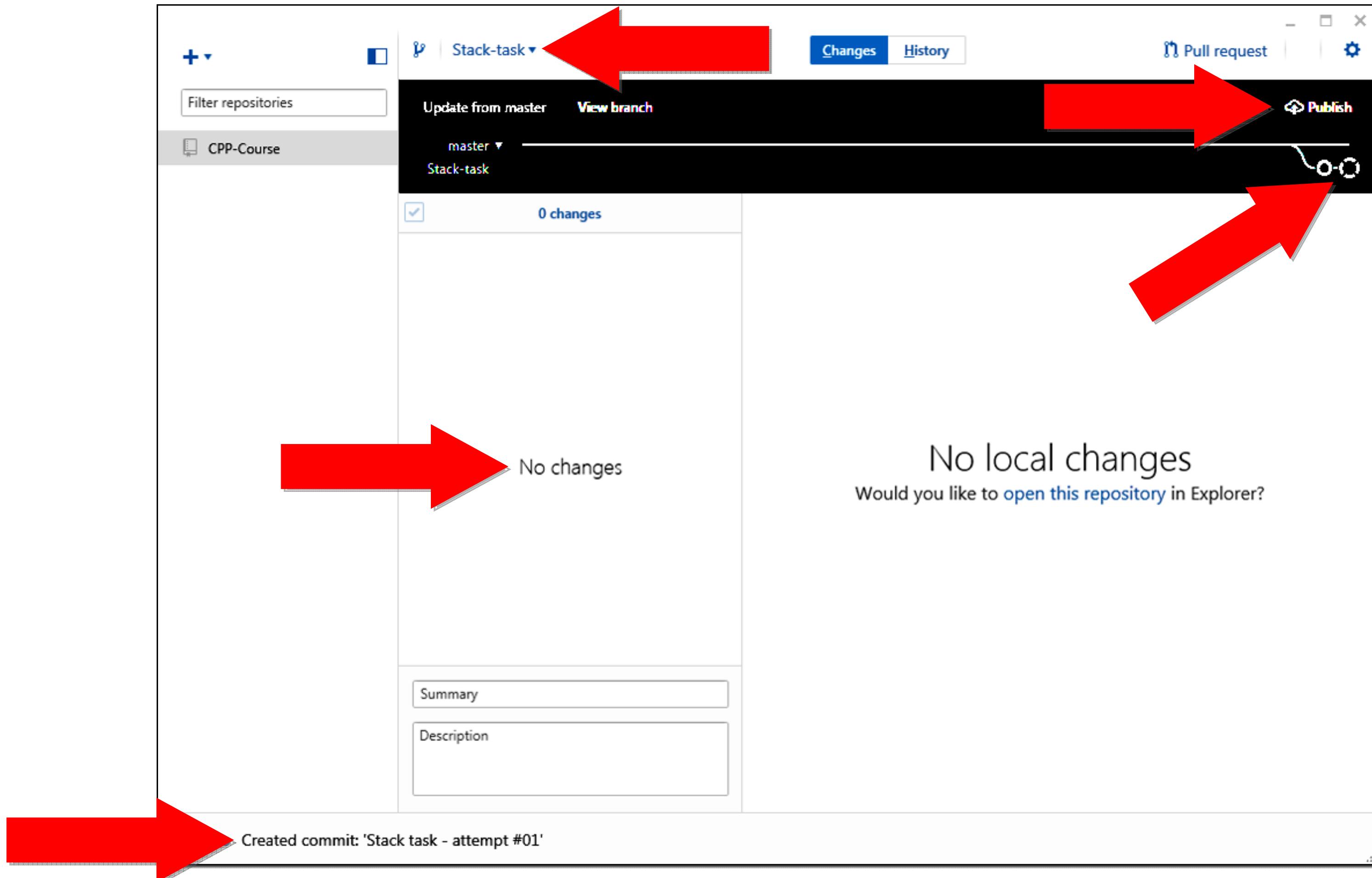
Github Desktop: Второй коммит (в ветку задачи)

ТЕХНОАТОМ



Github Desktop: Второй коммит (в ветку задачи)

ТЕХНОАТОМ





```
#include <stdio.h>

//=====

#define ASSERT_OK()  if (!ok()) { dump(); assert (!"stack Error"); }

//=====

namespace Meow
{
    //=====

    class CStack
    {
        public:

            bool ok() const;
            bool dump() const;

            bool push (int value);
            int pop();

            int clear();
            int size() const;

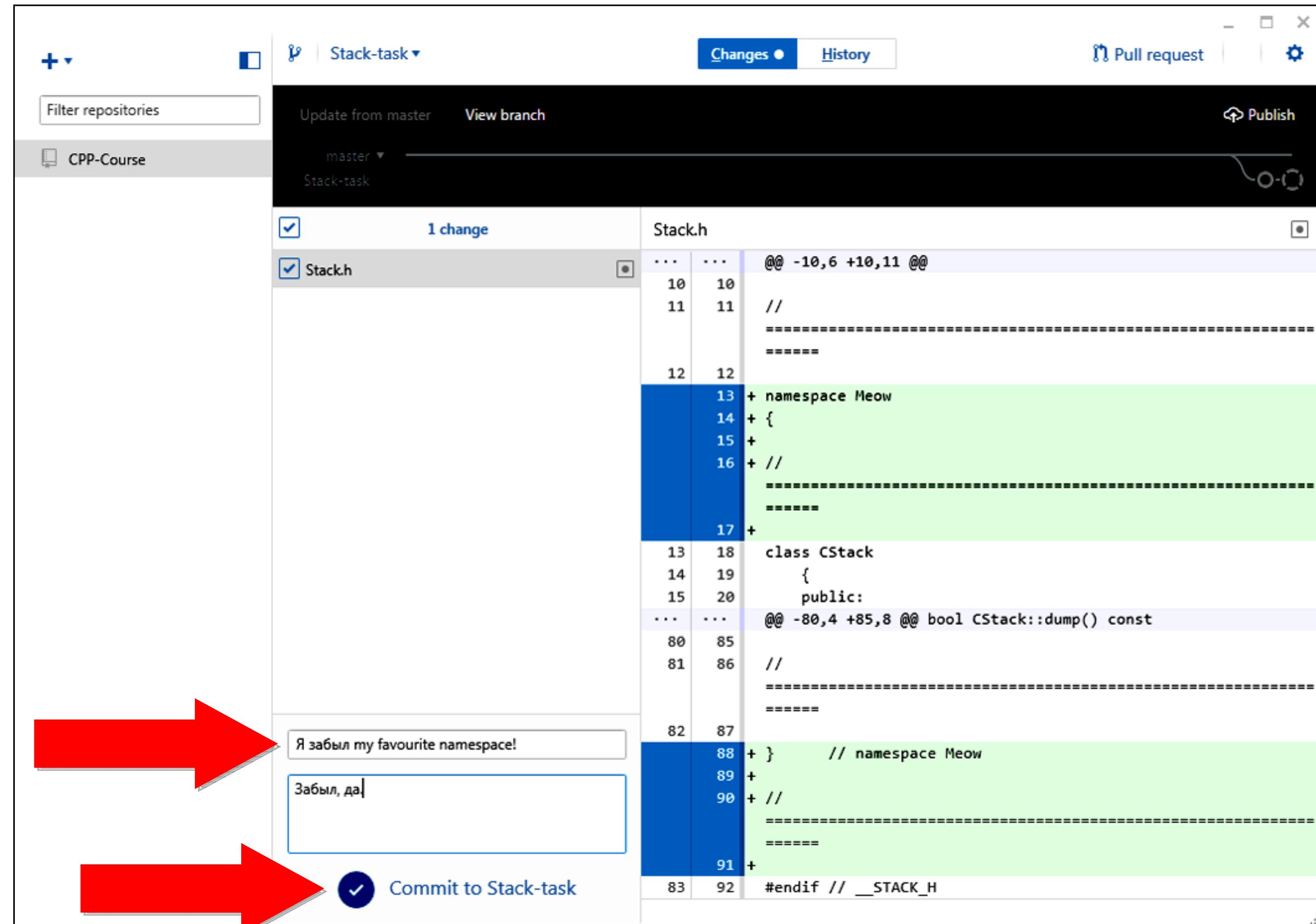
            static const int cStackCapacity = 100;

        private:

            int data_ [cStackCapacity] = {};
            int size_ = 0;
    };
}
```

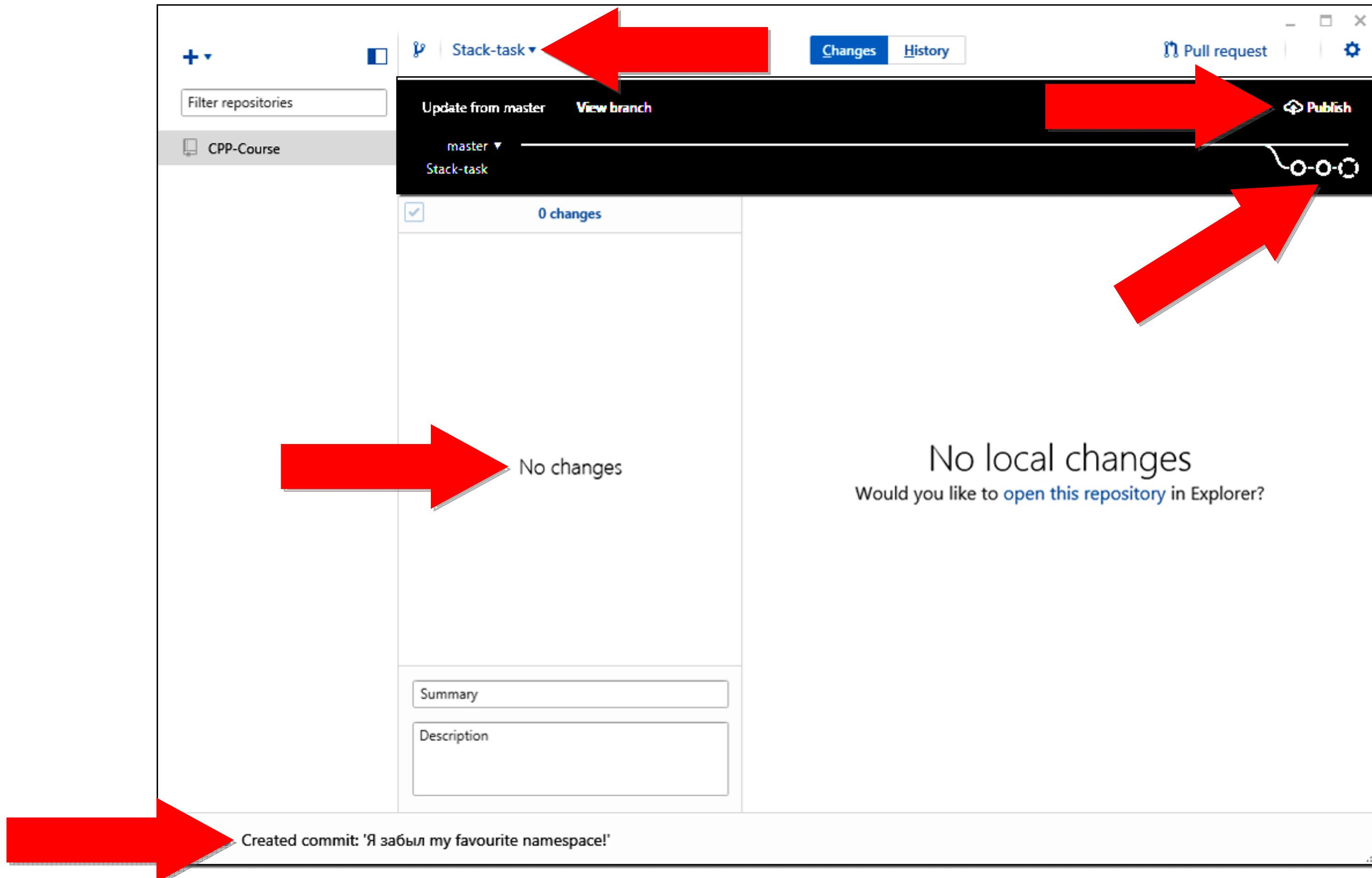
Github Desktop: Третий коммит (в ветку задачи)

ТЕХНОАТОМ

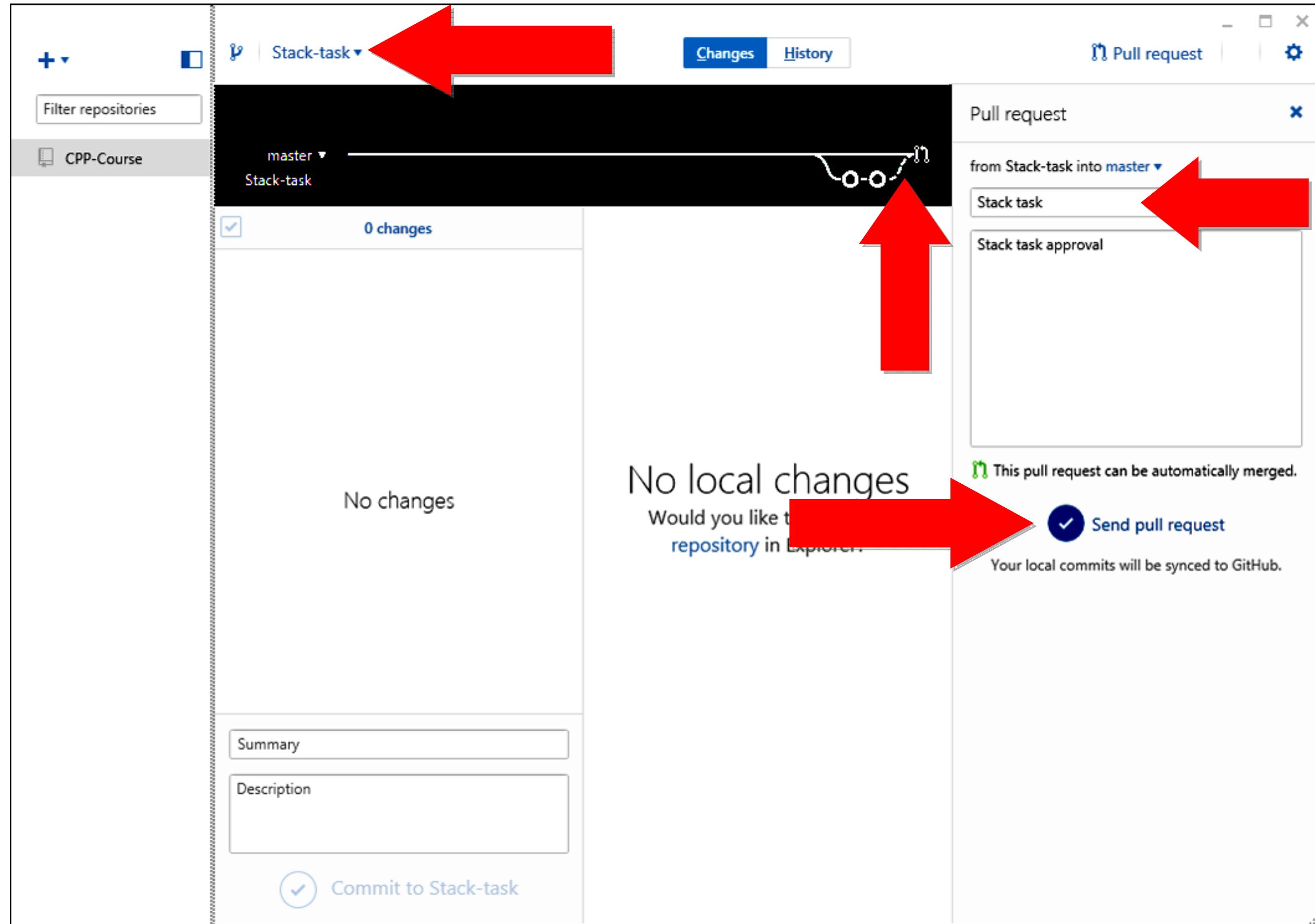


Github Desktop: Третий коммит (в ветку задачи)

ТЕХНОАТОМ



Github Desktop: Создаем pull request



Github Desktop: Pull request создан

TEXHOATOM



A screenshot of the Github Desktop application interface. At the top, the repository 'Stack-task' is selected. A large red arrow points from the top center towards the repository name. In the main area, a message says 'No local changes' and asks if you want to open the repository in Explorer. To the right, there's a sidebar titled 'Pull request' with a status icon (two interlocking arrows) and the text 'Pull request created' followed by a small emoji. A red arrow also points upwards from the bottom right towards the sidebar. At the bottom left, there's a 'Commit to Stack-task' button.

Stack-task

Changes History

Pull request

No local changes
Would you like to [open this repository](#) in Explorer?

Pull request created

View it on GitHub

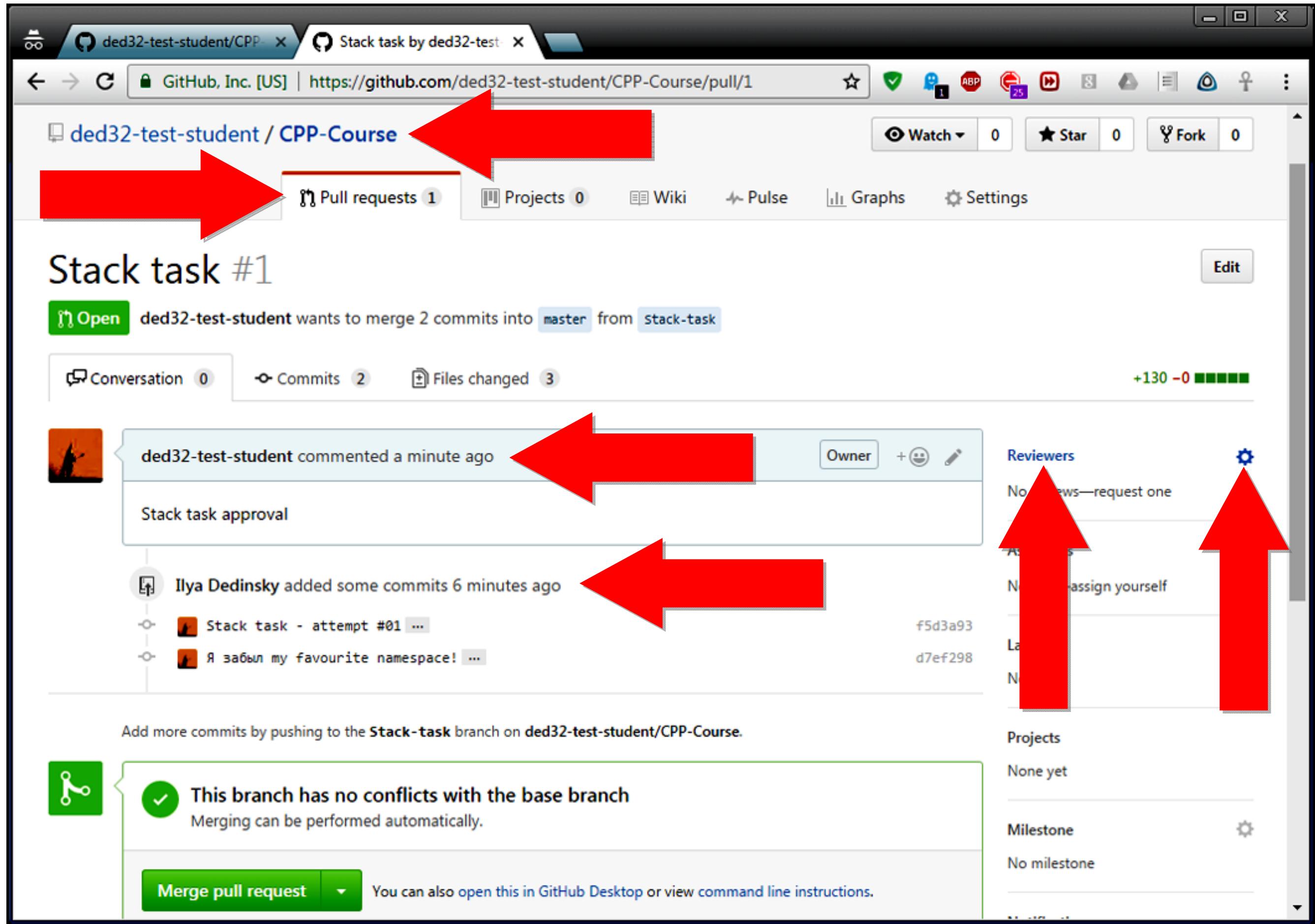
No changes

Summary

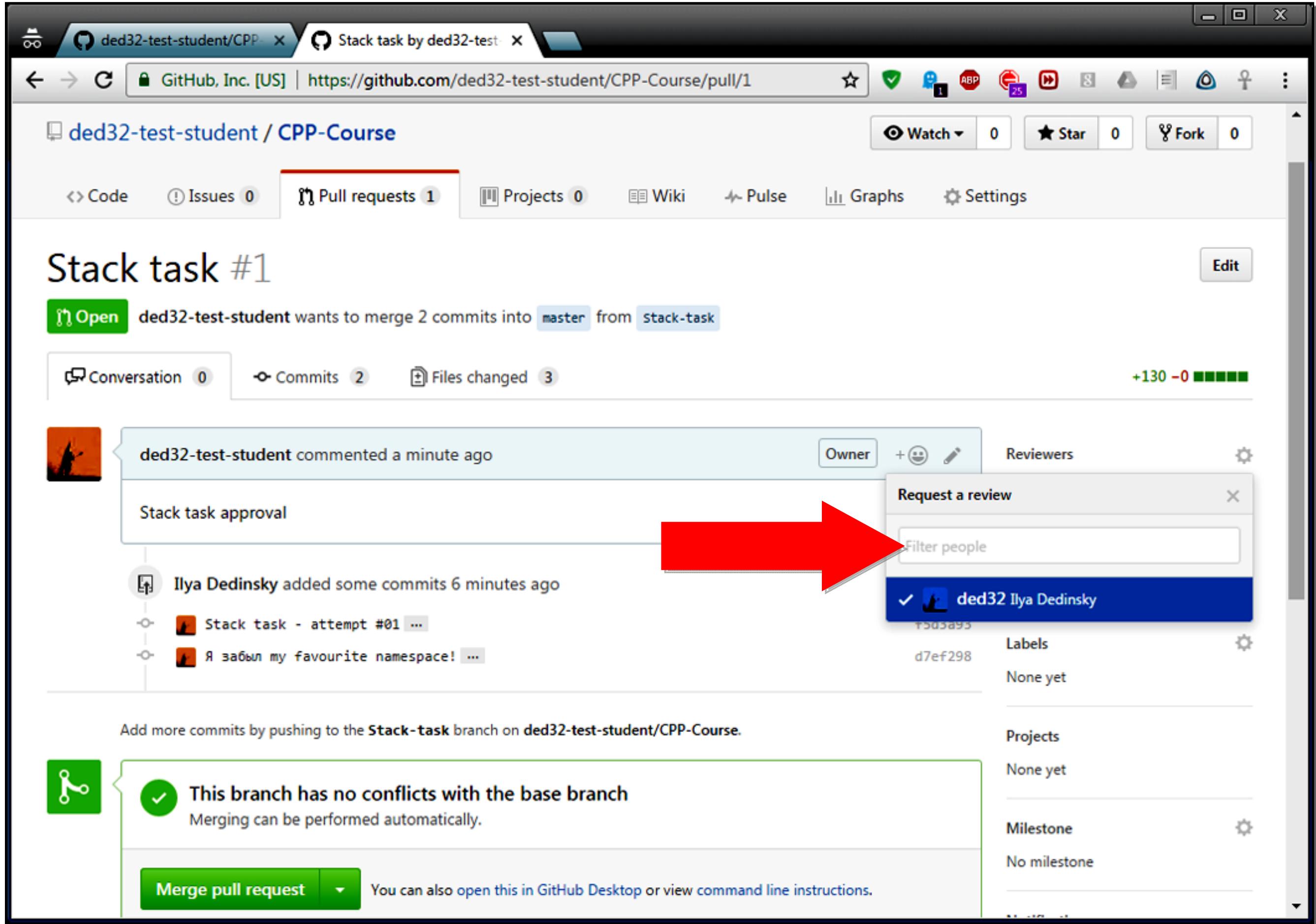
Description

Commit to Stack-task

Pull request на сайте



Pull request на сайте, выбираем ревьювера



The screenshot shows a GitHub pull request page for a repository named 'ded32-test-student / CPP-Course'. The pull request is titled 'Stack task #1' and is in an 'Open' state. It shows that 'ded32-test-student' wants to merge two commits from the 'Stack-task' branch into the 'master' branch.

A red arrow points to the 'Request a review' section on the right side of the page. This section includes a 'Filter people' input field, a list of reviewers (with 'ded32 Ilya Dedinsky' selected), and sections for 'Labels' (None yet), 'Projects' (None yet), and 'Milestone' (No milestone).

The main content area displays commit history:

- ded32-test-student commented a minute ago: Stack task approval
- Ilya Dedinsky added some commits 6 minutes ago:
 - Stack task - attempt #01 ...
 - Я забыл my favourite namespace! ...

Below the commit history, there is a note: "Add more commits by pushing to the Stack-task branch on ded32-test-student / CPP-Course." A green button labeled "Merge pull request" is visible at the bottom left.

Pull request на сайте, выбираем ревьювера

TEXHOATOM

The screenshot shows a GitHub pull request page for a repository named 'ded32-test-student / CPP-Course'. The pull request is titled 'Stack task #1' and is in an 'Open' state. It shows that 'ded32-test-student' wants to merge two commits from the 'Stack-task' branch into the 'master' branch. The pull request has 130 approvals and 0 rejections. The commit history includes a comment from 'ded32-test-student' and two commits from 'Ilya Dedinsky'. A red arrow points to the 'Reviewers' section on the right, which lists 'ded32' as the reviewer. Other sections shown include 'Assignees' (no one assigned), 'Labels' (None yet), 'Projects' (None yet), and 'Milestone' (No milestone).

Stack task #1

Open ded32-test-student wants to merge 2 commits into master from Stack-task

Conversation 0 Commits 2 Files changed 3 +130 -0

ded32-test-student commented 2 minutes ago

Stack task approval

Ilya Dedinsky added some commits 7 minutes ago

Stack task - attempt #01 ... f5d3a93

Я забыл my favourite namespace! ... d7ef298

ded32-test-student requested a review from ded32 just now

Add more commits by pushing to the Stack-task branch on ded32-test-student / CPP-Course.

This branch has no conflicts with the base branch Merging can be performed automatically.

Reviewers ded32

Assignees

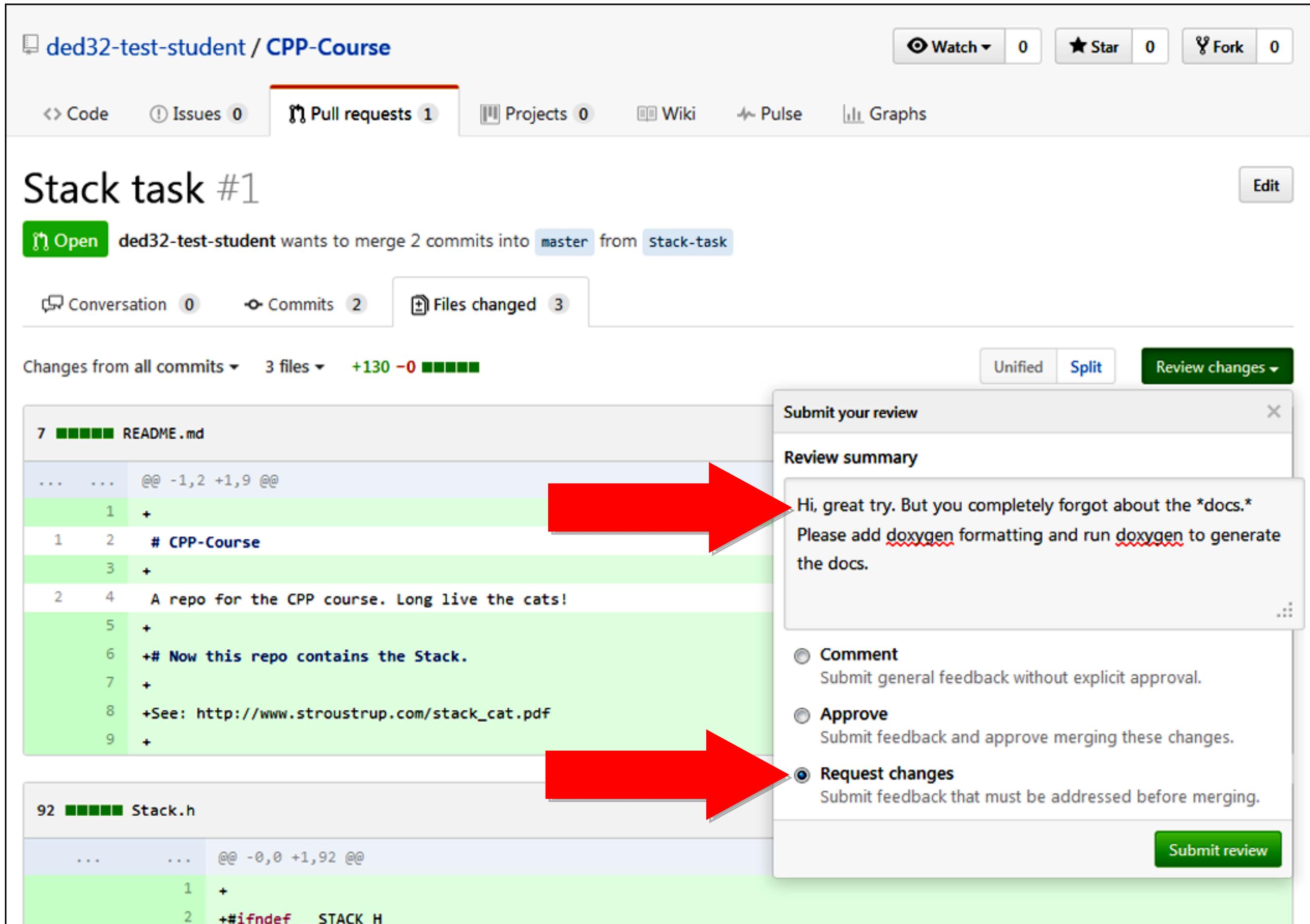
Labels None yet

Projects

Milestone

Pull request, ревьювер заревьювил ревьюемое

TEXHOATOM 



The screenshot shows a GitHub pull request page for the repository `ded32-test-student / CPP-Course`. The pull request, titled "Stack task #1", has 1 commit and 3 files changed. The review summary highlights a missing documentation section:

Hi, great try. But you completely forgot about the *docs.* Please add doxygen formatting and run doxygen to generate the docs.

The review interface includes options for Comment, Approve, or Request changes, with Request changes selected. A large red arrow points from the "Review summary" text to the "Request changes" button, and another red arrow points from the "Comment" text to the "Comment" radio button.

```
diff --git a/README.md b/README.md
index 12345..67890 100644
--- a/README.md
+++ b/README.md
@@ -1,2 +1,9 @@
 1 +
 2 # CPP-Course
 3 +
 4 A repo for the CPP course. Long live the cats!
 5 +
 6 +## Now this repo contains the Stack.
 7 +
 8 +See: http://www.stroustrup.com/stack_cat.pdf
 9 +
```

```
diff --git a/Stack.h b/Stack.h
index 12345..67890 100644
--- a/Stack.h
+++ b/Stack.h
@@ -0,0 +1,92 @@
 1 +
 2 +#ifndef STACK_H
```

Stack task #1

[Open](#) ded32-test-student wants to merge 2 commits into `master` from `stack-task`

[Conversation 1](#) [Commits 2](#) [Files changed 3](#)

 ded32-test-student commented 6 minutes ago

Stack task approval

 Ilya Dedinsky added some commits 11 minutes ago

-  Stack task - attempt #01 ... f5d3a93
-  Я забыл my favourite namespace! ... d7ef298

 ded32-test-student requested a review from ded32 4 minutes ago

  ded32 requested changes just now

[View changes](#)

Hi, great try. But you completely forgot about the *docs*. Please add doxygen formatting and run doxygen to generate the docs.

Owner +  

Reviewers  ded32

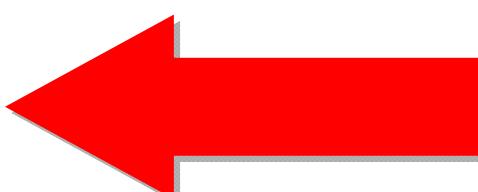
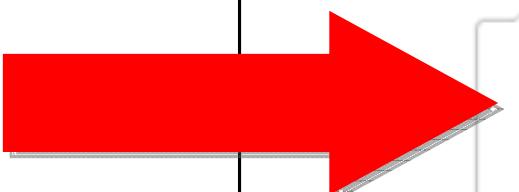
Assignees No one—assigned

Labels None yet

Projects None yet

Milestone No milestone

Notifications 



Pull request, дадим ревьюверу что он хочет (иначе не отстанет)

```
//===@file Stack.h
//{
// @mainpage
//
// The МЕРНІ Nuclear Stack Library
//
// See the files:
// - Stack.h
// - StackTest.cpp
//
// @note Please return (the_books) in the library before end of semester!
//       otherwise, rector's reactor may explode.
//
// @version 1.0
//
// @author (C) Ded, 2017
//}

#ifndef __STACK_H
#define __STACK_H

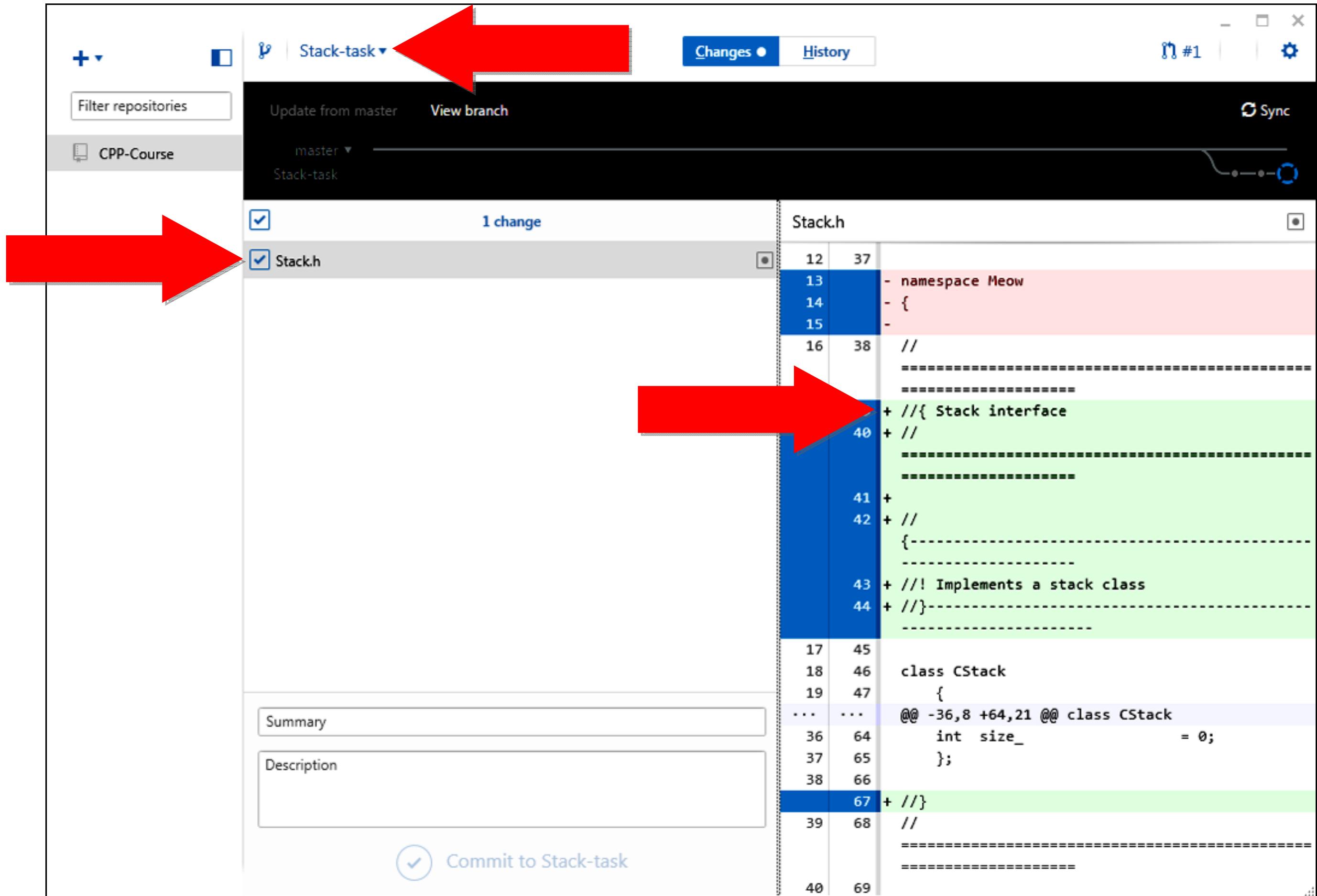
#include <stdio.h>

//=={@ General staff
//=={@ Stack interface
//=={@ Stack implementation
```

Pull request, дадим ревьюверу что он хочет (он настырный)

```
//{-----  
// Adds an element to the stack.  
// @param value A value to be added.  
// @return Operation status.  
//}-----  
  
bool cStack::push (int value)  
{  
    ASSERT_OK();  
  
    // TODO Feed the cats  
  
    ASSERT_OK();  
    return true;  
}  
  
//{-----  
// Removes an element from the stack.  
// @return Value of the element removed.  
//}-----  
  
int cStack::pop()  
{  
    ASSERT_OK();  
  
    // TODO Remove cats from the box (beware!)  
  
    ASSERT_OK();  
    return 0;  
}
```

Pull request, Github Desktop, измененные файлы на компе





The screenshot shows the official Doxygen download page. A large red arrow points to the "Downloads" link in the sidebar, which is currently selected. Another red arrow points to the "doxygen-1.8.13-setup.exe" download link in the Windows distribution section.

Doxygen

Home Downloads Documentation Extensions Support

Doxygen

- About
- Downloads
- Changelog
- Documentation
- Get Involved
- Wish list
- Examples
- Links
- Extensions
- Support
- Report bugs
- Donate

GIT binaries

Windows binaries for the latest tagged releases are sometimes available as well.

Sources and Binaries

Latest release

The latest version of doxygen is 1.8.13 (release date December 29th 2016).

The **source** distribution

doxygen-1.8.13.src.tar.gz (4.7MB) ([ftp](#) | [http](#))

A binary distribution for Linux x86-64

doxygen-1.8.13.linux.bin.tar.gz (16.0MB) ([ftp](#) | [http](#))

Compiled using Ubuntu 14.04 with kernel 3.13.0 and gcc 4.8.2. This archive includes the manual, but not the GUI frontend.

A binary distribution for Windows. All versions of Windows since XP are supported.

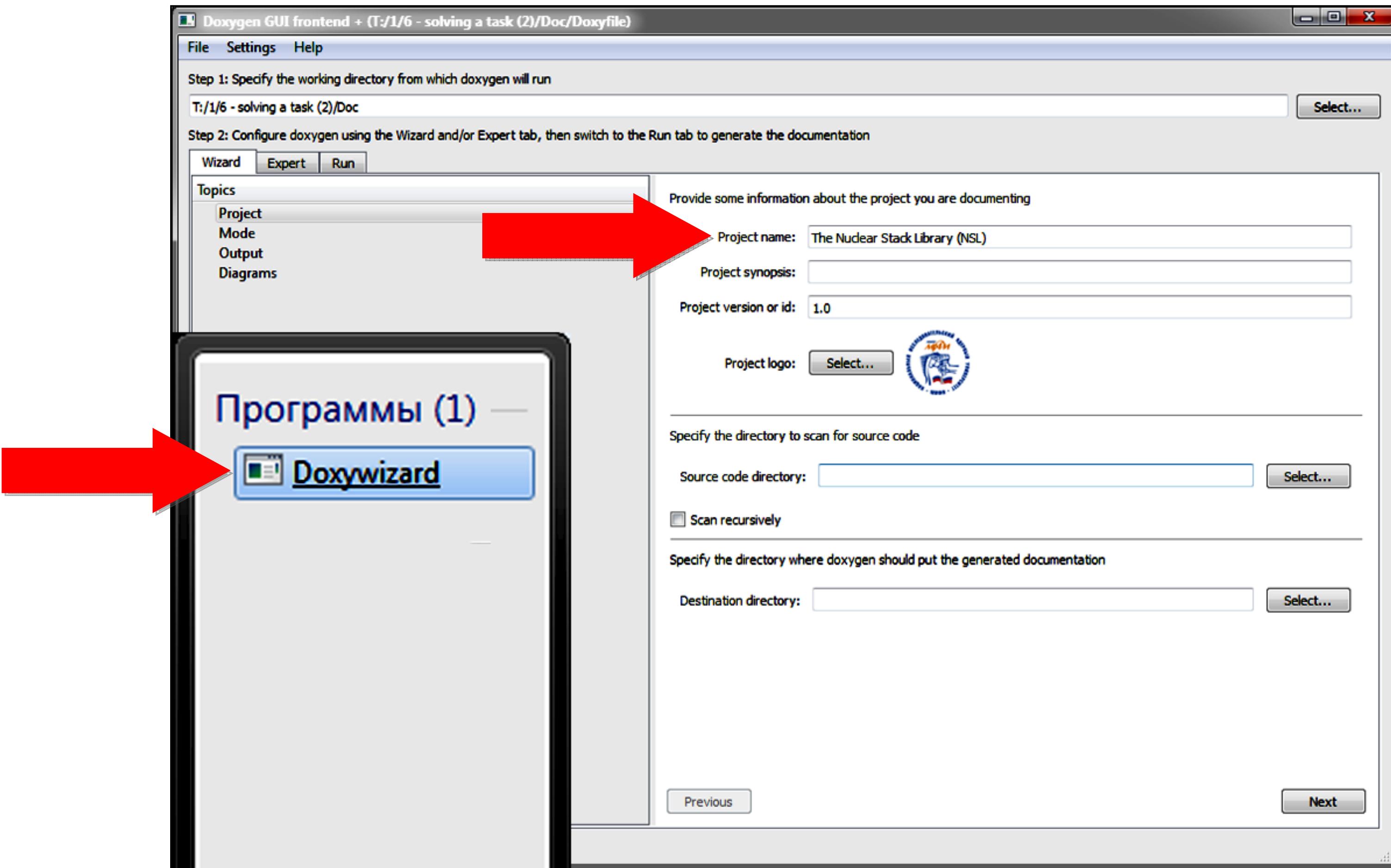
doxygen-1.8.13-setup.exe (24.4MB) ([ftp](#) | [http](#))

This is a self-installing archive that includes the HTML and compressed HTML versions of the GUI frontend. It bundles 32-bit and 64-bit versions of doxygen.exe, and will install the on the OS.

If you are allergic to installers and GUIs, haven't sufficient bandwidth, or don't have admin

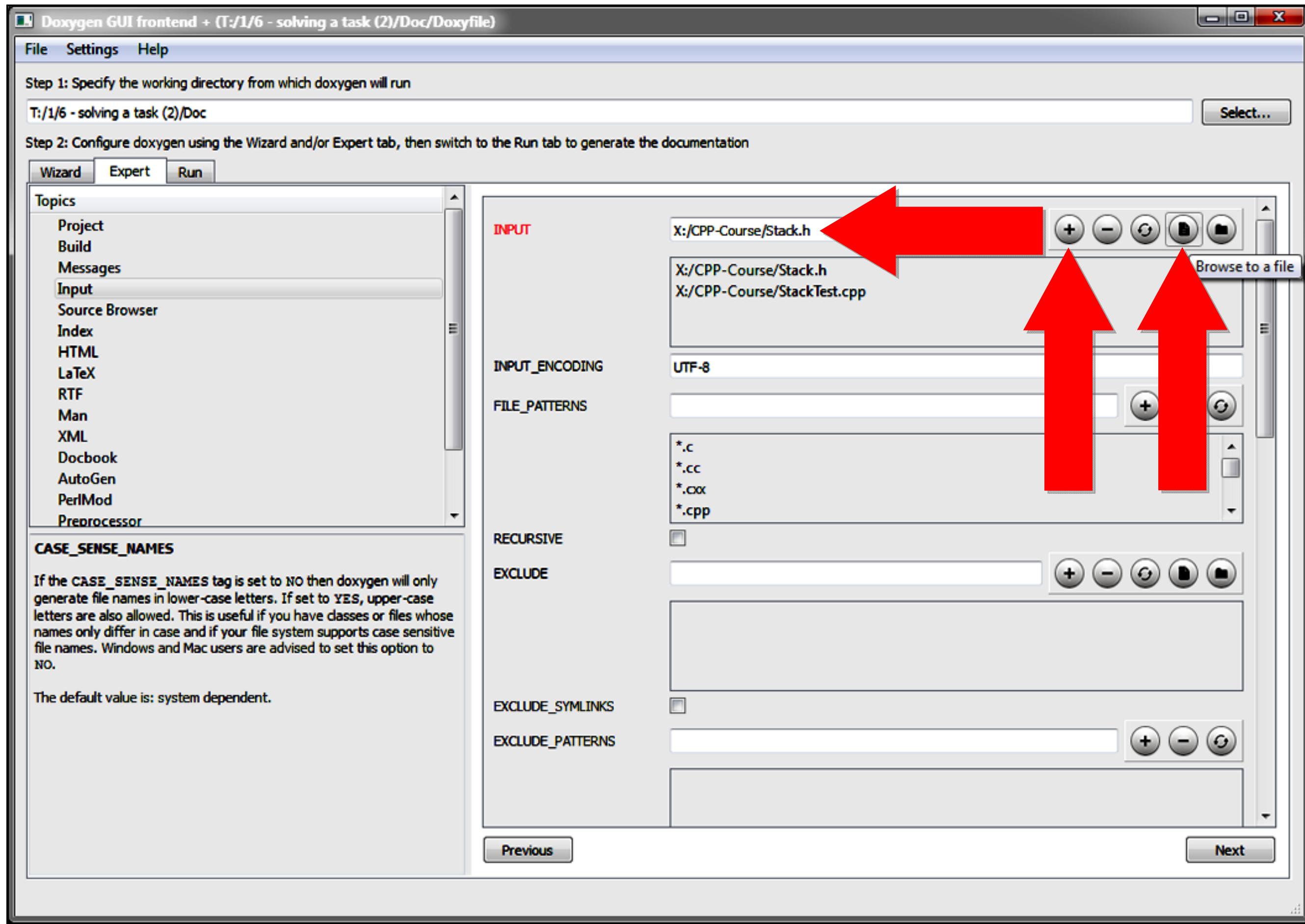
Документация: Создаем проект в Doxywizard

TEXHOATOM 

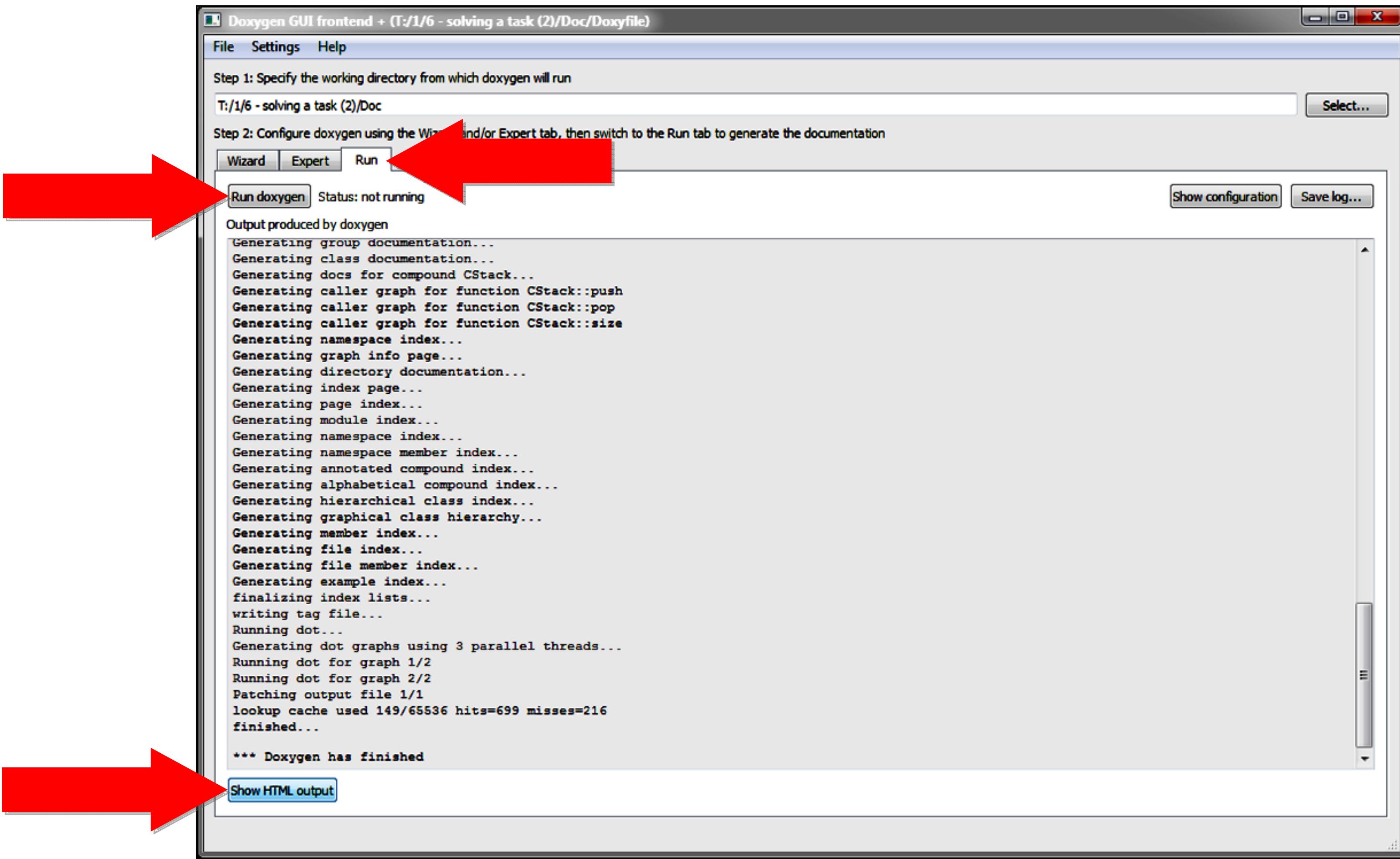


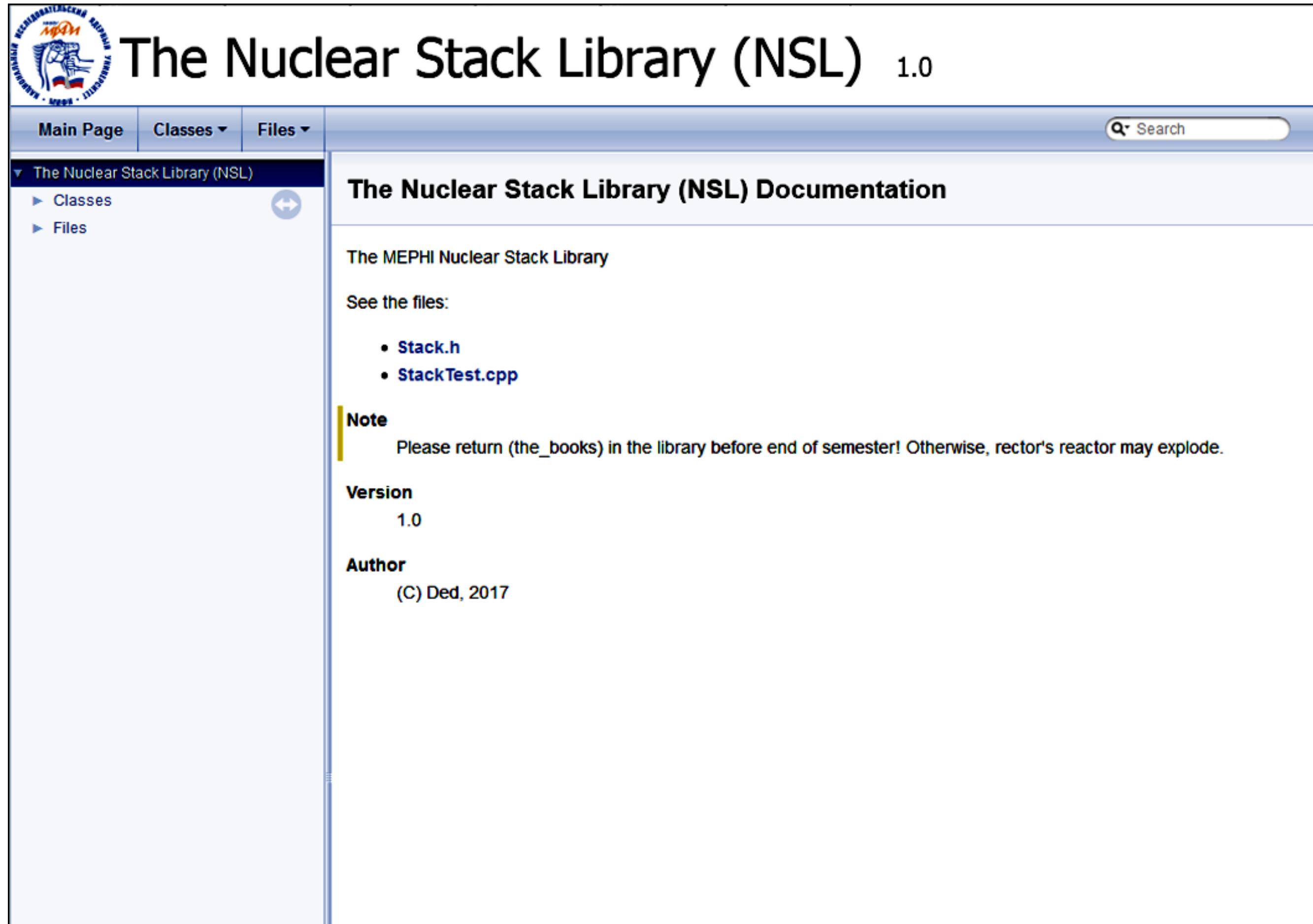
Документация: Настраиваем проект в Doxywizard

TEXHOATOM 



Документация: Компилируем доксигеном





The screenshot shows a documentation page for 'The Nuclear Stack Library (NSL) 1.0'. At the top left is the logo of the Moscow Power Engineering Institute (MEPHI). The main title 'The Nuclear Stack Library (NSL)' is displayed prominently. A navigation bar at the top includes 'Main Page', 'Classes ▾', 'Files ▾', and a search bar. The left sidebar contains a tree view with 'The Nuclear Stack Library (NSL)' expanded, showing 'Classes' and 'Files'. A double-headed arrow icon is next to the tree view. The main content area is titled 'The Nuclear Stack Library (NSL) Documentation'. It includes sections for 'The MEPhI Nuclear Stack Library', 'See the files:' (listing 'Stack.h' and 'StackTest.cpp'), a 'Note' section with a warning about returning books, and sections for 'Version' (1.0) and 'Author' ((C) Ded, 2017).

The Nuclear Stack Library (NSL) 1.0

Main Page Classes ▾ Files ▾ Search

▼ The Nuclear Stack Library (NSL)

▶ Classes

▶ Files

The Nuclear Stack Library (NSL) Documentation

The MEPhI Nuclear Stack Library

See the files:

- [Stack.h](#)
- [StackTest.cpp](#)

Note

Please return (the_books) in the library before end of semester! Otherwise, rector's reactor may explode.

Version

1.0

Author

(C) Ded, 2017



The Nuclear Stack Library (NSL) 1.0

Main Page Classes ▾ Files ▾

Search

Public Member Functions | Static Public Attributes | Private Attributes | List of all members

▼ The Nuclear Stack Library (NSL) 

 ▼ Classes

 ▼ Class List

 ▶ CStack

 Class Index

 ▶ Class Members

 ▶ Files

CStack Class Reference

Implements a stack class. More...

#include <**Stack.h**>

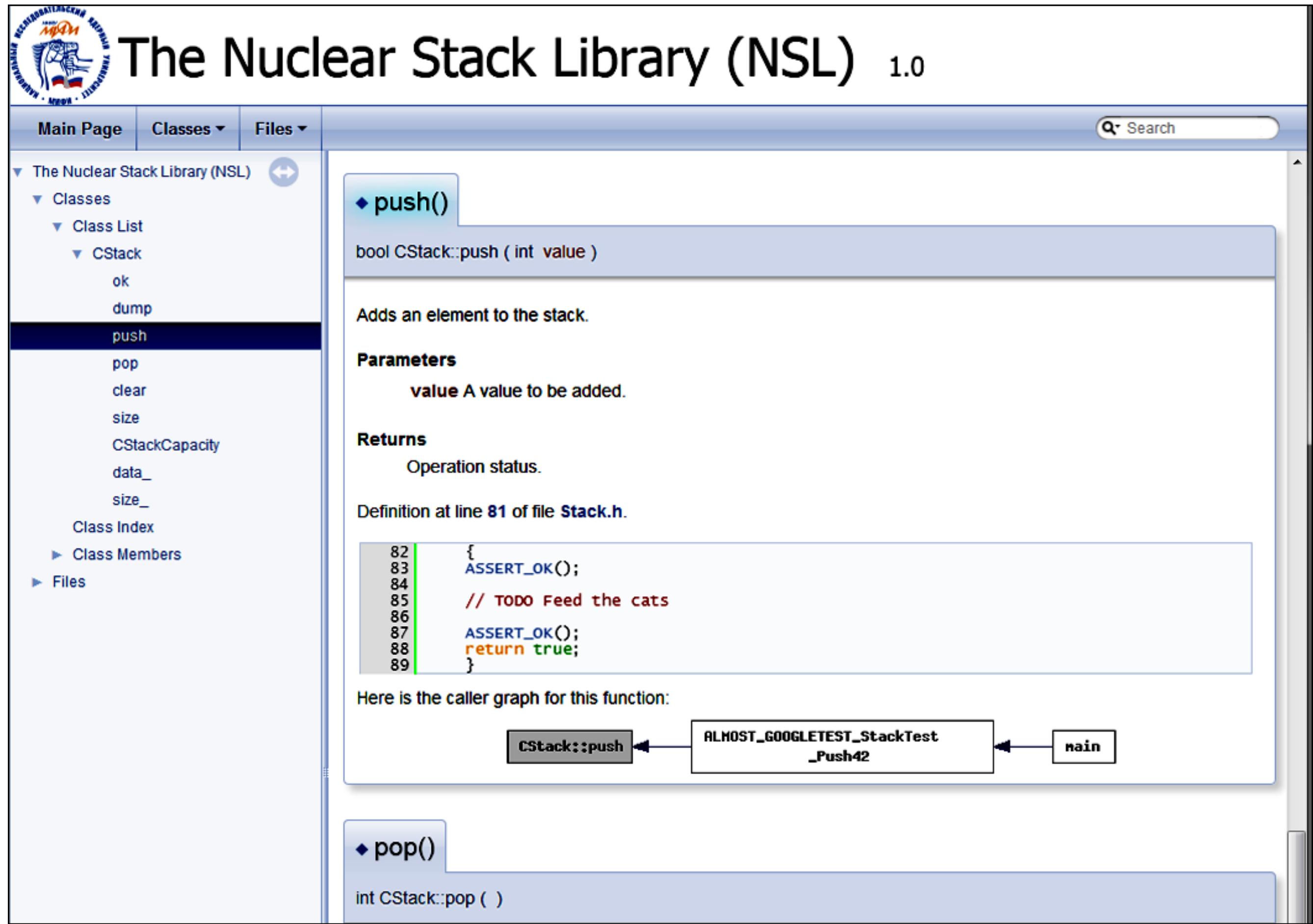
Collaboration diagram for CStack:

CStack
+ CStackCapacity - data_ - size_
+ ok() + dump() + push() + pop() + clear() + size()

Public Member Functions

bool **ok () const**
bool **dump () const**
bool **push (int value)**
int **pop ()**
int **clear ()**
int **size () const**

Static Public Attributes



The Nuclear Stack Library (NSL) 1.0

Main Page Classes ▾ Files ▾

Search

♦ push()

```
bool CStack::push ( int value )
```

Adds an element to the stack.

Parameters

value A value to be added.

Returns

Operation status.

Definition at line 81 of file [Stack.h](#).

```
82 {  
83     ASSERT_OK();  
84  
85     // TODO Feed the cats  
86  
87     ASSERT_OK();  
88     return true;  
89 }
```

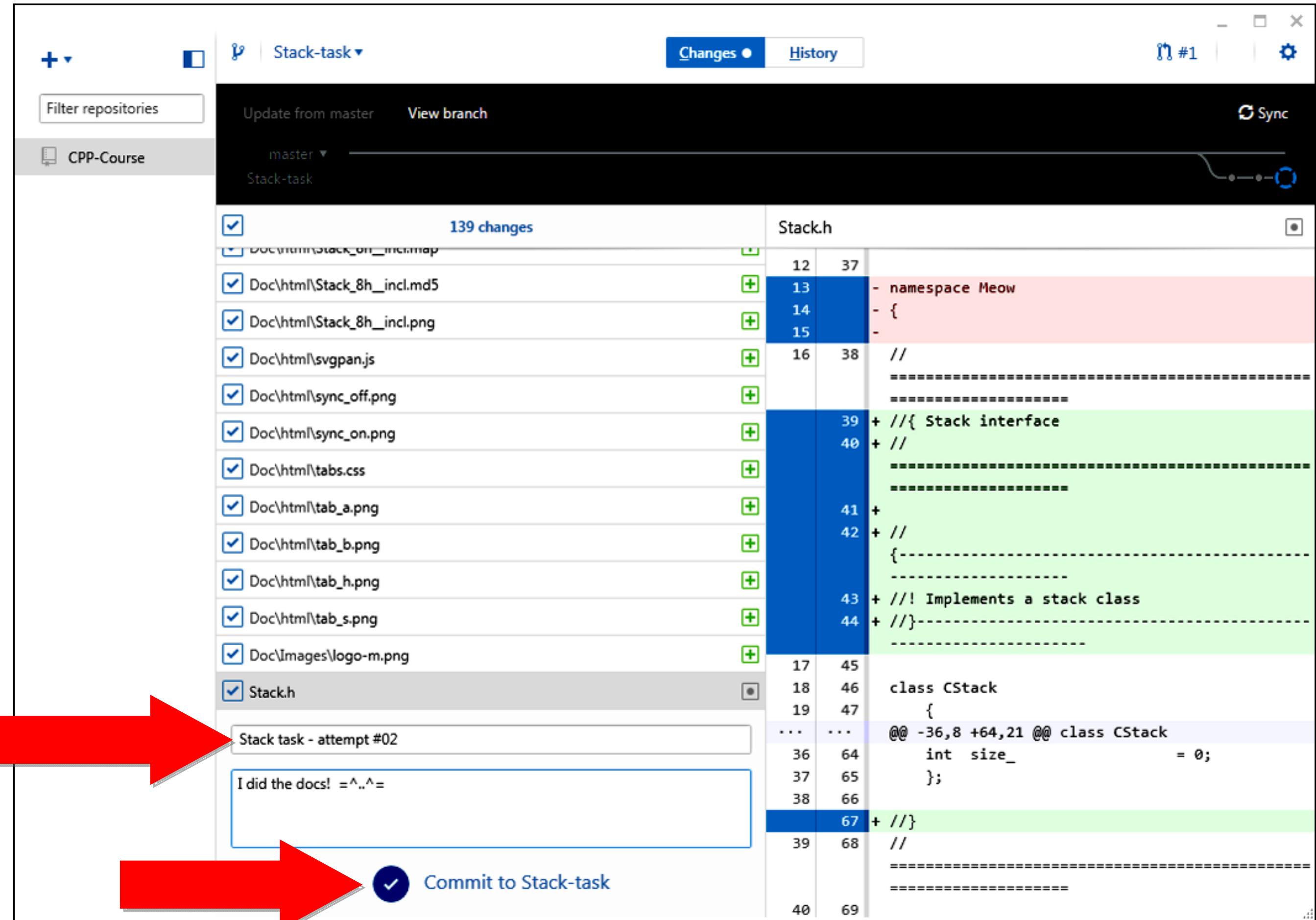
Here is the caller graph for this function:

```
graph LR; main --> ALMOST_GOOGLTEST_StackTest_Push42[ALMOST_GOOGLTEST_StackTest_Push42]; ALMOST_GOOGLTEST_StackTest_Push42 --> CStack::push[CStack::push]
```

♦ pop()

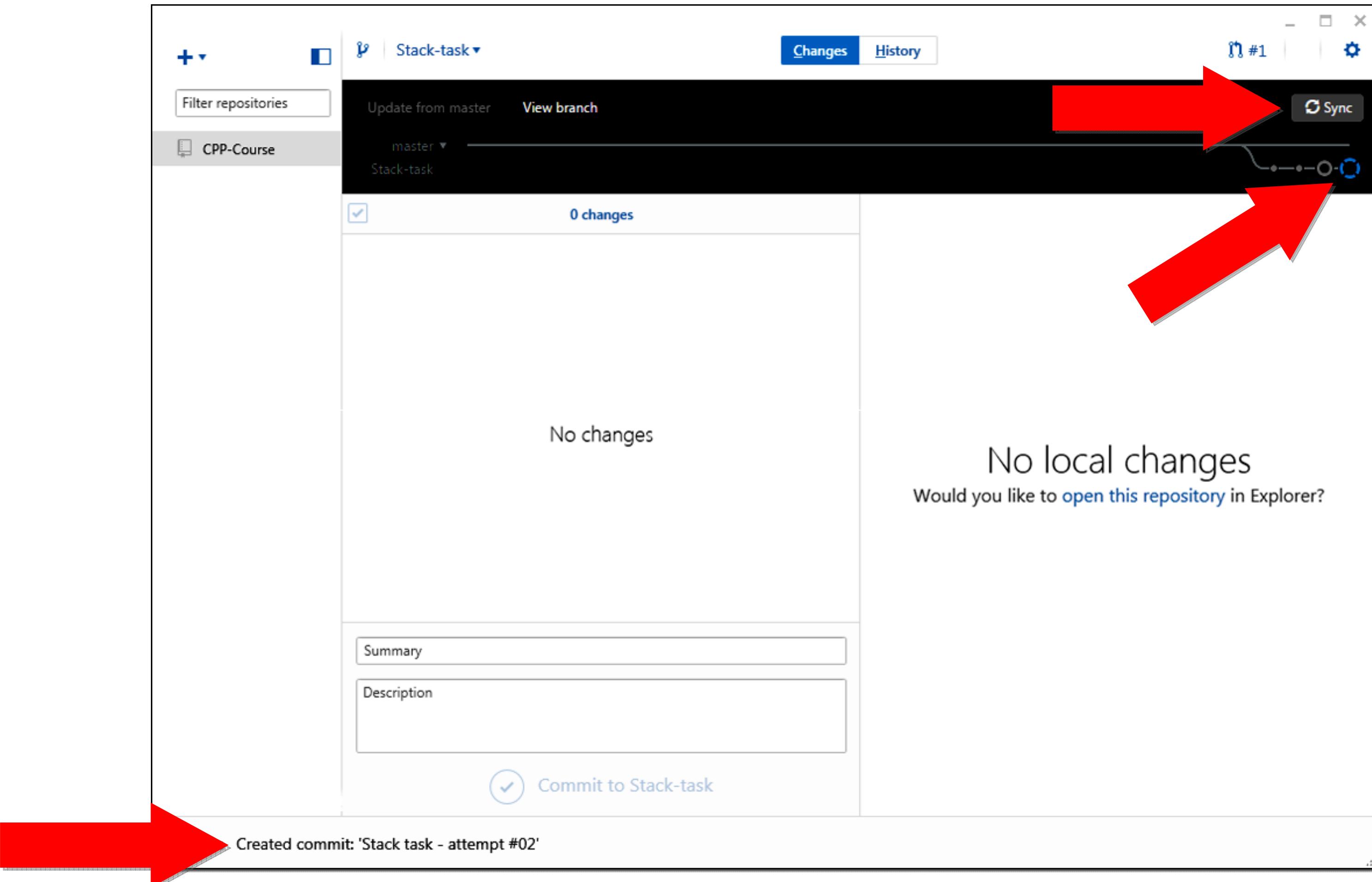
```
int CStack::pop ( )
```

Github Desktop: Файлы с доками в локальном репо на компе



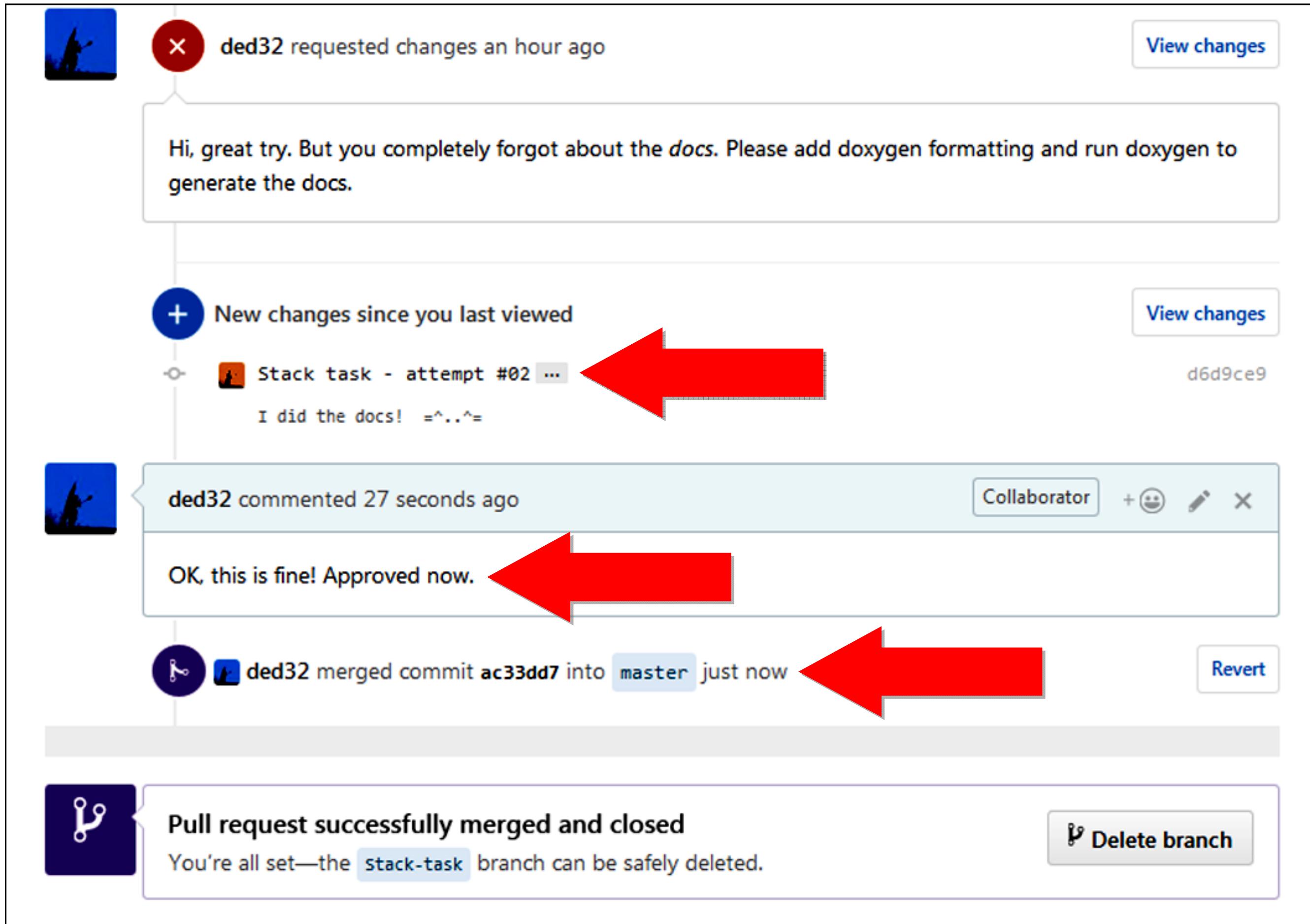
Github Desktop: Коммит с документацией. Sync!

ТЕХНОАТОМ



Репо на сайте: Ревьювер доволен!

TEXHOATOM 

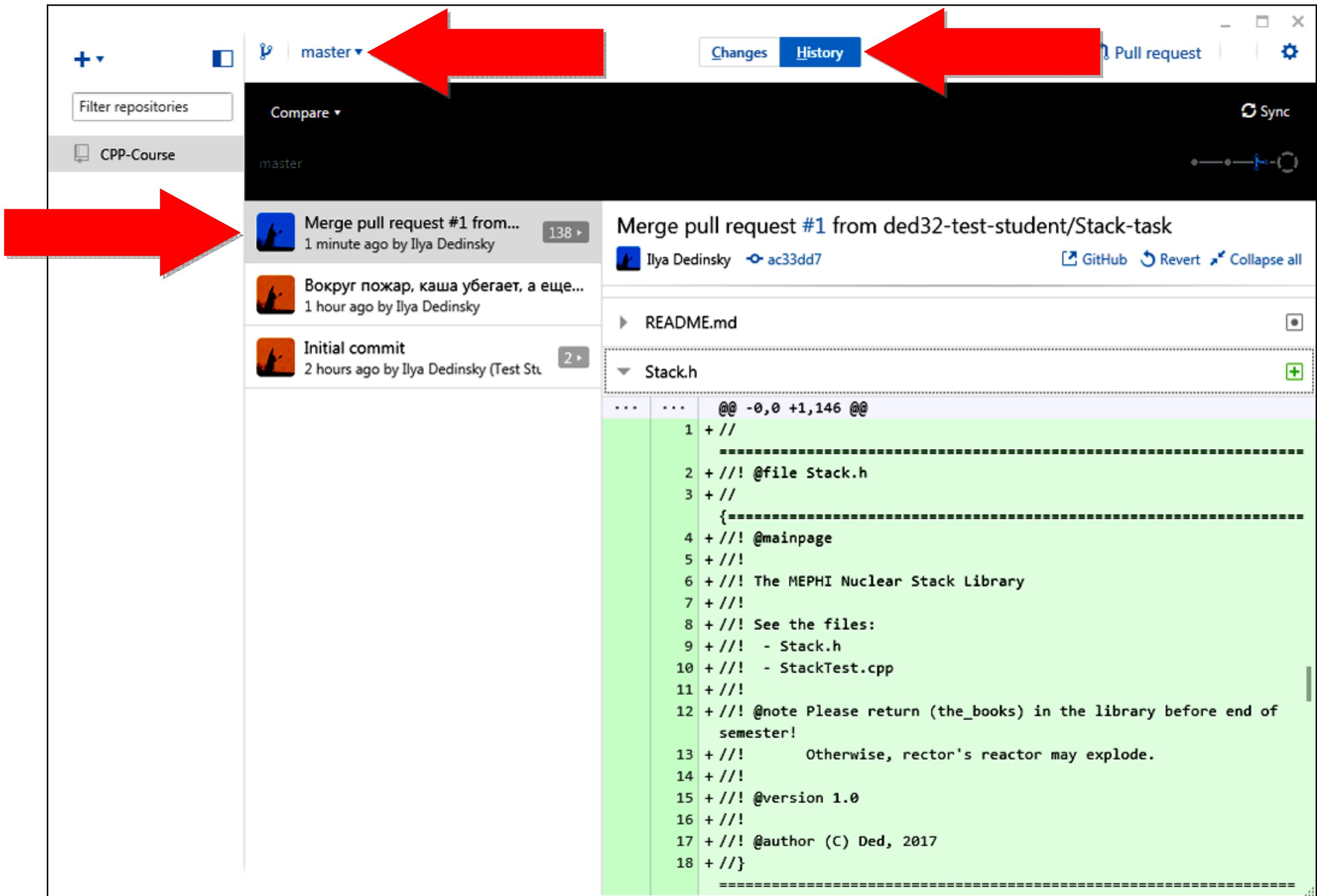


The screenshot shows a GitHub pull request interface with several comments and actions:

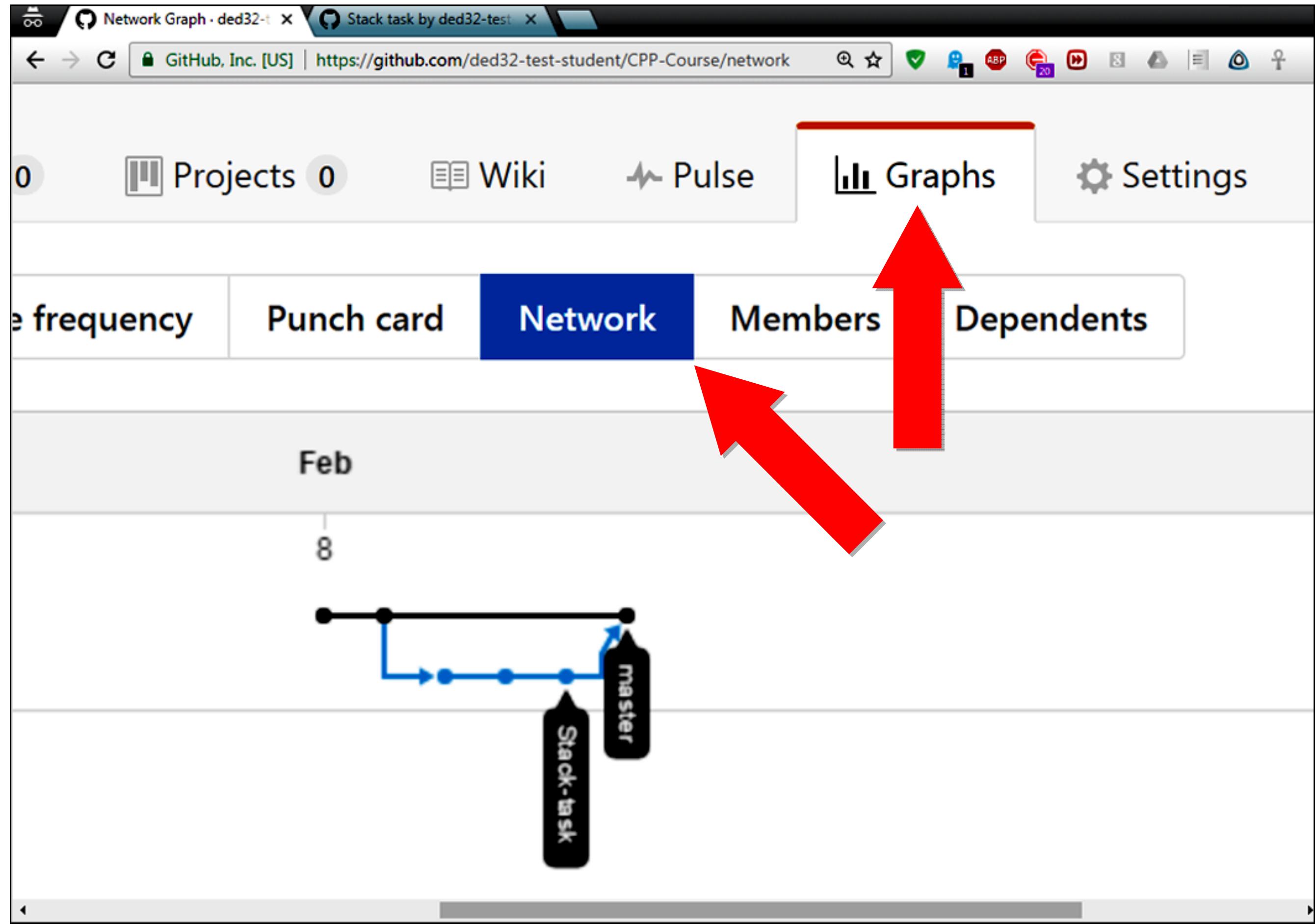
- Comment by ded32:** ded32 requested changes an hour ago. The message: "Hi, great try. But you completely forgot about the docs. Please add doxygen formatting and run doxygen to generate the docs." A red arrow points from this comment to the merge commit.
- New changes since you last viewed:** A blue circle with a plus sign. The message: "Stack task - attempt #02 ..." followed by "I did the docs! =^..^=". A red arrow points from this message to the merge commit.
- Comment by ded32:** ded32 commented 27 seconds ago. The message: "OK, this is fine! Approved now." A red arrow points from this message to the merge commit.
- Merge Commit:** ded32 merged commit `ac33dd7` into `master` just now. A red arrow points from this commit to the final status message.
- Status:** Pull request successfully merged and closed. You're all set—the `stack-task` branch can be safely deleted. A red arrow points from this status to the "Delete branch" button.

Github Desktop: Ветка закрыта, задание сделано

ТЕХНОАТОМ

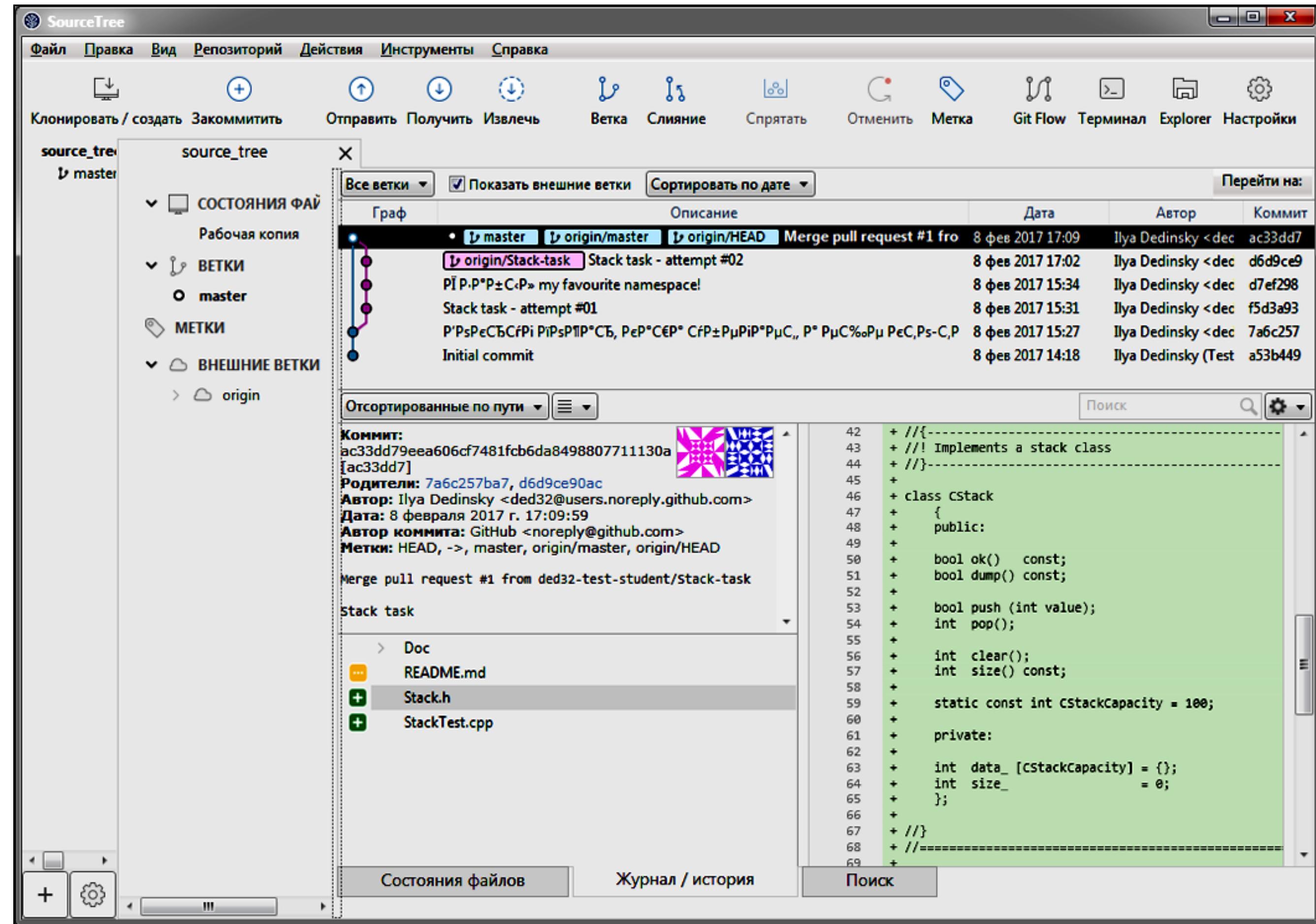


Вид закрытой ветки на сайте

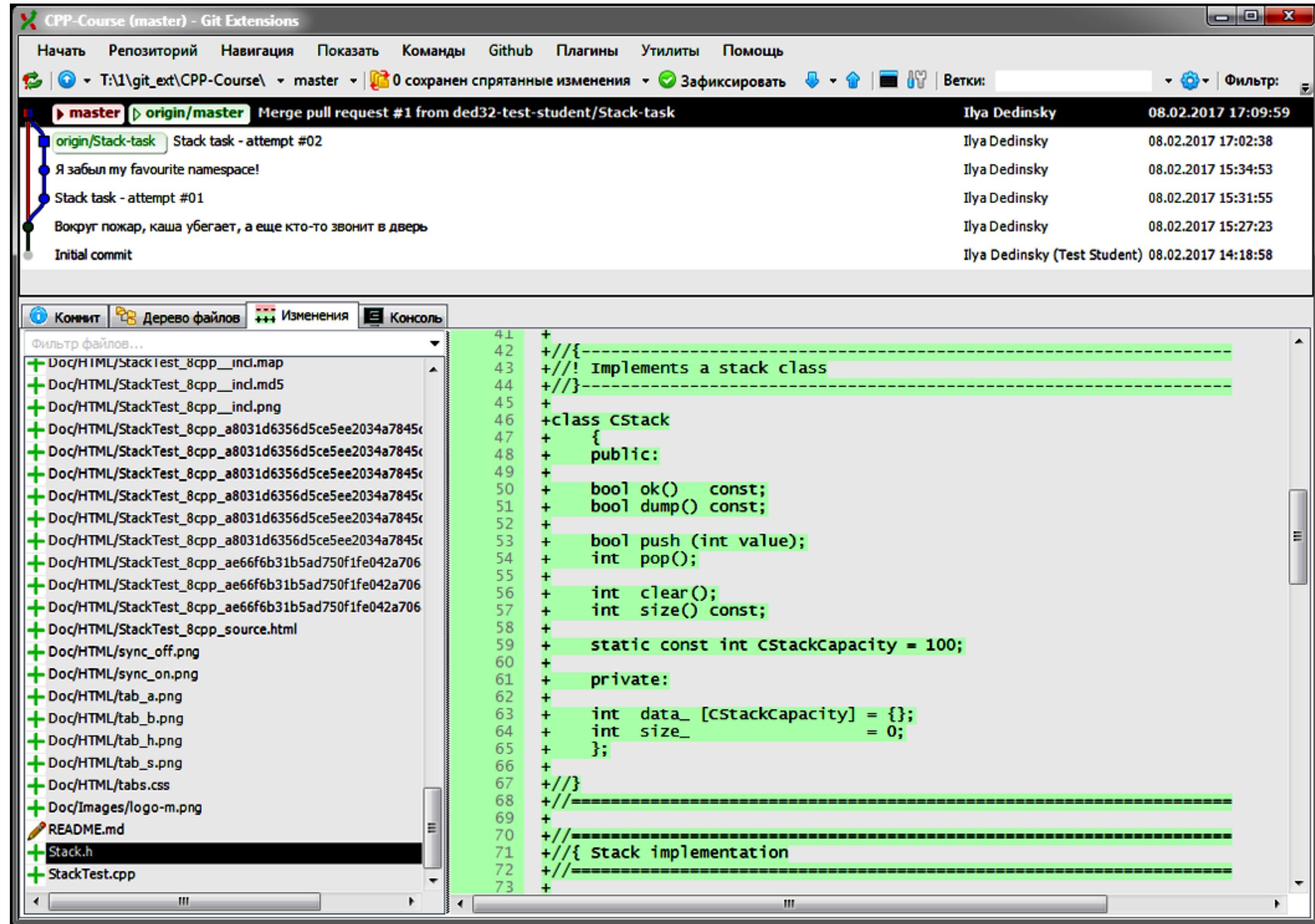


Вид закрытой ветки в SourceTree

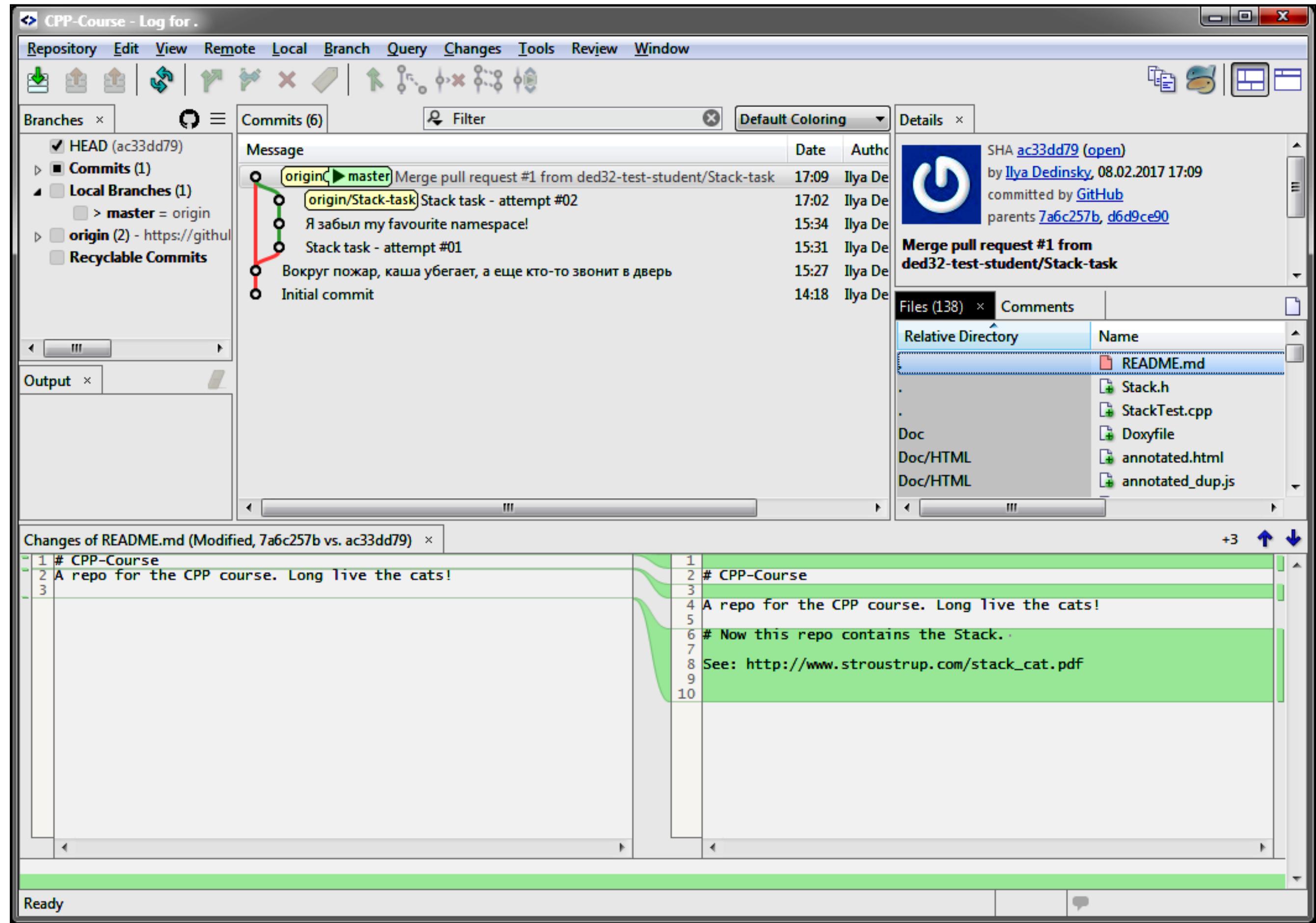
ТЕХНОАТОМ 



Вид закрытой ветки в Git Extensions



Вид закрытой ветки в SmartGit



The screenshot shows the SmartGit interface with the following details:

- Repository Bar:** Repository, Edit, View, Remote, Local, Branch, Query, Changes, Tools, Review, Window.
- Branches Panel:** Shows HEAD (ac33dd79), Commits (1), Local Branches (1) (with master = origin), origin (2) - https://github.com/ded32-test-student/Stack-task, and Recyclable Commits.
- Commits Panel:** Displays 6 commits from the master branch:
 - origin/master: Merge pull request #1 from ded32-test-student/Stack-task at 17:09 by Ilya Dedinsky (SHA ac33dd79)
 - origin/Stack-task: Stack task - attempt #02 at 17:02 by Ilya Dedinsky
 - Я забыл my favourite namespace! at 15:34 by Ilya Dedinsky
 - Stack task - attempt #01 at 15:31 by Ilya Dedinsky
 - Вокруг пожар, каша убегает, а еще кто-то звонит в дверь at 15:27 by Ilya Dedinsky
 - Initial commit at 14:18 by Ilya Dedinsky
- Details Panel:** Shows the details of the selected commit (Merge pull request #1 from ded32-test-student/Stack-task). It includes the SHA (ac33dd79), author (Ilya Dedinsky), date (08.02.2017 17:09), and parents (7a6c257b, d6d9ce90).
- Files Panel:** Shows the files modified in the README.md file, including README.md, Stack.h, StackTest.cpp, Doxyfile, annotated.html, and annotated_dup.js.
- Changes Panel:** Shows the changes made to README.md, comparing it against commit 7a6c257b. The changes are:

```
1 # CPP-Course
2 A repo for the CPP course. Long live the cats!
3
4 # CPP-Course
5
6 A repo for the CPP course. Long live the cats!
7
8 # Now this repo contains the Stack.
9
10 See: http://www.stroustrup.com/stack_cat.pdf
```

Оставьте фидбек по лекции

На Технотреке, не на Гитхабе :)

Спасибо за внимание

&&

Задавайте вопросы!

Mail.Ru & МФТИ, 2017