Федеральное государственное бюджетное образовательное учреждение высшего образования «Национальный исследовательский университет «МЭИ»

Институт информационных и вычислительных технологий

Кафедра Управления и интеллектуальных технологий

**Отчёт по лабораторной работе № 2**

**По курсу «Разработка программного обеспечения систем управления»**

**«Система контроля версий Git»**

Выполнила студентка группы А-02-19

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Москва 2020

Вход в терминал и создание структуры каталогов

Anastasia@anastasia MINGW64 ~/Desktop/lab02

$ mkdir alice //создание каталога

Anastasia@anastasia MINGW64 ~/Desktop/lab02

$ mkdir bob

Anastasia@anastasia MINGW64 ~/Desktop/lab02

$ cd alice

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice

$ mkdir project

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice

$ cd project

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project

$ cd .. // перейти на уровень выше

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice

$ cd project

Инициализация репозитария и настройка Git

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project

$ git init

Initialized empty Git repository in C:/Users/екрке/Desktop/lab02/alice/project/.git/ //Инициализируем репозитарий в текущем каталоге (project)

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git config user.name 'Alice (NoskovaAV)' // Настроим репозитарий Алисы, чтобы коммиты были от ее имени

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git config user.email 'alice@example.com'

Создание коммитов

Занесение файлов под контроль версий

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git status // просмотрим состояние рабочей копии

On branch master // мы находимся на ветке master

No commits yet // История не содержит еще коммитов

Untracked files: // В рабочей копии замечены файл, но Git их не отслеживает.

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

main.cpp

project.cbp

nothing added to commit but untracked files present (use "git add" to track) // В рабочей копии нет ничего,что можно было бы добавить.

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git add main.cpp //Добавим файл main.cpp в отслеживаемые (в индекс)

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

No commits yet

Changes to be committed: // Git начал отслеживать файл.

(use "git rm --cached <file>..." to unstage)

new file: main.cpp

Untracked files:

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

project.cbp

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'code: заготовка программы'

[master (root-commit) 5a205e2] code: заготовка программы

1 file changed, 9 insertions(+)

create mode 100644 main.cpp //Сводная статистика изменений

Составление сообщений к коммитам

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git add project.cbp

warning: LF will be replaced by CRLF in project.cbp.

The file will have its original line endings in your working directory //Git хранит файлы в немного измененном виде, чтобы обеспечивать удобную работу с репозитарием в любой операционной системе.

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'build: update CMake version' //добавлен файл проекта

[master eb308abb] build: update CMake version

1 file changed, 43 insertions(+)

create mode 100644 project.cbp

Создание коммитов с изменениями

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (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: main.cpp

no changes added to commit (use "git add" and/or "git commit -a") //Отслеживаемый файл был изменен в рабочем каталоге, но пока не проиндексирован

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git add main.cpp

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'code: Enter A and B'//Ввод чисел А и В

[master 1b37123] code: Enter A and B

1 file changed, 4 insertions(+), 1 deletion(-)

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git add -u

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'code: summa A and B'//Вывод суммы А и В

[master 2e352c0] code: summa A and B

1 file changed, 1 insertion(+), 1 deletion(-)

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git commit -a -m 'code: raznost A and B'//Вывод разности А и В

[master 4408a70] code: raznost A and B

1 file changed, 1 insertion(+)

Игнорирование файлов

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

Untracked files:

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

.gitignore //Указала Git игнорировать присутствие каталога bin

obj/

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

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

Untracked files:

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

.gitignore //Указала Git игнорировать присутствие каталога bin и obj

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

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git add .gitignore

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'git'

[master 3a466a4] git

1 file changed, 2 insertions(+)

create mode 100644 .gitignore

Просмотр истории

Работа с журналом репозитария

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git log –stat //показывает файлы, измененные в коммитах

commit 3a466a469fe4ef6be4bd8931e5c42b857aface5c (HEAD -> master)

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:51:53 2020 +0300

git

.gitignore | 2 ++

1 file changed, 2 insertions(+)

commit 4408a70b04011de3c46b9075adf526f6328d0f9a

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:44:07 2020 +0300

code: raznost A and B

main.cpp | 1 +

1 file changed, 1 insertion(+)

commit 2e352c0eec3ded2ce7546cdd6c8642dbfc5aca5c

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:43:02 2020 +0300

code: summa A and B

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git log --oneline –decorate //показывает коммиты компактно

3a466a4 (HEAD -> master) git

4408a70 code: raznost A and B

2e352c0 code: summa A and B

1b37123 code: Enter A and B

eb38abb build: update CMake version

5a205e2 code: заготовка программы

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git log --oneline --decorate --all –graph //делает то же для всех веток

\* 3a466a4 (HEAD -> master) git

\* 4408a70 code: raznost A and B

\* 2e352c0 code: summa A and B

\* 1b37123 code: Enter A and B

\* eb38abb build: update CMake version

\* 5a205e2 code: заготовка программы

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git log -- main.cpp // показывает затрагивающие main.cpp

commit 4408a70b04011de3c46b9075adf526f6328d0f9a

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:44:07 2020 +0300

code: raznost A and B

commit 2e352c0eec3ded2ce7546cdd6c8642dbfc5aca5c

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:43:02 2020 +0300

code: summa A and B

commit 1b371235006ba24a7b612ebe2c79c6ca9ee731b7

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:41:37 2020 +0300

code: Enter A and B

commit 5a205e2f1fb4a743c15f0fdbec242e0ec564f686

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:39:23 2020 +0300

code: заготовка программы

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git log --grep "code:" // показывает коммиты с code: в сообщении

commit 4408a70b04011de3c46b9075adf526f6328d0f9a

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:44:07 2020 +0300

code: raznost A and B

commit 2e352c0eec3ded2ce7546cdd6c8642dbfc5aca5c

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:43:02 2020 +0300

code: summa A and B

commit 1b371235006ba24a7b612ebe2c79c6ca9ee731b7

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:41:37 2020 +0300

code: Enter A and B

commit 5a205e2f1fb4a743c15f0fdbec242e0ec564f686

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:39:23 2020 +0300

code: заготовка программы

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git log --grep "build:"

commit eb38abb93c7bd72bbb29f855b3cbb49721ac8530

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:39:43 2020 +0300

build: update CMake version

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git log -- project.cbp

commit eb38abb93c7bd72bbb29f855b3cbb49721ac8530

Author: Alice (NoskovaAV) <alice@example.com>

Date: Wed Mar 26 15:39:43 2020 +0300

build: update CMake version

Просмотр коммитов

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git show HEAD~1

commit 4408a70b04011de3c46b9075adf526f6328d0f9a

Author: Alice (NoskovaAV) <alice@example.com>

Date: Thu Mar 26 15:44:35 2020 +0300

code: raznost A and B

**diff --git a/main.cpp b/main.cpp**

**index 443df7f..bd65f30 100644**

**--- a/main.cpp** // заголовок

**+++ b/main.cpp**

@@ -7,7 +7,8 @@ int main() // Обозначение места изменений в файле

cout << "Enter A and B: ";

int a, b;

cin >> a >> b;

-cout << "A + B = " << a + b << '\n';// Удаленные (-) и добавленные (+) строки

+cout << "A + B = " << a + b << '\n'

+<< "A - B = " << a - b << '\n';

return 0;

}

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git show master~1

commit 4408a70b04011de3c46b9075adf526f6328d0f9a

Author: Alice (NoskovaAV) <alice@example.com>

Date: Thu Mar 26 15:44:35 2020 +0300

code: raznost A and B

**diff --git a/main.cpp b/main.cpp**

**index 443df7f..bd65f30 100644**

**--- a/main.cpp**

**+++ b/main.cpp**

@@ -7,7 +7,8 @@ int main()

cout << "Enter A and B: ";

int a, b;

cin >> a >> b;

-cout << "A + B = " << a + b << '\n';

+cout << "A + B = " << a + b << '\n'

+<< "A - B = " << a - b << '\n';

return 0;

}

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git show 4408a

commit 4408a70b04011de3c46b9075adf526f6328d0f9a

Author: Alice (NoskovaAV) <alice@example.com>

Date: Thu Mar 26 15:44:35 2020 +0300

code: raznost A and B

**diff --git a/main.cpp b/main.cpp**

**index 443df7f..bd65f30 100644**

**--- a/main.cpp**

**+++ b/main.cpp**

@@ -7,7 +7,8 @@ int main()

cout << "Enter A and B: ";

int a, b;

cin >> a >> b;

-cout << "A + B = " << a + b << '\n';

+cout << "A + B = " << a + b << '\n'

+<< "A - B = " << a - b << '\n';

return 0;

}

Просмотр изменений

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git diff

**diff --git a/main.cpp b/main.cpp**

**index bd65f30..92a0021 100644**

**--- a/main.cpp** // заголовок

**+++ b/main.cpp**

@@ -8,7 +8,7 @@ int main() // Обозначение места изменений в файле.

int a, b;

cin >> a >> b;

cout << "A + B = " << a + b << '\n' // Измененная функция (для удобства чтения)

-<< "A - B = " << a - b << '\n';

-

+<< "A - B = " << a - b << '\n' // Удаленные (-) и добавленные (+) строки

+<< "A \* B = " << a \* b << '\n';

return 0;

}

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git diff HEAD~2

**diff --git a/.gitignore b/.gitignore**

**new file mode 100644**

**index 0000000..4c7473d**

**--- /dev/null**

**+++ b/.gitignore**

@@ -0,0 +1,2 @@

+/bin

+/obj

**diff --git a/main.cpp b/main.cpp**

**index bd65f30..92a0021 100644**

**--- a/main.cpp**

**+++ b/main.cpp**

@@ -8,7 +8,7 @@ int main()

int a, b;

cin >> a >> b;

cout << "A + B = " << a + b << '\n'

-<< "A - B = " << a - b << '\n';

-

+<< "A - B = " << a - b << '\n'

+<< "A \* B = " << a \* b << '\n';

return 0;

}

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git diff HEAD~2 HEAD

**diff --git a/.gitignore b/.gitignore**

**new file mode 100644**

**index 0000000..4c7473d**

**--- /dev/null**

**+++ b/.gitignore**

@@ -0,0 +1,2 @@

+/bin

+/obj

**diff --git a/main.cpp b/main.cpp**

**index 443df7f..bd65f30 100644**

**--- a/main.cpp**

**+++ b/main.cpp**

@@ -7,7 +7,8 @@ int main()

cout << "Enter A and B: ";

int a, b;

cin >> a >> b;

-cout << "A + B = " << a + b << '\n';

+cout << "A + B = " << a + b << '\n'

+<< "A - B = " << a - b << '\n';

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git diff 5a205 4408 // изменения между самым первым коммитом и коммитом, добавляющим вывод разности

**diff --git a/main.cpp b/main.cpp**

**index b4392ec..bd65f30 100644**

**--- a/main.cpp**

**+++ b/main.cpp**

@@ -4,6 +4,11 @@ using namespace std;

int main()

{

- cout << "Hello world!" << endl;

+ cout << "Enter A and B: ";

+int a, b;

+cin >> a >> b;

+cout << "A + B = " << a + b << '\n'

+<< "A - B = " << a - b << '\n';

+

return 0;

}

Откат изменений

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git add -u

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'code:proizved' //Вывод произведения А и В

[master 4d18613] code:proizved

1 file changed, 2 insertions(+), 1 deletion(-)

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git reset --hard HEAD~1 // Здесь HEAD~1 указывает на коммит, к которому нужно откатить состояние рабочей копии, а ключ --hard означает, что нужно привести рабочую копию точно к состоянию выбранного коммита

HEAD is now at 3a466a4 git

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git checkout HEAD -- main.cpp // Уберем изменения в main.cpp другим способом — откатив этот файл к состоянию в последнем коммите (HEAD)

Обмен кодом через удаленное хранилище

Отправка проекта на GitHub

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git remote add origin https://github.com/NoskovaAV/cs-lab02.git

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git push -u origin master

Enumerating objects: 18, done.

Counting objects: 100% (18/18), done.

Delta compression using up to 4 threads

Compressing objects: 100% (16/16), done.

Writing objects: 100% (18/18), 2.20 KiB | 140.00 KiB/s, done.

Total 18 (delta 2), reused 0 (delta 0), pack-reused 0

remote: Resolving deltas: 100% (2/2), done.

To https://github.com/NoskovaAV/cs-lab02.git

\* [new branch] master -> master

Branch 'master' set up to track remote branch 'master' from 'origin'.

Получение проекта с GitHub

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob

$ git clone https://github.com/NoskovaAV/cs-lab02.git project //Клонируем проект

Cloning into 'project'...

remote: Enumerating objects: 18, done.

remote: Counting objects: 100% (18/18), done.

remote: Compressing objects: 100% (14/14), done.

remote: Total 18 (delta 2), reused 18 (delta 2), pack-reused 0

Receiving objects: 100% (18/18), done.

Resolving deltas: 100% (2/2), done.

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob

$ cd project

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git config user.name 'Bob (NoskovaAV)'

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git config user.email 'bob@example.com'

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git add main.cpp

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git commit -m 'code:proizved' //Вывод произведения чисел А и В

[master 343b01b] code:proizved

1 file changed, 2 insertions(+), 1 deletion(-)

Совместная работа над проектом без конфликтов правок

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git push //Отправила коммит на GitHub

Enumerating objects: 5, done.

Counting objects: 100% (5/5), done.

Delta compression using up to 4 threads

Compressing objects: 100% (3/3), done.

Writing objects: 100% (3/3), 370 bytes | 123.00 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.

To https://github.com/NoskovaAV/cs-lab02.git

3a466a4.. 343b01b master -> master

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git fetch // Выполнила загрузку изменений

remote: Enumerating objects: 5, done.

remote: Counting objects: 100% (5/5), done.

remote: Compressing objects: 100% (2/2), done.

remote: Total 3 (delta 1), reused 3 (delta 1), pack-reused 0

Unpacking objects: 100% (3/3), 350 bytes | 23.00 KiB/s, done.

From https://github.com/NoskovaAV/cs-lab02

3a466a4.. 343b01b master -> origin/master

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git log --oneline --decorate --all --graph

\* 343b01b (origin/master) code:proizved

\* 3a466a4 (HEAD -> master) git

\* 4408a70 code: raznost A and B

\* 2e352c0 code: summa A and B

\* 1b37123 code: Enter A and B

\* eb38abb build: update CMake version

\* 5a205e2 code: заготовка программы

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git pull --ff-only //Продвинула ветку master к скачанной версии

Updating 3a466a4..343b01b

Fast-forward

main.cpp | 3 ++-

1 file changed, 2 insertions(+), 1 deletion(-)

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git add -u

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'code:del' //Вывод деления чисел А и В

[master a9b56b1] code:del

1 file changed, 1 insertion(+)

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git push

Enumerating objects: 5, done.

Counting objects: 100% (5/5), done.

Delta compression using up to 4 threads

Compressing objects: 100% (3/3), done.

Writing objects: 100% (3/3), 366 bytes | 122.00 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.

To https://github.com/NoskovaAV/cs-lab02.git

343b01b.. a9b56b1 master -> master

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git fetch

remote: Enumerating objects: 5, done.

remote: Counting objects: 100% (5/5), done.

remote: Compressing objects: 100% (2/2), done.

remote: Total 3 (delta 1), reused 3 (delta 1), pack-reused 0

Unpacking objects: 100% (3/3), 346 bytes | 16.00 KiB/s, done.

From https://github.com/NoskovaAV/cs-lab02

343b01b.. a9b56b1 master -> origin/master

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git log --oneline --decorate --all --graph

\* a9b56b1 (origin/master, origin/HEAD) code:del

\* 343b01b (HEAD -> master) code:proizved

\* 3a466a4 git

\* 4408a70 code: raznost A and B

\* 2e352c0 code: summa A and B

\* 1b37123 code: Enter A and B

\* eb38abb build: update CMake version

\* 5a205e2 code: заготовка программы

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git pull --ff-only

Updating 343b01b..a9b56b1

Fast-forward

main.cpp | 3 ++-

1 file changed, 2 insertions(+), 1 deletion(-)

Разрешение конфликтов правок при совместной работе

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git add -u

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'code: Max' //Печать максимума из чисел

[master ab36ff6] code:Max

1 file changed, 13 insertion(+), 2 deletions(-)

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git push

Enumerating objects: 5, done.

Counting objects: 100% (5/5), done.

Delta compression using up to 4 threads

Compressing objects: 100% (3/3), done.

Writing objects: 100% (3/3), 434 bytes | 131.00 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.

To https://github.com/NoskovaAV/cs-lab02.git

A9b56b1.. ab36ff6 master -> master

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git add main.cpp

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git commit -m 'code: Min' //Печать минимума из чисел

[master 55f3c3b] code: Min

1 file changed, 13 insertions(+), 2 deletion(-)

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git push

To https://github.com/NoskovaAV/cs-lab02.git

! [rejected] master -> master (fetch first) // удаленный репозитарий не принимает изменений: коммит Боба основан не на последнем существующем коммите.

error: failed to push some refs to 'https://github.com/NoskovaAV/cs-lab02.git'

hint: Updates were rejected because the remote contains work that you do

hint: not have locally. This is usually caused by another repository pushing

hint: to the same ref. You may want to first integrate the remote changes

hint: (e.g., 'git pull ...') before pushing again.

hint: See the 'Note about fast-forwards' in 'git push --help' for details.

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git fetch

remote: Enumerating objects: 5, done.

remote: Counting objects: 100% (5/5), done.

remote: Compressing objects: 100% (2/2), done.

remote: Total 3 (delta 1), reused 3 (delta 1), pack-reused 0

Unpacking objects: 100% (3/3), done.

From https://github.com/NoskovaAv/cs-lab02

A9b56b1.. ab36ff6 master -> origin/master // ветка master раздвоилась

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git log --oneline --decorate --all --graph

\* 55f3c3b (HEAD -> master) code: Min

| ab36ff6 (origin/master, origin/HEAD) code: Max

|/

\* a9b56b1 code:del

\* 343b01b code:proizved

\* 3a466a4 git

\* 4408a70 code: raznost A and B

\* 2e352c0 code: summa A and B

\* 1b37123 code: Enter A and B

\* eb38abb build: update CMake version

\* 5a205e2 code: заготовка программы

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git rebase origin/master

First, rewinding head to replay your work on top of it...

Applying: code: Min

Using index info to reconstruct a base tree...

main.cpp

Falling back to patching base and 3-way merge...

Auto-merging main.cpp

CONFLICT (content): Merge conflict in main.cpp

error: Failed to merge in the changes.

hint: Use 'git am --show-current-patch' to see the failed patch

Patch failed at 0001 code: Min

Resolve all conflicts manually, mark them as resolved with

"git add/rm <conflicted\_files>", then run "git rebase --continue".

You can instead skip this commit: run "git rebase --skip".

To abort and get back to the state before "git rebase", run "git rebase --abort".

// в CodeBlocks нужно: Удалить метки конфликта: <<<< ..., ... >>>> и =====.

Отредактировать код так, чтобы он включал и правки Алисы, и правки Боба.

Убедиться, что программа компилируется и работает.

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master|REBASE 1/1)

$ git add main.cpp

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master|REBASE 1/1)

$ git rebase --continue

Applying: code: Min

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git log --oneline --decorate --all --graph

\* 55f3c3b (HEAD -> master) code: Min

\* ab36ff6 (origin/master, origin/HEAD) code: Max

\* a9b56b1 code:del

\* 343b01b code:proizved

\* 3a466a4 git

\* 4408a70 code: raznost A and B

\* 2e352c0 code: summa A and B

\* 1b37123 code: Enter A and B

\* eb38abb build: update CMake version

\* 5a205e2 code: заготовка программы

Anastasia@anastasia MINGW64 ~/Desktop/lab02/bob/project (master)

$ git push

Enumerating objects: 5, done.

Counting objects: 100% (5/5), done.

Delta compression using up to 4 threads

Compressing objects: 100% (3/3), done.

Writing objects: 100% (3/3), 462 bytes | 92.00 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.

To https://github.com/NoskovaAV/cs-lab02.git

ab36ff6..55f3c3b master -> master

Использование веток

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git checkout double

Switched to branch 'double'

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (double)

$ git commit -a -m 'code: a and b double'

[double e5c20e8] code: a and b double

1 file changed, 1 insertions(+), 1 deletion(-)

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (double)

$ git checkout master

Switched to branch 'master'

Your branch is up to date with 'origin/master'.

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git fetch

remote: Enumerating objects: 5, done.

remote: Counting objects: 100% (5/5), done.

remote: Compressing objects: 100% (2/2), done.

remote: Total 3 (delta 1), reused 3 (delta 1), pack-reused 0

Unpacking objects: 100% (3/3), done.

From https://github.com/NoskovaAV/cs-lab02

ab36ff6..55f3c3b master -> origin/master

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git log --oneline --decorate --all --graph

\* e025f72 (double) code: a and b double

| \* 55f3c3b (origin/master) code: Min

|/

\* ab36ff6 (HEAD -> master) code: Max

\* a9b56b1 code:del

\* 343b01b code:proizved

\* 3a466a4 git

\* 4408a70 code: raznost A and B

\* 2e352c0 code: summa A and B

\* 1b37123 code: Enter A and B

\* eb38abb build: update CMake version

\* 5a205e2 code: заготовка программы

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git merge double

Updating ab36ff6..e025f72

Fast-forward

main.cpp | 3 ++-

1 file changed, 2 insertions(+), 1 deletion(-)

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git log --oneline --decorate --all --graph

\* e025f72 (HEAD -> master, double) code: a and b double

| \* 55f3c3b (origin/master) code: Min

|/

\* ab36ff6 code: Max

\* a9b56b1 code:del

\* 343b01b code:proizved

\* 3a466a4 git

\* 4408a70 code: raznost A and B

\* 2e352c0 code: summa A and B

\* 1b37123 code: Enter A and B

\* eb38abb build: update CMake version

\* 5a205e2 code: заготовка программы

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git fetch

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git rebase origin/master

First, rewinding head to replay your work on top of it...

Applying: code: a and b double

Using index info to reconstruct a base tree...

main.cpp

Falling back to patching base and 3-way merge...

Auto-merging main.cpp

CONFLICT (content): Merge conflict in main.cpp

error: Failed to merge in the changes.

hint: Use 'git am --show-current-patch' to see the failed patch

Patch failed at 0001 code: a and b double

Resolve all conflicts manually, mark them as resolved with

"git add/rm <conflicted\_files>", then run "git rebase --continue".

You can instead skip this commit: run "git rebase --skip".

To abort and get back to the state before "git rebase", run "git rebase --abort".

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master|REBASE 1/1)

$ git add main.cpp

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master|REBASE 1/1)

$ git rebase --continue

Successfully rebased and updated refs/heads/master.

Anastasia@anastasia MINGW64 ~/Desktop/lab02/alice/project (master)

$ git log --oneline --decorate --all --graph

\* e5c20e8 (HEAD -> master) code: a and b double

\* 55f3c3b (origin/master) code: Min

| \* e025f72 (double) code: a and b double

|/

\* ab36ff6 code: Max

\* a9b56b1 code:del

\* 343b01b code:proizved

\* 3a466a4 git

\* 4408a70 code: raznost A and B

\* 2e352c0 code: summa A and B

\* 1b37123 code: Enter A and B

\* eb38abb build: update CMake version

\* 5a205e2 code: заготовка программы