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 ПО систем управления»

# «Система контроля версий Git»

# Выполнил студент группы А-02-19

# Фенске А.В.

# Проверили

# Мохов А. С

# Козлюк Д. А

Москва 2020

1. **Вход в терминал и создание структуры каталогов**

Открываем Git Bash. Создаем каталоги Алисы и Боба, а также папку проекта Алисы

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02

$ mkdir alice

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02

$ mkdir bob

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02

$ cd alice

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice

$ mkdir project

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice

$ cd project

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice

$ cd project

## **2. Инициализация репозитария и настройка Git**

## Указываем имя пользователя и почту

$ git init

Initialized empty Git repository in C:/Users/Alexandr/Desktop/lab02/alice/projec

t/.git/

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

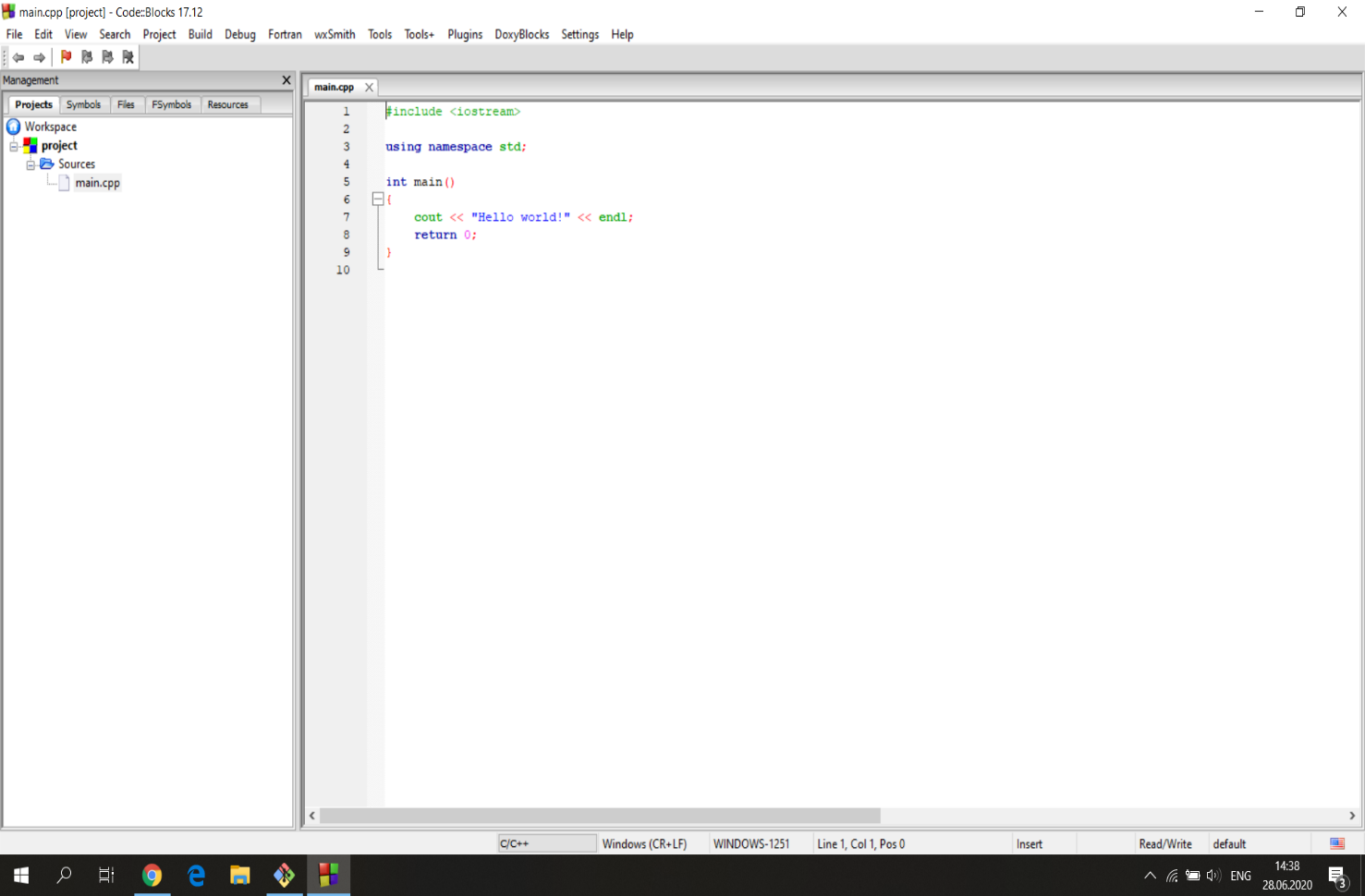
$ git config user.name 'Alice(FenskeAV)'

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git config user.email 'sanyok.fenske@gmail.com'

## **3.Создание коммитов**

## Создаем и собираем проект



### **3.1 Занесение файлов под контроль версий**

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

No commits yet

Untracked files:

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

bin/

main.cpp

obj/

project.cbp

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

Консоль сообщает что коммитов нет и показывает неотслеживаемые файлы и призывает добавить коммиты командой “git add”

Добавляем коммиты с файлами main.cpp и project.cbp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add main.cpp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

No commits yet

Changes to be committed:

(use "git rm --cached ..." to unstage)

new file: main.cpp

Untracked files:

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

bin/

obj/

project.cbp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'code: заготовка программы'

[master (root-commit) 168281d] code: заготовка программы

1 file changed, 9 insertions(+)

create mode 100644 main.cpp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'build: new project'

[master 53c32d8] build: new project

1 file changed, 42 insertions(+)

create mode 100644 project.cbp

***3.2 Создание коммитов с* изменениями**

Добавляем вывод двух чисел и смотрим состояние репозитория

$ git status

On branch master

Changes not staged for commit:

(use "git add ..." to update what will be committed)

(use "git checkout -- ..." to discard changes in working directory)

modified: main.cpp

Untracked files:

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

bin/

obj/

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

Видим , что main.cpp был изменен, делаем коммит

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'Ввод двух чисел'

[master 9e72f73] Ввод двух чисел

1 file changed, 6 insertions(+), 1 deletion(-)

Добавляем сумму чисел, делаем коммит

$ git add -u

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'Вывод суммы двух чисел'

[master 1a3a96f] Вывод суммы двух чисел

1 file changed, 2 insertions(+)

С разностью аналогично

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -a -m 'Вывод разности двух чисел'

[master 92a7eb2] Вывод разности двух чисел

1 file changed, 3 insertions(+), 1 deletion(-)

## **4. Игнорирование файлов**

Добавим .gitignore и видим что /bin и /obj не отображается, делаем коммит

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

Untracked files:

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

.gitignore

project.depend

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add .gitignore

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'git: add gitignore /bin /obj'

[master c42e244] git: add gitignore /bin /obj

1 file changed, 2 insertions(+) create mode 100644 .gitignore

## **5. Просмотр истории**

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git log

commit c42e244d86c50d0dfb7320124b113969524741b2 (HEAD -> master)

Author: Alice(FenskeAV)

Date: Sun Jun 28 15:18:40 2020 +0300

git: add gitignore /bin /obj

commit 92a7eb25b57b3de2ffe9c0b0b3632b2179ea8fb1

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:52:33 2020 +0300

Вывод разности двух чисел

commit 1a3a96f67337a08cd66b50e3d87eb7cdbfa56a89

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:49:09 2020 +0300

Вывод суммы двух чисел

commit 9e72f7318a891ad05b7a7251245733882588f64d

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:46:31 2020 +0300

Ввод двух чисел

:...skipping...

commit c42e244d86c50d0dfb7320124b113969524741b2 (HEAD -> master)

Author: Alice(FenskeAV)

Date: Sun Jun 28 15:18:40 2020 +0300

git: add gitignore /bin /obj

commit 92a7eb25b57b3de2ffe9c0b0b3632b2179ea8fb1

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:52:33 2020 +0300

Вывод разности двух чисел

commit 1a3a96f67337a08cd66b50e3d87eb7cdbfa56a89

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:49:09 2020 +0300

Вывод суммы двух чисел

commit 9e72f7318a891ad05b7a7251245733882588f64d

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:46:31 2020 +0300

Ввод двух чисел

commit 53c32d8ac61cb460761717417304452c7fed6b84

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:43:11 2020 +0300

build: new project

commit 168281d58fb3ab94987c10639711b31f3bb28323

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:41:27 2020 +0300

code: заготовка программы

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ESCOD

commit c42e244d86c50d0dfb7320124b113969524741b2 (HEAD -> master)

Author: Alice(FenskeAV)

Date: Sun Jun 28 15:18:40 2020 +0300

git: add gitignore /bin /obj

commit 92a7eb25b57b3de2ffe9c0b0b3632b2179ea8fb1

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:52:33 2020 +0300

Вывод разности двух чисел

commit 1a3a96f67337a08cd66b50e3d87eb7cdbfa56a89

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:49:09 2020 +0300

Вывод суммы двух чисел

commit 9e72f7318a891ad05b7a7251245733882588f64d

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:46:31 2020 +0300

Ввод двух чисел

commit 53c32d8ac61cb460761717417304452c7fed6b84

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:43:11 2020 +0300

build: new project

commit 168281d58fb3ab94987c10639711b31f3bb28323

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:41:27 2020 +0300

code: заготовка программы

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Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git log --stat

commit c42e244d86c50d0dfb7320124b113969524741b2 (HEAD -> master)

Author: Alice(FenskeAV)

Date: Sun Jun 28 15:18:40 2020 +0300

git: add gitignore /bin /obj

.gitignore | 2 ++

1 file changed, 2 insertions(+)

commit 92a7eb25b57b3de2ffe9c0b0b3632b2179ea8fb1

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:52:33 2020 +0300

Вывод разности двух чисел

main.cpp | 4 +++-

1 file changed, 3 insertions(+), 1 deletion(-)

commit 1a3a96f67337a08cd66b50e3d87eb7cdbfa56a89

Author: Alice(FenskeAV)

Date: Sun Jun 28 14:49:09 2020 +0300

Вывод суммы двух чисел

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git log --oneline

c42e244 (HEAD -> master) git: add gitignore /bin /obj

92a7eb2 Вывод разности двух чисел

1a3a96f Вывод суммы двух чисел

9e72f73 Ввод двух чисел

53c32d8 build: new project

168281d code: заготовка программы

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git log --oneline --decorate

c42e244 (HEAD -> master) git: add gitignore /bin /obj

92a7eb2 Вывод разности двух чисел

1a3a96f Вывод суммы двух чисел

9e72f73 Ввод двух чисел

53c32d8 build: new project

168281d code: заготовка программы

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

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

\* c42e244 (HEAD -> master) git: add gitignore /bin /obj

\* 92a7eb2 Вывод разности двух чисел

\* 1a3a96f Вывод суммы двух чисел

\* 9e72f73 Ввод двух чисел

\* 53c32d8 build: new project

\* 168281d code: заготовка программы

Текущий коммит

$ git show HEAD

commit c42e244d86c50d0dfb7320124b113969524741b2 (HEAD -> master)

Author: Alice(FenskeAV)

Date: Sun Jun 28 15:18:40 2020 +0300

git: add gitignore /bin /obj

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

new file mode 100644

index 0000000..4c7473d

--- /dev/null

+++ b/.gitignore

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

+/bin

+/obj

Просмотр изменений в рабочей копии

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git diff

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

index 03f40fc..20e0a4c 100644

--- a/main.cpp

+++ b/main.cpp

@@ -14,5 +14,7 @@ cout << "A + B = " << a + b << '\n';

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

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

+

return 0;

}

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/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 3ada975..20e0a4c 100644

--- a/main.cpp

+++ b/main.cpp

@@ -12,5 +12,9 @@ cin >> a >> b;

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

- return 0;

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

+

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

+

+return 0;

}

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/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 3ada975..03f40fc 100644

--- a/main.cpp

+++ b/main.cpp

@@ -12,5 +12,7 @@ cin >> a >> b;

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

- return 0;

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

+

+return 0;

}

Разница между первым коммитом и коммитом с выводом разницы

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git diff HEAD~2 HEAD~4

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

index 3ada975..b4392ec 100644

--- a/main.cpp

+++ b/main.cpp

@@ -4,13 +4,6 @@ using namespace std;

int main()

{

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

-

-int a, b;

-

-cin >> a >> b;

-

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

-

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

return 0;

}

‘

## **6. Откат изменений**

## Создадим коммит и откатим его

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add main.cpp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'Вывод произведения двух чисел'

[master 18f16f7] Вывод произведения двух чисел

1 file changed, 2 insertions(+)

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git reset --hard HEAD~1

HEAD is now at c42e244 git: add gitignore /bin /obj

## **7. Обмен кодом через удаленное хранилище**

Загрузка проекта на GitHub

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/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 8 threads

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

Writing objects: 100% (18/18), 2.32 KiB | 395.00 KiB/s, done.

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

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

To https://github.com/Alexandr-Fenske/cs-lab02.git

\* [new branch] master -> master

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

Выгрузка с GitHub

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02

$ cd bob

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob

$ git clone https://github.com/Alexandr-Fenske/cs-lab02.git project

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

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob

$ cd project

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git config user.email 'sanyok.fenske@gmail.com'

## **8. Совместная работа над проектом без конфликтов правок**

Добавим произведение на машине БОБА и создадим коммит

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git add main.cpp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git commit -m 'Вывод произведения двух чисел'

[master c06ac63] Вывод произведения двух чисел

1 file changed, 2 insertions(+)

Загрузим на GitHub

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git push

Enumerating objects: 5, done.

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

Delta compression using up to 8 threads

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

Writing objects: 100% (3/3), 427 bytes | 427.00 KiB/s, done.

Total 3 (delta 1), reused 0 (delta 0)

remote: Resolving deltas: 100% (1/1), completed with 1 local object.

To https://github.com/Alexandr-Fenske/cs-lab02.git

c42e244..c06ac63 master -> master

Загрузка изменений у Алисы

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02

$ cd alice

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice

$ cd project

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/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/Alexandr-Fenske/cs-lab02

c42e244..c06ac63 master -> origin/master

Продвигаем ветку master

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

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

\* c06ac63 (origin/master) Вывод произведения двух чисел

\* c42e244 (HEAD -> master) git: add gitignore /bin /obj

\* 92a7eb2 Вывод разности двух чисел

\* 1a3a96f Вывод суммы двух чисел

\* 9e72f73 Ввод двух чисел

\* 53c32d8 build: new project

\* 168281d code: заготовка программы

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git pull --ff-only

Updating c42e244..c06ac63

Fast-forward

main.cpp | 2 ++

1 file changed, 2 insertions(+)

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

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

\* c06ac63 (HEAD -> master, origin/master) Вывод произведения двух чисел

\* c42e244 git: add gitignore /bin /obj

\* 92a7eb2 Вывод разности двух чисел

\* 1a3a96f Вывод суммы двух чисел

\* 9e72f73 Ввод двух чисел

\* 53c32d8 build: new project

\* 168281d code: заготовка программы

Добавляем деление у Алисы и загружаем у Боба

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add main.cpp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'Вывод деления двух чисел'

[master 946a9b2] Вывод деления двух чисел

1 file changed, 1 insertion(+)

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git push

Enumerating objects: 5, done.

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

Delta compression using up to 8 threads

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

Writing objects: 100% (3/3), 433 bytes | 433.00 KiB/s, done.

Total 3 (delta 1), reused 0 (delta 0)

remote: Resolving deltas: 100% (1/1), completed with 1 local object.

To https://github.com/Alexandr-Fenske/cs-lab02.git

c06ac63..946a9b2 master -> master

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02

$ cd bob

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob

$ cd project

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/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/Alexandr-Fenske/cs-lab02

c06ac63..946a9b2 master -> origin/master

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git pull --ff-only

Updating c06ac63..946a9b2

Fast-forward

main.cpp | 1 +

1 file changed, 1 insertion(+)

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

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

\* 946a9b2 (HEAD -> master, origin/master, origin/HEAD) Вывод деления двух чис

ел

\* c06ac63 Вывод произведения двух чисел

\* c42e244 git: add gitignore /bin /obj

\* 92a7eb2 Вывод разности двух чисел

\* 1a3a96f Вывод суммы двух чисел

\* 9e72f73 Ввод двух чисел

\* 53c32d8 build: new project

\* 168281d code: заготовка программы

## **9. Разрешение конфликтов правок при совместной работе**

## Добавил печать максимума от Алисы

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02

$ cd alice

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice

$ cd project

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add main.cpp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'MAX'

[master 615d7b4] MAX

1 file changed, 13 insertions(+)

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git push

Enumerating objects: 5, done.

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

Delta compression using up to 8 threads

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

Writing objects: 100% (3/3), 441 bytes | 441.00 KiB/s, done.

Total 3 (delta 1), reused 0 (delta 0)

remote: Resolving deltas: 100% (1/1), completed with 1 local object.

cdTo https://github.com/Alexandr-Fenske/cs-lab02.git

946a9b2..615d7b4 master -> master

## Добавил печать минимума минимума от Боба и попытался отправить на GitHub

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02

$ cd bob

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob

$ cd project

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git add main.cpp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git commit -m 'MIN'

[master 20306ee] MIN

1 file changed, 13 insertions(+)

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git push

To https://github.com/Alexandr-Fenske/cs-lab02.git

! [rejected] master -> master (fetch first)

error: failed to push some refs to 'https://github.com/Alexandr-Fenske/cs-lab

02.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.

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git log

commit 20306eee692a256af7837ff1fe8ee13b85899d62 (HEAD -> master)

Author: Bob (FenskeAV)

Date: Sun Jun 28 22:02:13 2020 +0300

MIN

commit 946a9b2d9a83190702f9f43443a90852fbea9bca (origin/master, origin/HEAD)

Author: Alice(FenskeAV)

Date: Sun Jun 28 21:50:28 2020 +0300

Вывод деления двух чисел

commit c06ac63984bf77f881a89fd0e9a54b5fb0f89f8d

Author: Bob (FenskeAV)

Date: Sun Jun 28 21:38:24 2020 +0300

Вывод произведения двух чисел

commit c42e244d86c50d0dfb7320124b113969524741b2

Author: Alice(FenskeAV)

Date: Sun Jun 28 15:18:40 2020 +0300

git: add gitignore /bin /obj

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git remote -v

origin https://github.com/Alexandr-Fenske/cs-lab02.git (fetch)

origin https://github.com/Alexandr-Fenske/cs-lab02.git (push)

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/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/Alexandr-Fenske/cs-lab02

946a9b2..615d7b4 master -> origin/master

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git rebase ori^C

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git status

On branch master

Your branch and 'origin/master' have diverged,

and have 1 and 1 different commits each, respectively.

(use "git pull" to merge the remote branch into yours)

Untracked files:

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

project.depend

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git push

To https://github.com/Alexandr-Fenske/cs-lab02.git

! [rejected] master -> master (non-fast-forward)

error: failed to push some refs to 'https://github.com/Alexandr-Fenske/cs-lab

02.git'

hint: Updates were rejected because the tip of your current branch is behind

hint: its remote counterpart. Integrate the remote changes (e.g.

hint: 'git pull ...') before pushing again.

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git rebase origin/master

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

Applying: MIN

.git/rebase-apply/patch:10: space before tab in indent.

int min;

warning: 1 line adds whitespace errors.

Using index info to reconstruct a base tree...

M 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 MIN

Resolve all conflicts manually, mark them as resolved with

"git add/rm ", 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 --abo

rt".

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master|REBASE 1

/1)

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

\* 20306ee (master) MIN

| \* 615d7b4 (HEAD, origin/master, origin/HEAD) MAX

|/

\* 946a9b2 Вывод деления двух чисел

\* c06ac63 Вывод произведения двух чисел

\* c42e244 git: add gitignore /bin /obj

\* 92a7eb2 Вывод разности двух чисел

\* 1a3a96f Вывод суммы двух чисел

\* 9e72f73 Ввод двух чисел

\* 53c32d8 build: new project

\* 168281d code: заготовка программы

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master|REBASE 1

/1)

$ git add main.cpp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master|REBASE 1

/1)

$ git rebase --continue

Applying: MIN

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

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

\* 850bf92 (HEAD -> master) MIN

\* 615d7b4 (origin/master, origin/HEAD) MAX

\* 946a9b2 Вывод деления двух чисел

\* c06ac63 Вывод произведения двух чисел

\* c42e244 git: add gitignore /bin /obj

\* 92a7eb2 Вывод разности двух чисел

\* 1a3a96f Вывод суммы двух чисел

\* 9e72f73 Ввод двух чисел

\* 53c32d8 build: new project

\* 168281d code: заготовка программы

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ git push

Enumerating objects: 5, done.

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

Delta compression using up to 8 threads

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

Writing objects: 100% (3/3), 464 bytes | 464.00 KiB/s, done.

Total 3 (delta 1), reused 0 (delta 0)

remote: Resolving deltas: 100% (1/1), completed with 1 local object.

To https://github.com/Alexandr-Fenske/cs-lab02.git

615d7b4..850bf92 master -> master

## **10. Использование веток**

## Создаем ветку double

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob/project (master)

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/bob

$ cd ..

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02

$ cd alice

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice

$ cd project

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git branch double

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git checkout double

Switched to branch 'double'

## Меняю double на int (изначально было double), а также устраняю конфликт и опубликовываю финальные изменения на GitHub.

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (double)

$ git add main.cpp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (double)

$ git commit -m 'double to int'

[double d760135] double to int

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (double)

$ git log

commit d760135dfa3ef1a7eb51a47c6a3b908a1986aeca (HEAD -> double)

Author: Alice(FenskeAV)

Date: Sun Jun 28 23:56:46 2020 +0300

double to int

commit 615d7b4d1185f26a974341f2ddbefb571e6a3750 (origin/master, master)

Author: Alice(FenskeAV)

Date: Sun Jun 28 21:58:53 2020 +0300

MAX

commit 946a9b2d9a83190702f9f43443a90852fbea9bca

Author: Alice(FenskeAV)

Date: Sun Jun 28 21:50:28 2020 +0300

Вывод деления двух чисел

commit c06ac63984bf77f881a89fd0e9a54b5fb0f89f8d

Author: Bob (FenskeAV)

Date: Sun Jun 28 21:38:24 2020 +0300

Вывод произведения двух чисел

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (double)

$ git status

On branch double

Untracked files:

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

project.depend

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (double)

$ 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/Alexandr-Fenske/cs-lab02

615d7b4..850bf92 master -> origin/master

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (double)

$ git checkout master

Switched to branch 'master'

Your branch is behind 'origin/master' by 1 commit, and can be fast-forwarded.

(use "git pull" to update your local branch)

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

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

\* d760135 (double) double to int

| \* 850bf92 (origin/master) MIN

|/

\* 615d7b4 (HEAD -> master) MAX

\* 946a9b2 Вывод деления двух чисел

\* c06ac63 Вывод произведения двух чисел

\* c42e244 git: add gitignore /bin /obj

\* 92a7eb2 Вывод разности двух чисел

\* 1a3a96f Вывод суммы двух чисел

\* 9e72f73 Ввод двух чисел

\* 53c32d8 build: new project

\* 168281d code: заготовка программы

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git merge double

Updating 615d7b4..d760135

Fast-forward

main.cpp | 4 ++--

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

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

\* d760135 (HEAD -> master, double) double to int

| \* 850bf92 (origin/master) MIN

|/

\* 615d7b4 MAX

\* 946a9b2 Вывод деления двух чисел

\* c06ac63 Вывод произведения двух чисел

\* c42e244 git: add gitignore /bin /obj

\* 92a7eb2 Вывод разности двух чисел

\* 1a3a96f Вывод суммы двух чисел

\* 9e72f73 Ввод двух чисел

\* 53c32d8 build: new project

\* 168281d code: заготовка программы

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

Your branch and 'origin/master' have diverged,

and have 1 and 1 different commits each, respectively.

(use "git pull" to merge the remote branch into yours)

Untracked files:

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

project.depend

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git log

commit d760135dfa3ef1a7eb51a47c6a3b908a1986aeca (HEAD -> master, double)

Author: Alice(FenskeAV)

Date: Sun Jun 28 23:56:46 2020 +0300

double to int

commit 615d7b4d1185f26a974341f2ddbefb571e6a3750

Author: Alice(FenskeAV)

Date: Sun Jun 28 21:58:53 2020 +0300

MAX

commit 946a9b2d9a83190702f9f43443a90852fbea9bca

Author: Alice(FenskeAV)

Date: Sun Jun 28 21:50:28 2020 +0300

Вывод деления двух чисел

commit c06ac63984bf77f881a89fd0e9a54b5fb0f89f8d

Author: Bob (FenskeAV)

Date: Sun Jun 28 21:38:24 2020 +0300

Вывод произведения двух чисел

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git reset --soft HEAD~1

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

Your branch is behind 'origin/master' by 1 commit, and can be fast-forwarded.

(use "git pull" to update your local branch)

Changes to be committed:

(use "git reset HEAD ..." to unstage)

modified: main.cpp

Untracked files:

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

project.depend

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git log

commit 615d7b4d1185f26a974341f2ddbefb571e6a3750 (HEAD -> master)

Author: Alice(FenskeAV)

Date: Sun Jun 28 21:58:53 2020 +0300

MAX

commit 946a9b2d9a83190702f9f43443a90852fbea9bca

Author: Alice(FenskeAV)

Date: Sun Jun 28 21:50:28 2020 +0300

Вывод деления двух чисел

commit c06ac63984bf77f881a89fd0e9a54b5fb0f89f8d

Author: Bob (FenskeAV)

Date: Sun Jun 28 21:38:24 2020 +0300

Вывод произведения двух чисел

commit c42e244d86c50d0dfb7320124b113969524741b2

Author: Alice(FenskeAV)

Date: Sun Jun 28 15:18:40 2020 +0300

git: add gitignore /bin /obj

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git checkout double

Switched to branch 'double'

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (double)

$ git log

commit d760135dfa3ef1a7eb51a47c6a3b908a1986aeca (HEAD -> double)

Author: Alice(FenskeAV)

Date: Sun Jun 28 23:56:46 2020 +0300

double to int

commit 615d7b4d1185f26a974341f2ddbefb571e6a3750 (master)

Author: Alice(FenskeAV)

Date: Sun Jun 28 21:58:53 2020 +0300

MAX

commit 946a9b2d9a83190702f9f43443a90852fbea9bca

Author: Alice(FenskeAV)

Date: Sun Jun 28 21:50:28 2020 +0300

Вывод деления двух чисел

commit c06ac63984bf77f881a89fd0e9a54b5fb0f89f8d

Author: Bob (FenskeAV)

Date: Sun Jun 28 21:38:24 2020 +0300

Вывод произведения двух чисел

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (double)

$ git checkout master

Switched to branch 'master'

Your branch is behind 'origin/master' by 1 commit, and can be fast-forwarded.

(use "git pull" to update your local branch)

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git pull

Updating 615d7b4..850bf92

Fast-forward

main.cpp | 14 ++++++++++++++

1 file changed, 14 insertions(+)

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git log

commit 850bf92d2ee1ae01e06c4709251366ae4cd42bce (HEAD -> master, origin/maste

r)

Author: Bob (FenskeAV)

Date: Sun Jun 28 22:02:13 2020 +0300

MIN

commit 615d7b4d1185f26a974341f2ddbefb571e6a3750

Author: Alice(FenskeAV)

Date: Sun Jun 28 21:58:53 2020 +0300

MAX

commit 946a9b2d9a83190702f9f43443a90852fbea9bca

Author: Alice(FenskeAV)

Date: Sun Jun 28 21:50:28 2020 +0300

Вывод деления двух чисел

commit c06ac63984bf77f881a89fd0e9a54b5fb0f89f8d

Author: Bob (FenskeAV)

Date: Sun Jun 28 21:38:24 2020 +0300

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git merge double

Auto-merging main.cpp

CONFLICT (content): Merge conflict in main.cpp

Automatic merge failed; fix conflicts and then commit the result.

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master|MERGIN

G)

$ git status

On branch master

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

You have unmerged paths.

(fix conflicts and run "git commit")

(use "git merge --abort" to abort the merge)

Unmerged paths:

(use "git add ..." to mark resolution)

both modified: main.cpp

Untracked files:

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

project.depend

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master|MERGIN

G)

$ git show

commit 850bf92d2ee1ae01e06c4709251366ae4cd42bce (HEAD -> master, origin/maste

r)

Author: Bob (FenskeAV)

Date: Sun Jun 28 22:02:13 2020 +0300

MIN

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

index 9ba7042..6d05254 100644

--- a/main.cpp

+++ b/main.cpp

@@ -18,6 +18,7 @@ cout << "A \* B = " << a \* b << '\n';

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

+<<<<<<< HEAD

int max;

if (a > b) max = a;

@@ -29,6 +30,19 @@ int max;

else

cout << "MAX = " << max;

+=======

+ int min;

+

+ if (a > b) min = b;

+

+ if (b > a) min = a;

+

+ if (b == a) cout << "A = B";

+

+ else

+

+cout << "MIN = " << min;

+>>>>>>> MIN

return 0;

}

$ git status

On branch master

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

You have unmerged paths.

(fix conflicts and run "git commit")

(use "git merge --abort" to abort the merge)

Unmerged paths:

(use "git add ..." to mark resolution)

both modified: main.cpp

Untracked files:

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

project.depend

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master|MERGIN

G)

$ git commit

error: Committing is not possible because you have unmerged files.

hint: Fix them up in the work tree, and then use 'git add/rm '

hint: as appropriate to mark resolution and make a commit.

fatal: Exiting because of an unresolved conflict.

U main.cpp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master|MERGIN

G)

$ git status

On branch master

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

You have unmerged paths.

(fix conflicts and run "git commit")

(use "git merge --abort" to abort the merge)

Unmerged paths:

(use "git add ..." to mark resolution)

both modified: main.cpp

Untracked files:

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

project.depend

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

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master|MERGIN

G)

$ git add main.cpp

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master|MERGIN

G)

$ git commit

[master a209ea3] Merge branch 'double'

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git log

commit a209ea368cd860bb3f6d56aeb1e0bfa52f8236a5 (HEAD -> master)

Merge: 850bf92 d760135

Author: Alice(FenskeAV)

Date: Mon Jun 29 00:14:00 2020 +0300

Merge branch 'double'

commit d760135dfa3ef1a7eb51a47c6a3b908a1986aeca (double)

Author: Alice(FenskeAV)

Date: Sun Jun 28 23:56:46 2020 +0300

double to int

commit 850bf92d2ee1ae01e06c4709251366ae4cd42bce (origin/master)

Author: Bob (FenskeAV)

Date: Sun Jun 28 22:02:13 2020 +0300

MIN

commit 615d7b4d1185f26a974341f2ddbefb571e6a3750

Author: Alice(FenskeAV)

Date: Sun Jun 28 21:58:53 2020 +0300

Alexandr@DESKTOP-LE1CFFC MINGW32 ~/Desktop/lab02/alice/project (master)

$ git push

Enumerating objects: 10, done.

Counting objects: 100% (10/10), done.

Delta compression using up to 8 threads

Compressing objects: 100% (6/6), done.

Writing objects: 100% (6/6), 770 bytes | 385.00 KiB/s, done.

Total 6 (delta 2), reused 0 (delta 0)

remote: Resolving deltas: 100% (2/2), completed with 1 local object.

To https://github.com/Alexandr-Fenske/cs-lab02.git

850bf92..a209ea3 master -> master

Ссылка на GitHub: [https://github.com/Alexandr-Fenske/cs lab02](https://github.com/Alexandr-Fenske/cs%20lab02)