**[Национальный исследовательский университет "МЭИ"](https://www.mpei.ru/)**

**Отчёт по лабораторной работе №2**

# тема: «Система контроля версий Git»

# дисциплина: «[Разработка ПО систем управления](https://uii.bitbucket.io/study/courses/cs)»

Отчёт подготовил студент

Группа А-02-19

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29.03.2020.

ALICE –

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02

$ ls

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02

$ mkdir Alice

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02

$ mkdir bob

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02

$ cd alice

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice

$ mkdir Project

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice

$ cd project

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project

$ cd ..

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice

$ cd project

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project

$ git init

Initialized empty Git repository in C:/Users/21006/Desktop/lab02/Alice/Project/.

git/

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ ls -A

.git/

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

1. ***$ git status***

On branch master - ***На какой ветке мы находимся***

No commits yet ***- пока ещё нет коммитов***

Untracked files: ***- не отслеживаемые файлы***

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

Project.cbp ***- названия не отслеживаемых файлов***

main.cpp

nothing added to commit but untracked files present (use "git add" to track) ***- нечего не отслеживается, чтобы закоммитить***

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add main.cpp

21006@DESKTOP-026769K 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)

Project.cbp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'code: заготовка программы'

[master (root-commit) 645bfe8] code: заготовка программы

1 file changed, 9 insertions(+)

create mode 100644 main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add project.cbp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'build: add project file'

On branch master

Untracked files:

Project.cbp

nothing added to commit but untracked files present

21006@DESKTOP-026769K 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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'build: add project file'

[master 201e099] build: add project file

1 file changed, 43 insertions(+)

create mode 100644 Project.cbp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

1. ***$ 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 ***- отличие будет заключаться в том, что появится данная строчка, сообщающая об изменении того или иного файла***

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")

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m "Upg: a-b"

[master 6c0dc07] Upg: a-b

1 file changed, 5 insertions(+), 1 deletion(-)

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add -u

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m " Upg: a-b a+b"

[master bed4e4e] Upg: a-b a+b

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

Untracked files:

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

bin/

obj/

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

Untracked files:

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

.gitignore

bin/

obj/

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

Untracked files:

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

.gitignore

obj/

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

Untracked files:

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

.gitignore

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add .gitignore

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'New:ignore files'

[master b8170e8] New:ignore files

1 file changed, 2 insertions(+)

create mode 100644 .gitignore

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

1. ***$ git log --stat***

commit b8170e8cb2429bf084d19f71b3c1a646b2078b81 (HEAD -> master***) - ХЭШ Коммита ( с помощью хэша мы можем возвращаться к тому или иному коммиту )***

Author: Alice (MorozovGZ) ***- Автор Коммита***

Date: Sun Mar 29 18:29:27 2020 +0300 ***- Дата создания Коммита***

New:ignore files ***- Подписсь коммита, которую пишет сам пользователь, добавляющий коммит***

.gitignore | 2 ++ ***- название файла, который добавился в коммит***

1 file changed, 2 insertions(+)

commit bed4e4ec802c886c4771c5aff7381cff18bf87f5

Author: Alice (MorozovGZ)

Date: Sun Mar 29 16:10:33 2020 +0300

Upg: a-b a+b

main.cpp | 3 ++-

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

commit 6c0dc07b215b333dc8c60f1f629236980ff93972

Author: Alice (MorozovGZ)

Date: Sun Mar 29 16:07:16 2020 +0300

Upg: a-b

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git log --oneline --decorate

b8170e8 (HEAD -> master) New:ignore files

bed4e4e Upg: a-b a+b

6c0dc07 Upg: a-b

201e099 build: add project file

645bfe8 code: заготовка программы

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

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

\* b8170e8 (HEAD -> master) New:ignore files

\* bed4e4e Upg: a-b a+b

\* 6c0dc07 Upg: a-b

\* 201e099 build: add project file

\* 645bfe8 code: заготовка программы

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git log --grep "build:"

commit 201e09919a3ca5829d1bc9127458617391f390e5

Author: Alice (MorozovGZ)

Date: Sun Mar 29 16:01:00 2020 +0300

build: add project file

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git log -- project.cbp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git show HEAD

commit b8170e8cb2429bf084d19f71b3c1a646b2078b81 (HEAD -> master)

Author: Alice (MorozovGZ)

Date: Sun Mar 29 18:29:27 2020 +0300

New:ignore files

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

new file mode 100644

index 0000000..0a079b6

--- /dev/null

+++ b/.gitignore

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

+/bin

+/obj

\ No newline at end of file

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git show master

commit b8170e8cb2429bf084d19f71b3c1a646b2078b81 (HEAD -> master)

Author: Alice (MorozovGZ)

Date: Sun Mar 29 18:29:27 2020 +0300

New:ignore files

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

new file mode 100644

index 0000000..0a079b6

--- /dev/null

+++ b/.gitignore

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

+/bin

+/obj

\ No newline at end of file

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git show b8170e

commit b8170e8cb2429bf084d19f71b3c1a646b2078b81 (HEAD -> master)

Author: Alice (MorozovGZ)

Date: Sun Mar 29 18:29:27 2020 +0300

New:ignore files

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

new file mode 100644

index 0000000..0a079b6

--- /dev/null

+++ b/.gitignore

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

+/bin

+/obj

\ No newline at end of file

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

1. ***$ git diff***

diff --git a/main.cpp b/main.cpp ***- Где произошли изменения***

index 2f44235..ef4b6af 100644 ***- ХЭШ коммита***

--- a/main.cpp ***- в каких файлах происходили изменения***

+++ b/main.cpp

@@ -9,6 +9,7 @@ int a, b; ***- изменённая версия содержимого файла***

cin >> a >> b;

cout<<"a+b="<<a+b<

-cout<<"a-b="<<a-b;

+cout<<"a-b="<<a-b<<endl;

+cout<<"a\*b="<<a\*b;

return 0;

}

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git diff HEAD~2

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

new file mode 100644

index 0000000..0a079b6

--- /dev/null

+++ b/.gitignore

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

+/bin

+/obj

\ No newline at end of file

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

index 93baa3f..ef4b6af 100644

--- a/main.cpp

+++ b/main.cpp

@@ -8,6 +8,8 @@ int main()

int a, b;

cin >> a >> b;

-cout<<"a+b="<<a+b;

+cout<<"a+b="<<a+b<<endl;

+cout<<"a-b="<<a-b<<endl;

+cout<<"a\*b="<<a\*b;

return 0;

}

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git diff HEAD~2 HEAD

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

new file mode 100644

index 0000000..0a079b6

--- /dev/null

+++ b/.gitignore

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

+/bin

+/obj

\ No newline at end of file

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

index 93baa3f..2f44235 100644

--- a/main.cpp

+++ b/main.cpp

@@ -8,6 +8,7 @@ int main()

int a, b;

cin >> a >> b;

-cout<<"a+b="<<a+b;

+cout<<"a+b="<<a+b<<endl;

+cout<<"a-b="<<a-b;

return 0;

}

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git diff HEAD~2 HEAD~4

diff --git a/Project.cbp b/Project.cbp

deleted file mode 100644

index e066312..0000000

--- a/Project.cbp

+++ /dev/null

@@ -1,43 +0,0 @@

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git diff HEAD~2 HEAD~3

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

index 93baa3f..b4392ec 100644

--- a/main.cpp

+++ b/main.cpp

@@ -4,10 +4,6 @@ using namespace std;

int main()

{

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

-int a, b;

-

-cin >> a >> b;

-cout<<"a+b="<<a+b;

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

return 0;

}

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'Upg:a\*b'

[master 3952a51] Upg:a\*b

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git reset --hard HEAD~1

HEAD is now at b8170e8 New:ignore files

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git checkout HEAD -- main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git push -u origin master

Enumerating objects: 15, done.

Counting objects: 100% (15/15), done.

Delta compression using up to 8 threads

Compressing objects: 100% (13/13), done.

Writing objects: 100% (15/15), 1.93 KiB | 658.00 KiB/s, done.

Total 15 (delta 1), reused 0 (delta 0)

remote: Resolving deltas: 100% (1/1), done.

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

\* [new branch] master -> master

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git remote add origin https://github.com/MorozovGZ/cs-lab02.git^C

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git fetch

remote: Enumerating objects: 5, done.

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

remote: Compressing objects: 100% (1/1), done.

remote: Total 3 (delta 2), reused 3 (delta 2), pack-reused 0

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

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

b8170e8..803c510 master -> origin/master

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

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

\* 803c510 (origin/master) UPD a\*b BOB

\* b8170e8 (HEAD -> master) New:ignore files

\* bed4e4e Upg: a-b a+b

\* 6c0dc07 Upg: a-b

\* 201e099 build: add project file

\* 645bfe8 code: заготовка программы

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git pull --ff-only

Updating b8170e8..803c510

Fast-forward

main.cpp | 3 ++-

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'UPG a/b Alice'

[master 83c15a9] UPG a/b Alice

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

21006@DESKTOP-026769K 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), 329 bytes | 329.00 KiB/s, done.

Total 3 (delta 2), reused 0 (delta 0)

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

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

803c510..83c15a9 master -> master

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git add main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git commit -m 'UPd MAX Alice'

[master 3997685] UPd MAX Alice

1 file changed, 9 insertions(+), 2 deletions(-)

21006@DESKTOP-026769K 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), 357 bytes | 357.00 KiB/s, done.

Total 3 (delta 2), reused 0 (delta 0)

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

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

83c15a9..3997685 master -> master

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git branch double

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git checkout double

Switched to branch 'double'

M main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (double)

$ git add main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (double)

$ git commit -m 'UPD Double Alice'

[double a47fd1c] UPD Double Alice

1 file changed, 15 insertions(+), 1 deletion(-)

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (double)

$ git checkout master

Switched to branch 'master'

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git fetch

remote: Enumerating objects: 5, done.

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

remote: Compressing objects: 100% (1/1), done.

remote: Total 3 (delta 2), reused 3 (delta 2), pack-reused 0

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

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

3997685..11350c6 master -> origin/master

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

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

\* a47fd1c (double) UPD Double Alice

| \* 11350c6 (origin/master) UPD: min bob

|/

\* 3997685 (HEAD -> master) UPd MAX Alice

\* 83c15a9 UPG a/b Alice

\* 803c510 UPD a\*b BOB

\* b8170e8 New:ignore files

\* bed4e4e Upg: a-b a+b

\* 6c0dc07 Upg: a-b

\* 201e099 build: add project file

\* 645bfe8 code: заготовка программы

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git merge double

Updating 3997685..a47fd1c

Fast-forward

main.cpp | 16 +++++++++++++++-

1 file changed, 15 insertions(+), 1 deletion(-)

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git push

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

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

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

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

\* a47fd1c (HEAD -> master, double) UPD Double Alice

| \* 11350c6 (origin/master) UPD: min bob

|/

\* 3997685 UPd MAX Alice

\* 83c15a9 UPG a/b Alice

\* 803c510 UPD a\*b BOB

\* b8170e8 New:ignore files

\* bed4e4e Upg: a-b a+b

\* 6c0dc07 Upg: a-b

\* 201e099 build: add project file

\* 645bfe8 code: заготовка программы

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git reset --hard HEAD~1

HEAD is now at 3997685 UPd MAX Alice

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git show

commit 39976854f2b7c59268607b4a6e563bb79237c163 (HEAD -> master)

Author: Alice (MorozovGZ)

Date: Sun Mar 29 20:51:05 2020 +0300

UPd MAX Alice

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

index d7fbcfb..40fc0ad 100644

--- a/main.cpp

+++ b/main.cpp

@@ -5,12 +5,19 @@ using namespace std;

int main()

{

cout << "Enter A and B: ";

-int a, b;

+int a, b,max;

cin >> a >> b;

cout<<"a+b="<<a+b<

cout<<"a-b="<<a-b<

cout<<"a\*b="<<a\*b<

-cout<<"a/b="<

+cout<<"a/b="<

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git reflog

3997685 (HEAD -> master) HEAD@{0}: reset: moving to HEAD~1

a47fd1c (double) HEAD@{1}: merge double: Fast-forward

3997685 (HEAD -> master) HEAD@{2}: checkout: moving from double to master

a47fd1c (double) HEAD@{3}: commit: UPD Double Alice

3997685 (HEAD -> master) HEAD@{4}: checkout: moving from master to double

3997685 (HEAD -> master) HEAD@{5}: commit: UPd MAX Alice

83c15a9 HEAD@{6}: commit: UPG a/b Alice

803c510 HEAD@{7}: pull --ff-only: Fast-forward

b8170e8 HEAD@{8}: reset: moving to HEAD~1

3952a51 HEAD@{9}: commit: Upg:a\*b

b8170e8 HEAD@{10}: commit: New:ignore files

bed4e4e HEAD@{11}: commit: Upg: a-b a+b

6c0dc07 HEAD@{12}: commit: Upg: a-b

201e099 HEAD@{13}: commit: build: add project file

645bfe8 HEAD@{14}: commit (initial): code: заготовка программы

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git reset --hard a47fd

HEAD is now at a47fd1c UPD Double Alice

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git checkout double

Switched to branch 'double'

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (double)

$ git checkout master

Switched to 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)

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git fetch

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

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

\* a47fd1c (HEAD -> master, double) UPD Double Alice

| \* 11350c6 (origin/master) UPD: min bob

|/

\* 3997685 UPd MAX Alice

\* 83c15a9 UPG a/b Alice

\* 803c510 UPD a\*b BOB

\* b8170e8 New:ignore files

\* bed4e4e Upg: a-b a+b

\* 6c0dc07 Upg: a-b

\* 201e099 build: add project file

\* 645bfe8 code: заготовка программы

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git pull --ff-only

fatal: Not possible to fast-forward, aborting.

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git pull

Auto-merging main.cpp

CONFLICT (content): Merge conflict in main.cpp

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master|MERGING)

$ git pull

error: Pulling 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.

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master|MERGING)

$ git pull

error: Pulling 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.

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master|MERGING)

$ git push

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

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

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master|MERGING)

$ git pull

error: Pulling 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.

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master|MERGING)

$ 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)

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")

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master|MERGING)

$ git add main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master|MERGING)

$ git commit -m 'fVersion Alice'

[master 5ca83ae] fVersion Alice

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

Your branch is ahead of 'origin/master' by 2 commits.

(use "git push" to publish your local commits)

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)

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git status

On branch master

Your branch is ahead of 'origin/master' by 2 commits.

(use "git push" to publish your local commits)

nothing to commit, working tree clean

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

$ git pull

Already up to date.

21006@DESKTOP-026769K 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), 684 bytes | 684.00 KiB/s, done.

Total 6 (delta 4), reused 0 (delta 0)

remote: Resolving deltas: 100% (4/4), completed with 2 local objects.

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

11350c6..5ca83ae master -> master

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/alice/project (master)

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

\* 5ca83ae (HEAD -> master, origin/master) fVersion Alice

|\

| \* 11350c6 UPD: min bob

\* | a47fd1c (double) UPD Double Alice

|/

\* 3997685 UPd MAX Alice

\* 83c15a9 UPG a/b Alice

\* 803c510 UPD a\*b BOB

\* b8170e8 New:ignore files

\* bed4e4e Upg: a-b a+b

\* 6c0dc07 Upg: a-b

\* 201e099 build: add project file

\* 645bfe8 code: заготовка программы

BOB –

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob

$ git clone https://github.com/MorozovGZ/cs-lab02.git

Cloning into 'cs-lab02'...

remote: Enumerating objects: 15, done.

remote: Counting objects: 100% (15/15), done.

remote: Compressing objects: 100% (12/12), done.

remote: Total 15 (delta 1), reused 15 (delta 1), pack-reused 0

Unpacking objects: 100% (15/15), done.

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob

$ cd project

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git init

Reinitialized existing Git repository in C:/Users/21006/Desktop/lab02/bob/projec

t/.git/

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git add main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git commit -m 'UPD a\*b BOB'

[master 803c510] UPD a\*b BOB

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

21006@DESKTOP-026769K 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), 327 bytes | 327.00 KiB/s, done.

Total 3 (delta 2), reused 0 (delta 0)

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

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

b8170e8..803c510 master -> master

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git fetch

remote: Enumerating objects: 5, done.

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

remote: Compressing objects: 100% (1/1), done.

remote: Total 3 (delta 2), reused 3 (delta 2), pack-reused 0

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

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

803c510..83c15a9 master -> origin/master

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

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

\* 83c15a9 (origin/master, origin/HEAD) UPG a/b Alice

\* 803c510 (HEAD -> master) UPD a\*b BOB

\* b8170e8 New:ignore files

\* bed4e4e Upg: a-b a+b

\* 6c0dc07 Upg: a-b

\* 201e099 build: add project file

\* 645bfe8 code: заготовка программы

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git pull --ff-only

Updating 803c510..83c15a9

Fast-forward

main.cpp | 3 ++-

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git add main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git commit -m 'UPD: min bob'

[master 357df8c] UPD: min bob

1 file changed, 9 insertions(+), 2 deletions(-)

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git push

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

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

error: failed to push some refs to 'https://github.com/MorozovGZ/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.

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git fetch

remote: Enumerating objects: 5, done.

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

remote: Compressing objects: 100% (1/1), done.

remote: Total 3 (delta 2), reused 3 (delta 2), pack-reused 0

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

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

83c15a9..3997685 master -> origin/master

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

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

\* 357df8c (HEAD -> master) UPD: min bob

| \* 3997685 (origin/master, origin/HEAD) UPd MAX Alice

|/

\* 83c15a9 UPG a/b Alice

\* 803c510 UPD a\*b BOB

\* b8170e8 New:ignore files

\* bed4e4e Upg: a-b a+b

\* 6c0dc07 Upg: a-b

\* 201e099 build: add project file

\* 645bfe8 code: заготовка программы

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git rebase origin/master

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

Applying: UPD: min bob

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 UPD: min bob

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 --abort"

.

***На данном этапе у нас произошёл конфликт версий между Алисой и Бобом, мы в ручную исправляем ситуацию в файле main.cpp, затем коммитим изменения в данном файле, тем самым решаем конфликт версий.***

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master|REBASE 1/1)

$ git add main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master|REBASE 1/1)

$ git rebase --continue

Applying: UPD: min bob

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git status

On branch master

Your branch is ahead of 'origin/master' by 1 commit.

(use "git push" to publish your local commits)

Untracked files:

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

main.exe

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

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

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

\* 11350c6 (HEAD -> master) UPD: min bob

\* 3997685 (origin/master, origin/HEAD) UPd MAX Alice

\* 83c15a9 UPG a/b Alice

\* 803c510 UPD a\*b BOB

\* b8170e8 New:ignore files

\* bed4e4e Upg: a-b a+b

\* 6c0dc07 Upg: a-b

\* 201e099 build: add project file

\* 645bfe8 code: заготовка программы

21006@DESKTOP-026769K 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), 374 bytes | 374.00 KiB/s, done.

Total 3 (delta 2), reused 0 (delta 0)

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

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

3997685..11350c6 master -> master

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git add main.cpp

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git commit 'finish version Bob'

error: pathspec 'finish version Bob' did not match any file(s) known to git

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)

$ git commit 'fversion Bob'

error: pathspec 'fversion Bob' did not match any file(s) known to git

21006@DESKTOP-026769K MINGW32 ~/Desktop/lab02/bob/project (master)