

Ministerul Educației al Republicii Moldova

Universitatea Tehnică a Moldovei

Catedra Tehnologii Informaționale

RAPORT

Lucrarea de laborator#2

la Medii Interactive de Dezvoltare a Produselor Soft

A efectuat:

Malachi Vitalie

st.gr. TI – 143

A verificat:

Cojanu Irina

lect.asist.

Tema: Version Control Systems si modul de setare a unui server

Scopul lucrării:

- Intelegerea si folosirea CLI (basic level)
- Administrarea remote a masinilor linux machine folosind SSH (remote code editing)
- Version Control Systems (git || mercurial || svn)
- Compileaza codul C/C++/Java/Python prin intermediul CLI, folosind compilatoarele gcc/g++/javac/python

Formularea condiției problemei (sarcina de lucru): *Advanced*

Level (grade 9 || 10):

- seteaza un branch to track a remote origin pe care vei putea sa faci push (ex. Github, Bitbucket or custom server)
- reseteaza un branch la commit-ul anterior
- merge 2 branches
- conflict solving between 2 branches *Bonus Point:*
- Scrie un script care va compila HelloWorldPrograms projects.

Implimentare task-uri:

- *Advanced Level* (grade 9 || 10):
 - seteaza un branch to track a remote origin pe care vei putea sa faci push (ex. Github, Bitbucket or custom server)

```
MINGW64:/c/MIDPS

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (master)
$ git checkout -b branch1 origin/master
Branch branch1 set up to track remote branch master from origin.
Switched to a new branch 'branch1'

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ echo "#branch1" >> test.txt

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git add test.txt
warning: LF will be replaced by CRLF in test.txt.
The file will have its original line endings in your working directory.

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git commit -m "adaugat test.txt"
[branch1 8ced3a3] adaugat test.txt
warning: LF will be replaced by CRLF in test.txt.
The file will have its original line endings in your working directory.
1 file changed, 1 insertion(+)
create mode 100644 test.txt

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git push origin master
Everything up-to-date

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git push origin branch1
error: unable to read askpass response from 'C:/Program Files/Git/mingw64/libexec/git-core/git-gui--askpass'
Username for 'https://github.com':
error: unable to read askpass response from 'C:/Program Files/Git/mingw64/libexec/git-core/git-gui--askpass'
Password for 'https://github.com':
remote: Anonymous access to MalachiVitalie/MIDPS.git denied.
fatal: Authentication failed for 'https://github.com/MalachiVitalie/MIDPS.git/'

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git config --global user.name "MalachiVitalie"

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git push origin branch1
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 326 bytes | 0 bytes/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/MalachiVitalie/MIDPS.git
 * [new branch]      branch1 -> branch1

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ |
```

- reseteaza un branch la commit-ul anterior

```
MINGW64:/c/MIDPS

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git log-1
git: 'log-1' is not a git command. See 'git --help'.

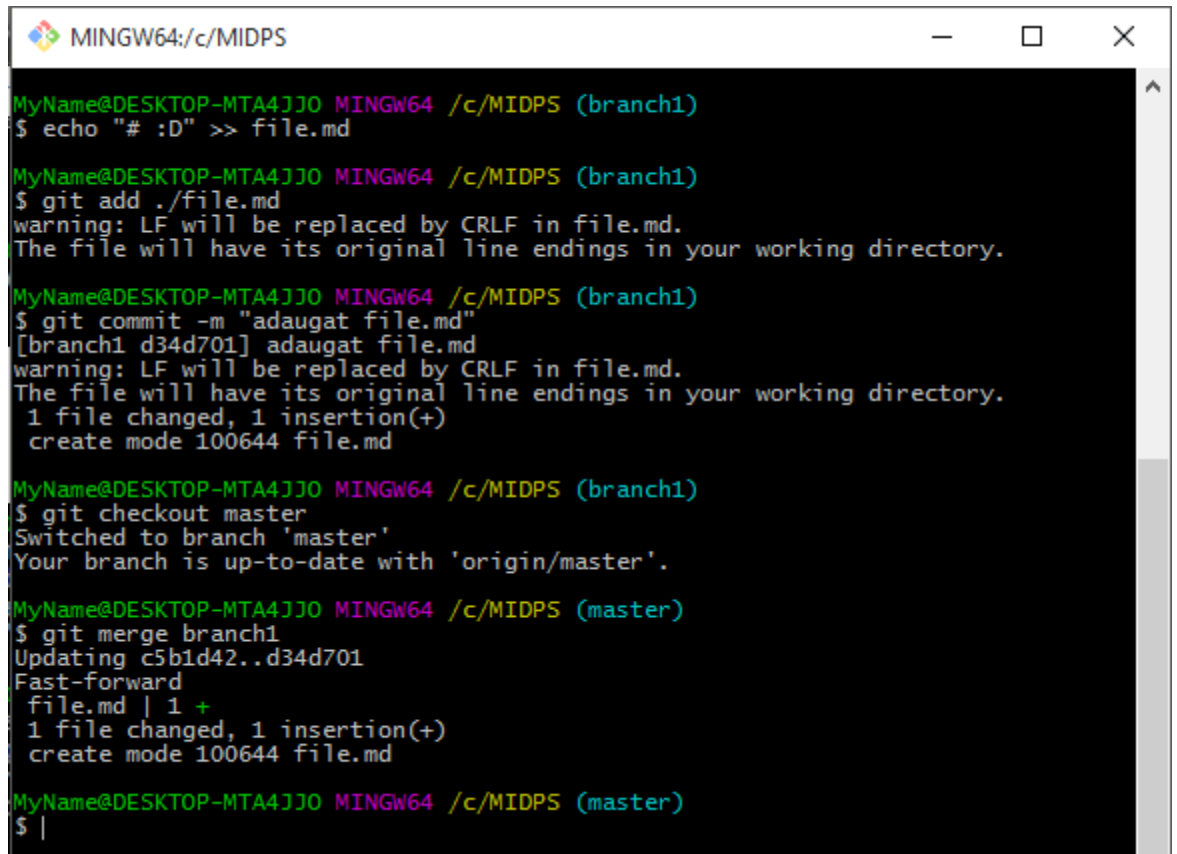
MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git log -1
commit 8ced3a38391f35fe3decba30eea4d42d99b16bcf
Author: Vitalie Malachi <myname.vetalik@gmail.com>
Date:   Wed Apr 20 05:18:42 2016 -0800

    adaugat test.txt

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git reset --hard HEAD^
HEAD is now at c5b1d42 added lab#1

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ |
```

- merge 2 branches



```
MINGW64:/c/MIDPS

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ echo "# :D" >> file.md

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git add ./file.md
warning: LF will be replaced by CRLF in file.md.
The file will have its original line endings in your working directory.

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git commit -m "adaugat file.md"
[branch1 d34d701] adaugat file.md
warning: LF will be replaced by CRLF in file.md.
The file will have its original line endings in your working directory.
1 file changed, 1 insertion(+)
create mode 100644 file.md

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git checkout master
Switched to branch 'master'
Your branch is up-to-date with 'origin/master'.

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (master)
$ git merge branch1
Updating c5b1d42..d34d701
Fast-forward
 file.md | 1 +
1 file changed, 1 insertion(+)
create mode 100644 file.md

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (master)
$ |
```

- conflict solving between 2 branches

```
MINGW64:/c/MIDPS
MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (master)
$ echo "# conflict master" >> conf.md

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (master)
$ git add conf.md
warning: LF will be replaced by CRLF in conf.md.
The file will have its original line endings in your working directory.

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (master)
$ git commit -m "conflict"
[master ff5f9a1] conflict
warning: LF will be replaced by CRLF in conf.md.
The file will have its original line endings in your working directory.
1 file changed, 1 insertion(+)
create mode 100644 conf.md

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (master)
$ git checkout
Your branch is ahead of 'origin/master' by 2 commits.
(use "git push" to publish your local commits)

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (master)
$ git checkout master
Already on 'master'
Your branch is ahead of 'origin/master' by 2 commits.
(use "git push" to publish your local commits)

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (master)
$ git checkout branch1
Switched to branch 'branch1'
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ echo "# conflict branch1" >> conf.md

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git add conf.md
warning: LF will be replaced by CRLF in conf.md.
The file will have its original line endings in your working directory.

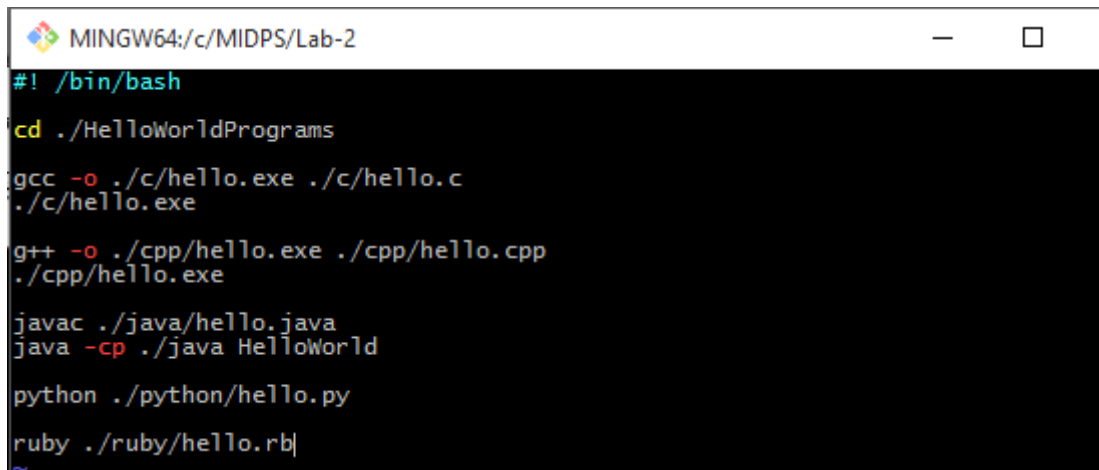
MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git commit -m "conflict"
[branch1 9b04023] conflict
warning: LF will be replaced by CRLF in conf.md.
The file will have its original line endings in your working directory.
1 file changed, 1 insertion(+)
create mode 100644 conf.md

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1)
$ git merge master
Auto-merging conf.md
CONFLICT (add/add): Merge conflict in conf.md
Automatic merge failed; fix conflicts and then commit the result.

MyName@DESKTOP-MTA4JJ0 MINGW64 /c/MIDPS (branch1|MERGING)
$ git mergetool
```

- *Bonus Point:*

□ Scribe un script care va compila HelloWorldPrograms projects.

A screenshot of a terminal window titled "MINGW64:/c/MIDPS/Lab-2". The terminal shows a series of commands and their outputs for compiling "HelloWorld" programs in different languages. The commands are: `cd ./HelloWorldPrograms`, `gcc -o ./c/hello.exe ./c/hello.c`, `g++ -o ./cpp/hello.exe ./cpp/hello.cpp`, `javac ./java/hello.java`, `java -cp ./java HelloWorld`, `python ./python/hello.py`, and `ruby ./ruby/hello.rb`. The terminal has a black background with white and colored text (yellow for `cd`, red for `cp`).

Link-ul catre repozitoriu online:

<https://github.com/MalachiVitalie>

Concluzie:

In urma efectuării acestei lucrări de laborator au fost capătate primele deprinderi de baza in lucrul cu un VCS. In aceasta lucrare de laborator a fost folosit GIT ca fiind unul dintre cele mai populare DVCS si unul dintre cele mai comode in lucru.

Am capatat deprinderi in lucrul cu repozitoriul atat online cit si local. M-am invatat sa initializez un repozitoriu sa-l clonez s.a. Pe langa aceste doua manipulări cu repozitoriul am folosit si alte posibilitati asa cum: crearea unui nou branch, am facut unirea a doua branch-uri, am invatat cum sa hotarim unele conflicte care pot aparea cind facem “merge” la branch-uri.

De asemenea am invatat cum sa compilez cod sursa in diferite limbaje atat direct din CLI cit si prin intermediul unui script creat anterior. Evident ca prin intermediul scriptului este mult mai usor din cauza ca scriptul o data creat nu necesita o multime de comenzi pentru a face ceea ce deha a fost facut o data.