

Ministerul Educației al Republicii Moldova

Universitatea Tehnică a Moldovei

Catedra Tehnologii Informaționale

RAPORT

Lucrarea de laborator nr.2

la Medii Interactive de Dezvoltare a Produselor Soft

A efectuat:

st.gr.TI-143

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A verificat:

lector superior:

Cojocarui Svetlana

lector asistent:

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Tema: Version Control System si modulul 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):

- *Basic Level* (nota 5 || 6) :
 - conecteaza-te la server folosind SSH
 - compileaza cel putin 2 sample programs din setul HelloWorldPrograms folosind CLI
 - executa primul commit folosind VCS
- *Normal Level* (nota 7 || 8):
 - initializeaza un nou repository
 - configureaza-ti VCS
 - crearea branch-urilor (creeaza cel putin 2 branches)
 - commit pe ambele branch-uri (cel putin 1 commit per branch)
- *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:*
 - Scribe un script care va compila HelloWorldPrograms projects.

Implimentare task-uri:

- *Normal Level* (nota 7 || 8):
 - initializeaza un nou repository
 - configureaza-ti VCS

```
Alex@MINGW32 /d/MIDPS (master)
$ git init
Reinitialized existing Git repository in D:/MIDPS/.git/

Alex@MINGW32 /d/MIDPS (master)
$ git config --global user.name "DumbravaAlexandru"

Alex@MINGW32 /d/MIDPS (master)
$ git config --global user.email "sahsa.loky.ad92@gmail.com"

Alex@MINGW32 /d/MIDPS (master)
$ |
```

- crearea branch-urilor (creeaza cel putin 2 branches)
- commit pe ambele branch-uri (cel putin 1 commit per branch)

```
Alex@MINGW32 /d/MIDPS (master)
$ git branch firstBranch

Alex@MINGW32 /d/MIDPS (master)
$ git branch secondBranch

Alex@MINGW32 /d/MIDPS (master)
$ echo "# commit on firstBranch" >> first.txt

Alex@MINGW32 /d/MIDPS (master)
$ echo "# commit on secondBranch" >> second.txt

Alex@MINGW32 /d/MIDPS (master)
$ git checkout firstBranch
Switched to branch 'firstBranch'

Alex@MINGW32 /d/MIDPS (firstBranch)
$ git add first.txt

Alex@MINGW32 /d/MIDPS (firstBranch)
$ git commit -m "first commit on this branch"
[firstBranch 9253e48] first commit on this branch
1 file changed, 1 insertion(+)
create mode 100644 first.txt

Alex@MINGW32 /d/MIDPS (firstBranch)
$ git checkout secondBranch
Switched to branch 'secondBranch'

Alex@MINGW32 /d/MIDPS (secondBranch)
$ git add second.txt

Alex@MINGW32 /d/MIDPS (secondBranch)
$ git commit -m "first commit on this branch"
[secondBranch 6fd2130] first commit on this branch
1 file changed, 1 insertion(+)
create mode 100644 second.txt

Alex@MINGW32 /d/MIDPS (secondBranch)
$ git checkout master
Switched to branch 'master'

Alex@MINGW32 /d/MIDPS (master)
$ git branch
firstBranch
* master
secondBranch
```

- *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)

```
Alex@MINGW32 /d/MIDPS (newTwoBranch)
$ git checkout -b track origin/master
Branch track set up to track remote branch master from origin.
Switched to a new branch 'track'

Alex@MINGW32 /d/MIDPS (track)
$ echo "# commit on track Branch" >> track.txt

Alex@MINGW32 /d/MIDPS (track)
$ git add track.txt

Alex@MINGW32 /d/MIDPS (track)
$ git commit -m "commit on this track Branch"
[track 2853a4c] commit on this track Branch
1 file changed, 1 insertion(+)
create mode 100644 track.txt

Alex@MINGW32 /d/MIDPS (track)
$ git push origin track
Counting objects: 3, done.
Delta compression using up to 2 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 318 bytes | 0 bytes/s, done.
Total 3 (delta 1), reused 0 (delta 0)
To git@github.com:DumbravaAlexandru/MIDPS.git
 * [new branch]      track -> track
```

- reseteaza un branch la commit-ul anterior

```
Alex@MINGW32 /d/MIDPS (track)
$ git log -2
commit 2853a4cc49d4f9fc0f1c9ee8737573895dccc0ab
Author: DumbravaAlexandru <sahsa.loky.ad92@gmail.com>
Date: Wed May 25 00:12:46 2016 +0300

    commit on this track Branch

commit 45720030d42f842335af0dbbe52f62e833286a3e
Author: Dumbrava Alexandru <sasha.loky.ad92@gmail.com>
Date: Mon May 23 13:43:19 2016 +0300

    Update README.md

Alex@MINGW32 /d/MIDPS (track)
$ git reset --hard HEAD^
HEAD is now at 4572003 Update README.md
```

- merge 2 branches
- conflict solving between 2 branches

Concluzie:

In urma efectuării acestei lucrări de laborator au fost capătate primele deprinderi de bază în lucrul cu un VCS. În această lucrare de laborator a fost folosit GIT ca fiind unul dintre cele mai populare VCS și unul dintre cele mai comode în lucru.

Link-ul către repozitoriu:

<https://github.com/DumbravaAlexandru/MIDPS>