Ministerul Educației al Republicii Moldova
Universitatea Tehnică a Moldovei

RAPORT

La lucrarea de laborator nr. 2
la disciplina «MIDPS»

«Version Control Systems si modul de setare a unui server»

A efectuat: studentul gr. T-145 Ialticenco A.
A verificat: lector univ. Cojocaru S.

Chisinau 2016

Obiectivele lucrării

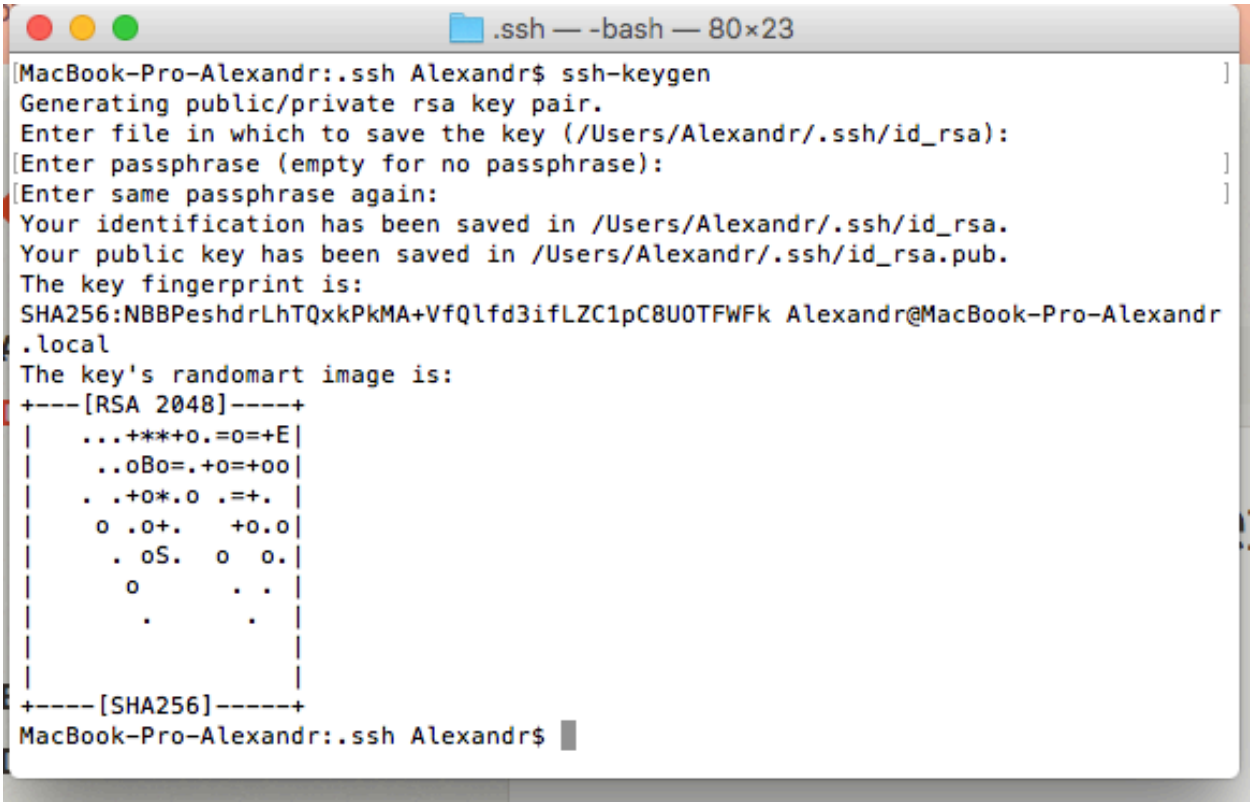
- Intelegerea si folosirea CLI (basic level)
- Administrarea remote a masinilor linux machine folosind SSH (remote code editing)
- Version Control Systems (git || mercurial || svn)
- Compileaza codul C/C++/Java/Python prin intermediul CLI, folosind compilatoarele gcc/g++/javac/python

Sarcina lucrarii

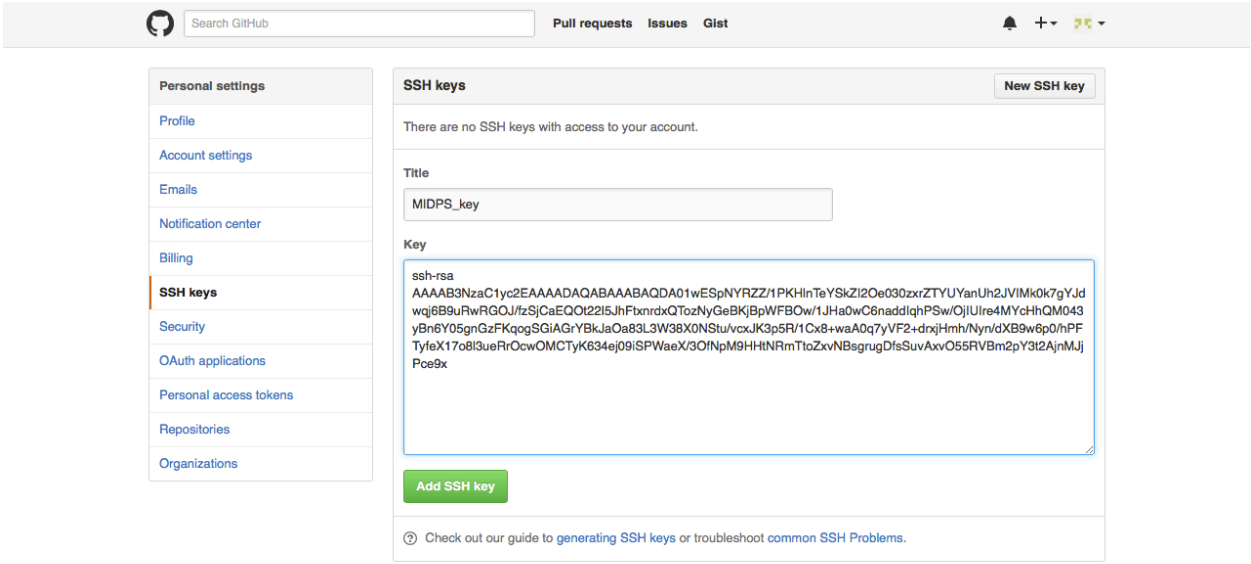
- ***Advanced Level*** **(nota 9 || 10):**
  seteaza un branch to track a remote origin pe care vei putea sa faci push (ex. Github, Bitbucket or custom server)
  reseteaza un branch la commit-ul anterior
  merge 2 branches
  conflict solving between 2 branches
- ***Bonus Point*****:**

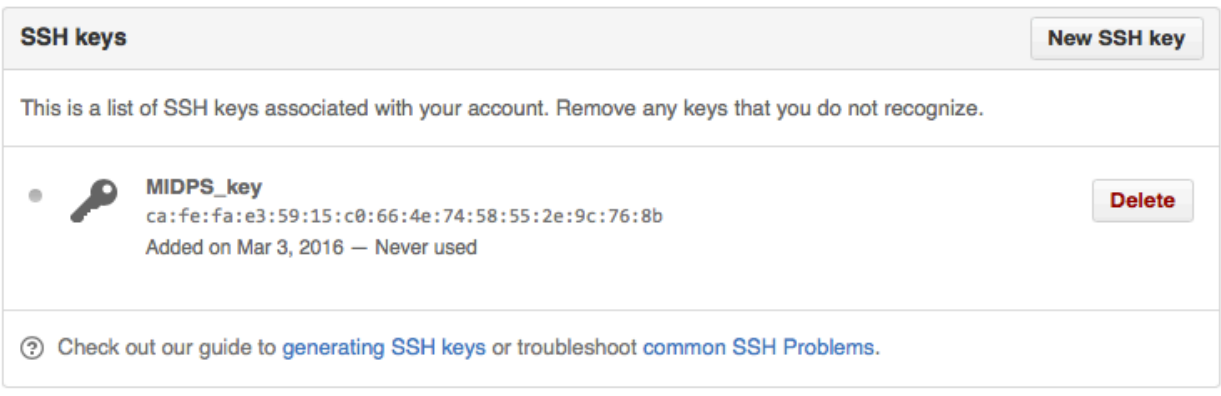
Scrie un script care va compila HelloWolrdPrograms projects.

1. Configurarea autentificarii ssh

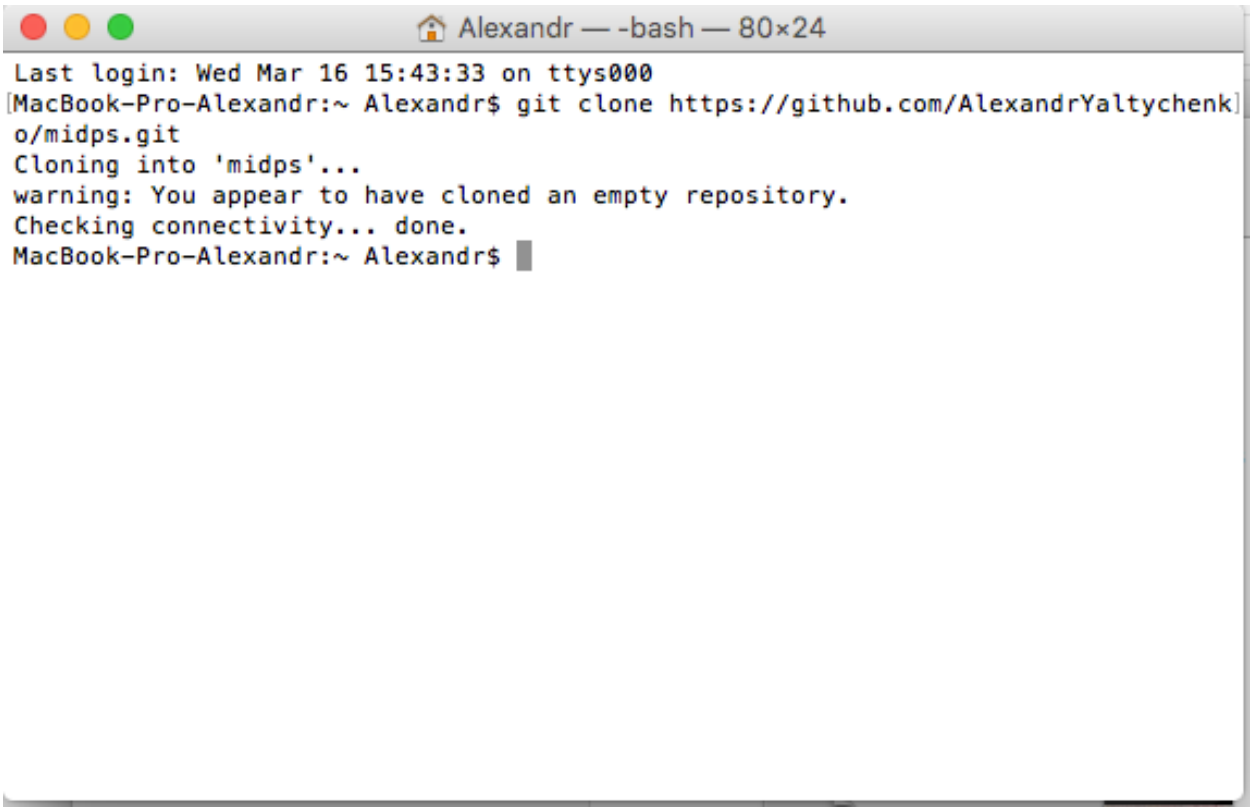


.ssh — -bash — 80×23
The key fingerprint is:
SHA256:NBBPeshdrLhTQxkPkMA+VfQlfd3ifLZC1pC8UOTFWFk Alexandr@MacBook-Pro-Alexandr
.local
The key's randomart image is:
+---[RSA 2048]----+
| ...+**+o.=o=+E|
| ..oBo=.+o=+oo|
| . .+o*.o .=+. |
| o .o+.   +o.o|
| . oS. o o.|
| o   . . |
| .   . |
| |
| |
+----[SHA256]-----+
MacBook-Pro-Alexandr:.ssh Alexandr$ cat id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDA01wESpNYRZZ/1PKHlnTeYSkZI2Oe030zxrZTYUYa
nUh2JVIMk0k7gYJdwqj6B9uRwRGOJ/fzSjCaEQOt22I5JhFtxnrdxQTozNyGeBKjBpWFBOw/1JHa0wC6
naddIqhPSw/OjIUIre4MYcHhQM043yBn6Y05gnGzFKqogSGiAGrYBkJaOa83L3W38X0NStu/vcxJK3p5
R/1Cx8+waA0q7yVF2+drxjHmh/Nyn/dXB9w6p0/hPFTyfeX17o8l3ueRrOcwOMCTyK634ej09iSPWaeX
/3OfNpM9HHtNRmTtoZxvNBsgrugDfsSuvAxvO55RVBm2pY3t2AjnMJjPce9x Alexandr@MacBook-Pr
o-Alexandr.local
MacBook-Pro-Alexandr:.ssh Alexandr$

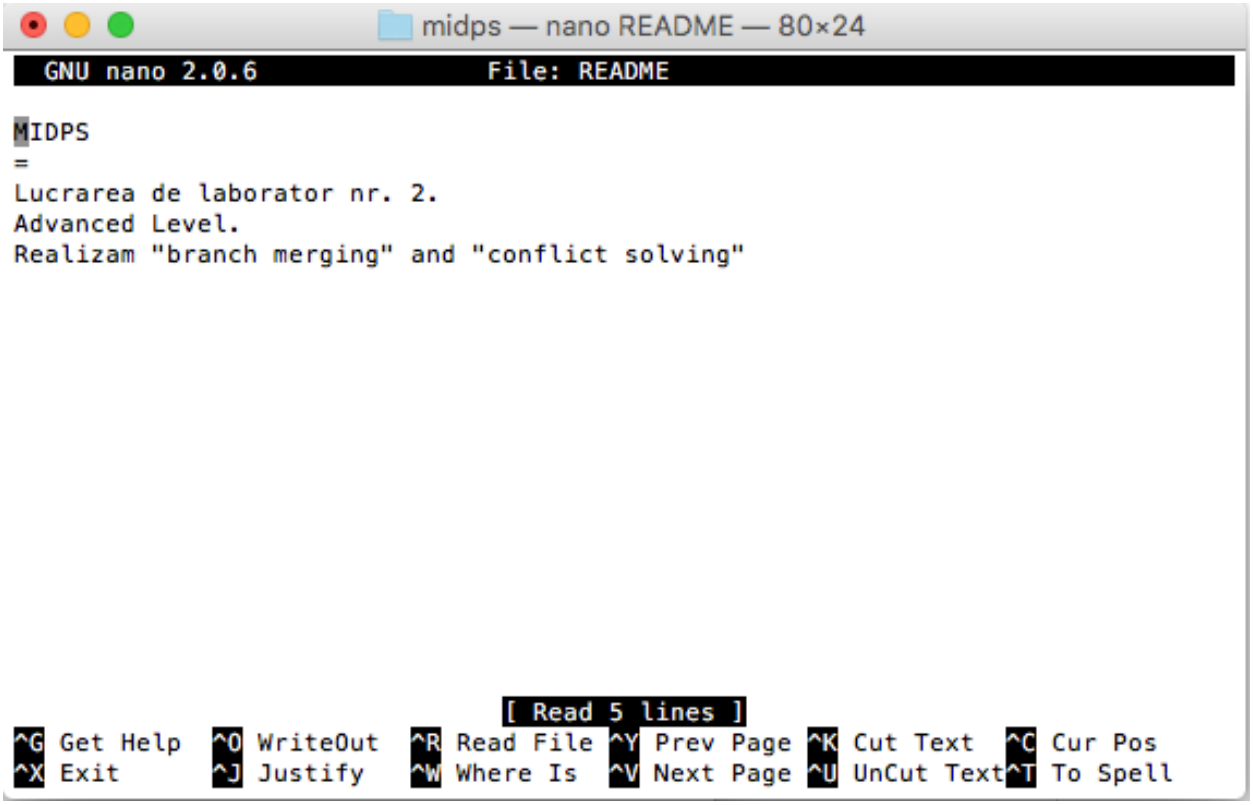

Search GitHub
Pull requests
Issues
Gist
Personal settings
Profile
Account settings
Emails
Notification center
Billing
SSH keys
Security
OAuth applications
Personal access tokens
Repositories
Organizations
SSH keys
New SSH key
There are no SSH keys with access to your account.
Title
MIDPS_key
Key
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABAQDA01wESpNYRZZ/1PKHlnTeYSkZI2Oe030zxrZTYUYanUh2JVIMk0k7gYJd
wqj6B9uRwRGOJ/fzSjCaEQOt22I5JhFtxnrdxQTozNyGeBKjBpWFBOw/1JHa0wC6naddIqhPSw/OjIUIre4MYcHhQM043
yBn6Y05gnGzFKqogSGiAGrYBkJaOa83L3W38X0NStu/vcxJK3p5R/1Cx8+waA0q7yVF2+drxjHmh/Nyn/dXB9w6p0/hPF
TyfeX17o8l3ueRrOcwOMCTyK634ej09iSPWaeX/3OfNpM9HHtNRmTtoZxvNBsgrugDfsSuvAxvO55RVBm2pY3t2AjnMJj
Pce9x
Add SSH key
Check out our guide to generating SSH keys or troubleshoot common SSH Problems.


SSH keys
New SSH key
This is a list of SSH keys associated with your account. Remove any keys that you do not recognize.
MIDPS_key
ca:fe:fa:e3:59:15:c0:66:4e:74:58:55:2e:9c:76:8b
Added on Mar 3, 2016 — Never used
Delete
Check out our guide to generating SSH keys or troubleshoot common SSH Problems.

2. Clonarea repozitoriului gol creat pe github.com

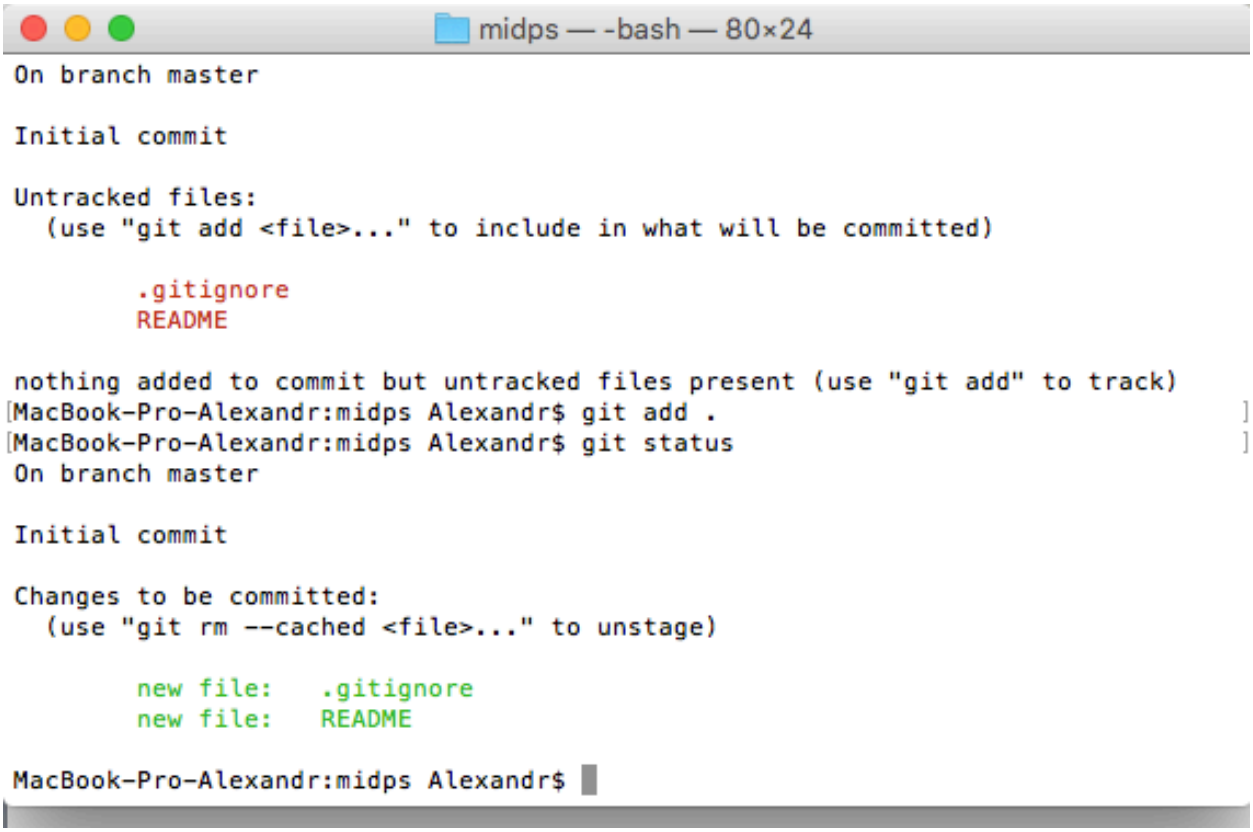


3. Crearea fisierului README in nano

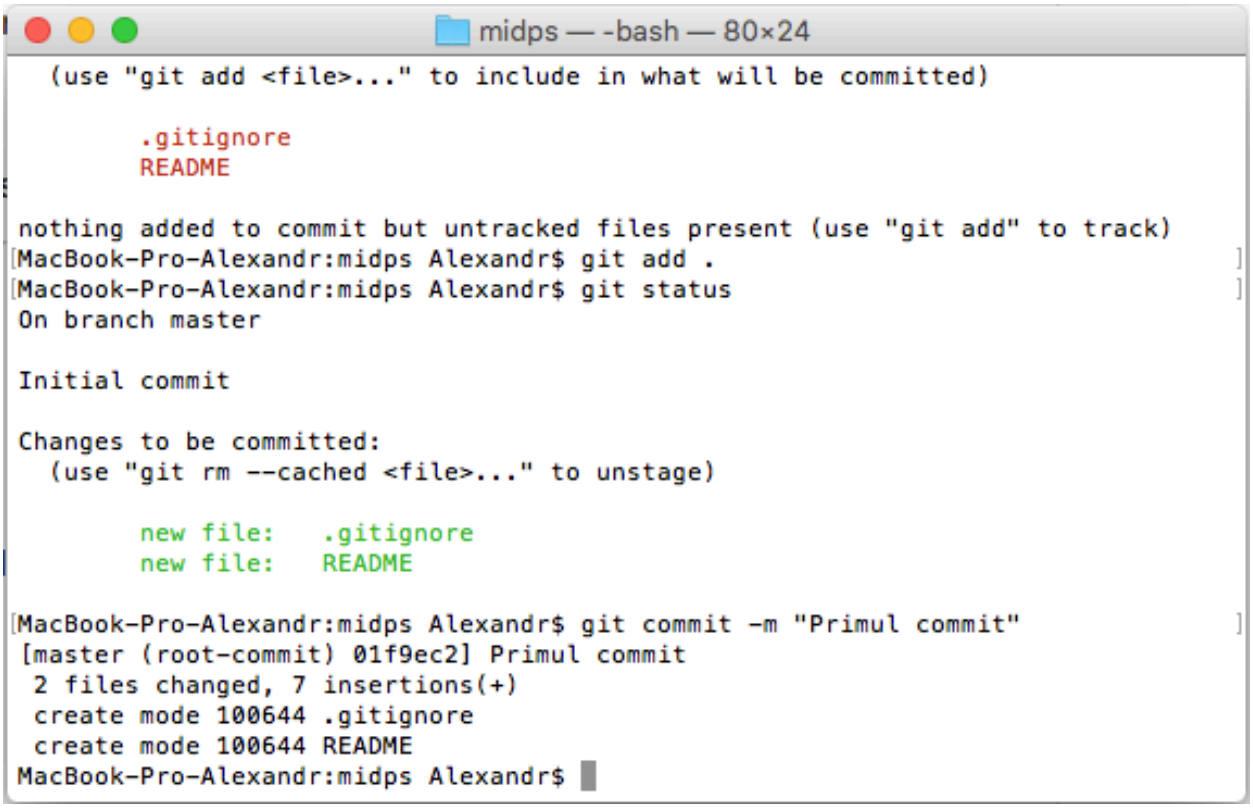


4. Crearea fisierului README in nano (ca sa fie ignorat fisierul .DS_Store generat de sistemul de operare Mac OS X)

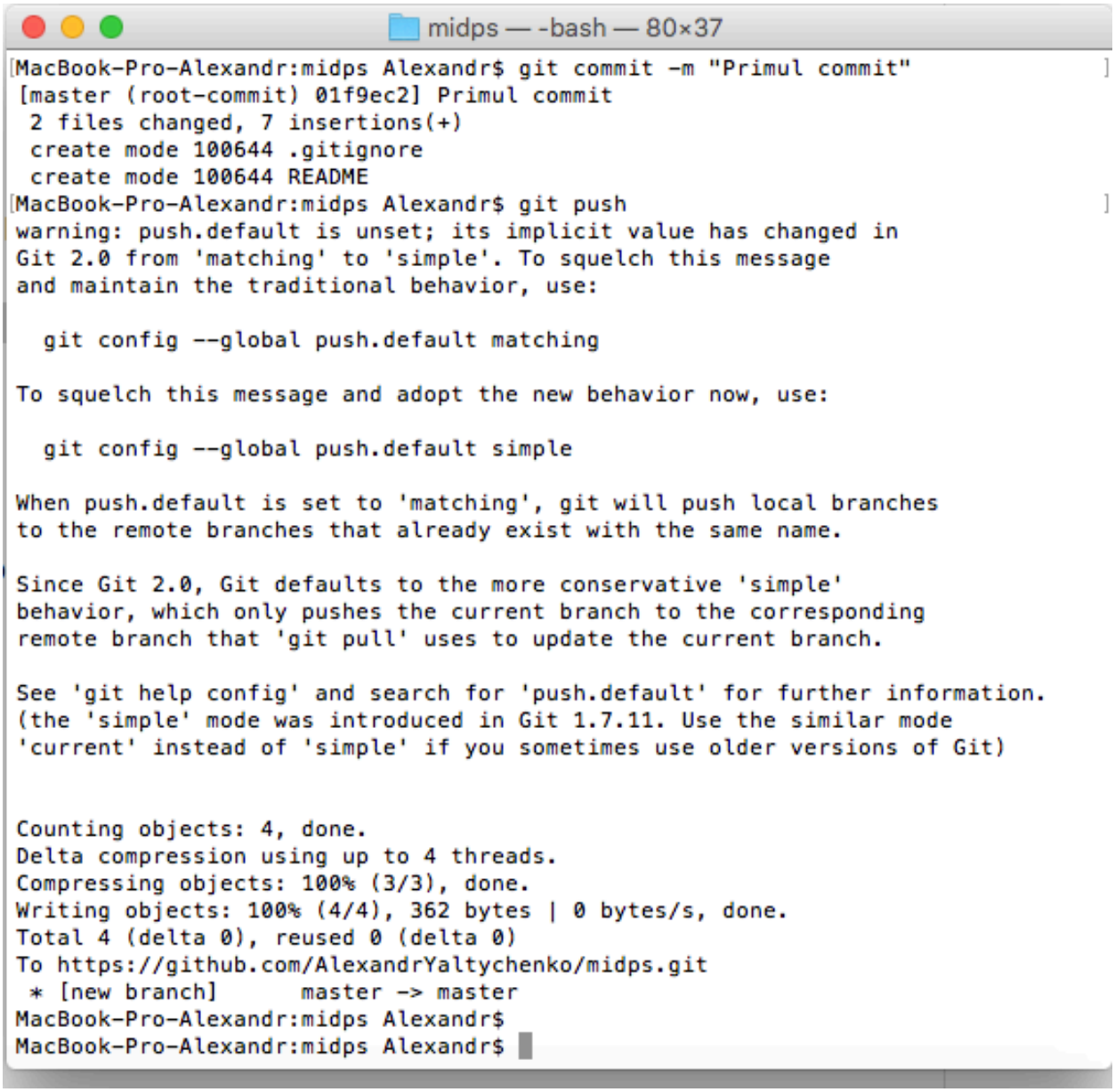
5. Desfasurarea primului commit



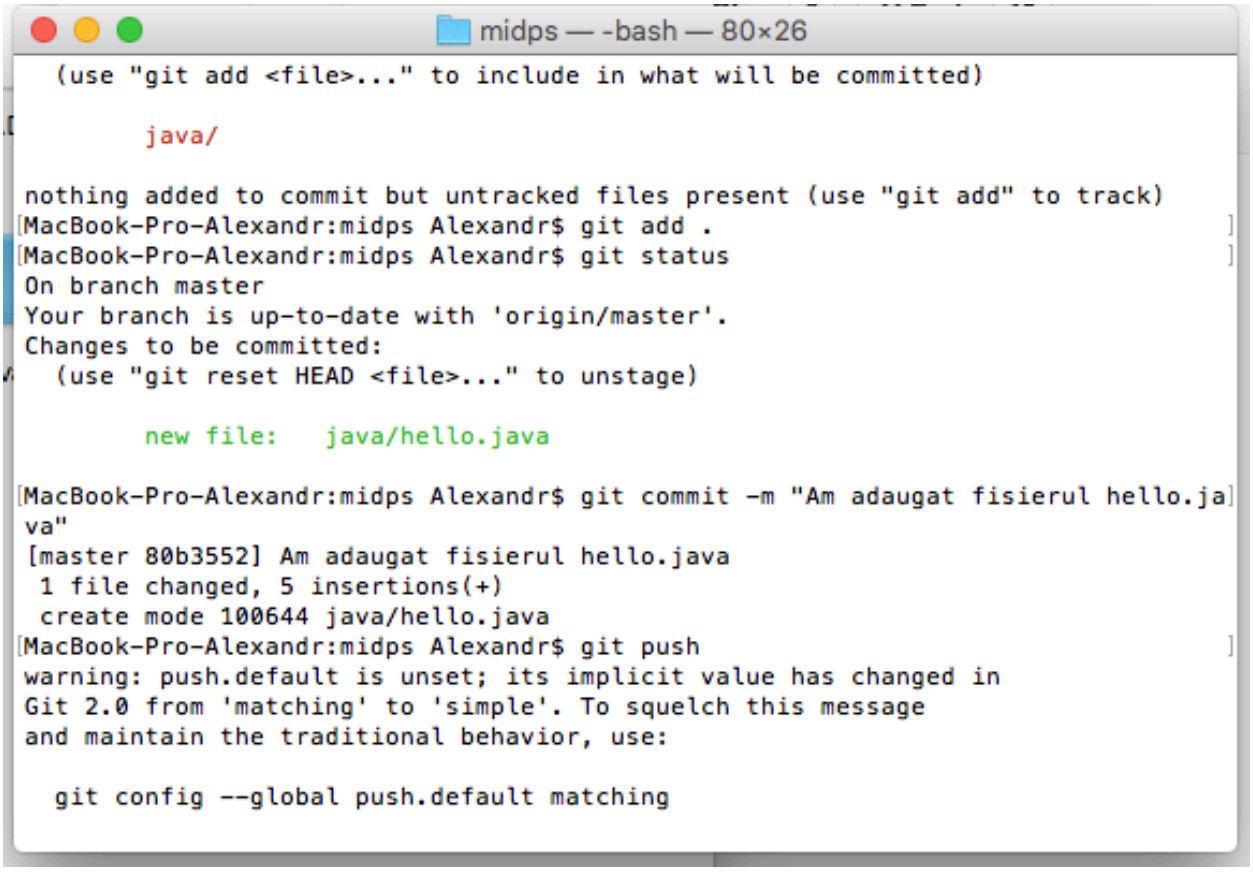
6. Desfasurarea primului commit

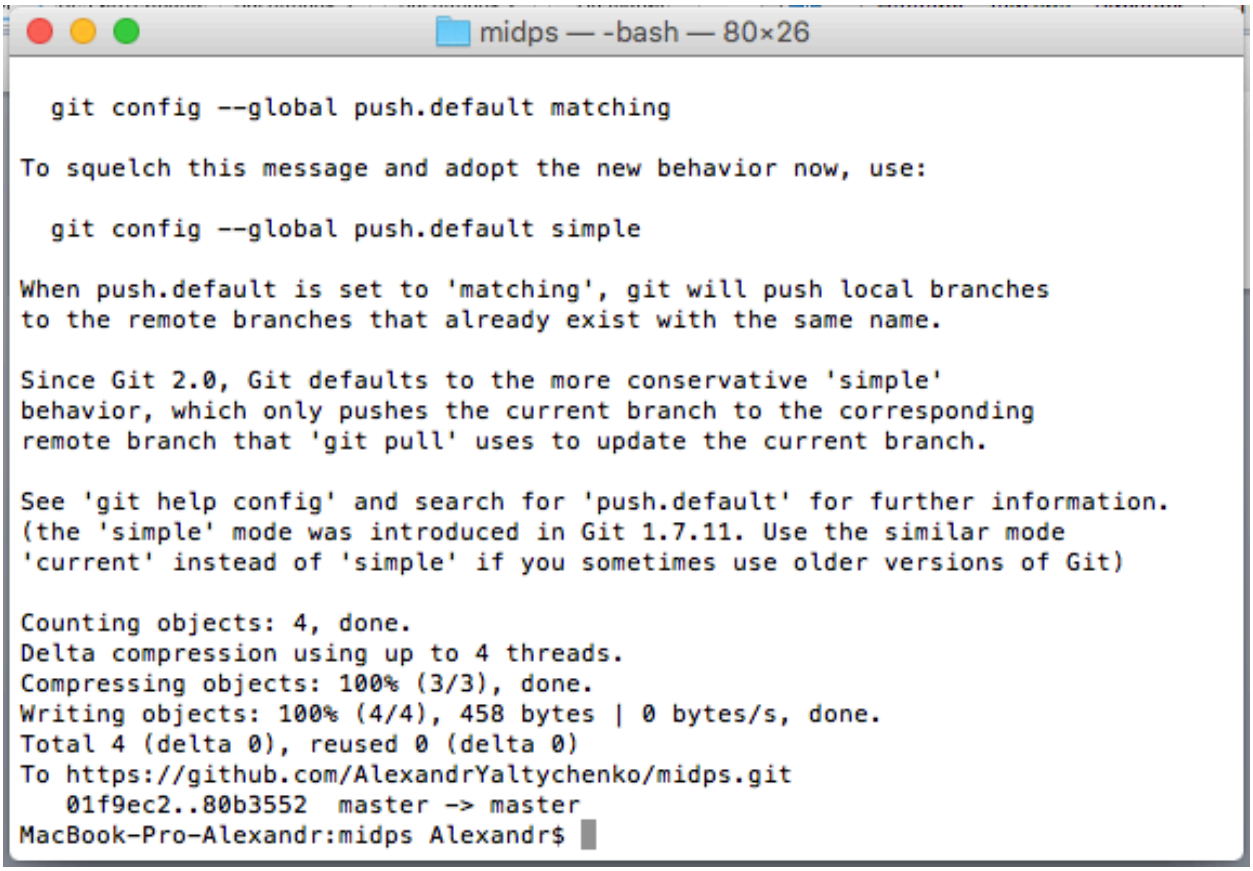


7. Setarea unui branch to track a remote origin pe care va putea fi facut push

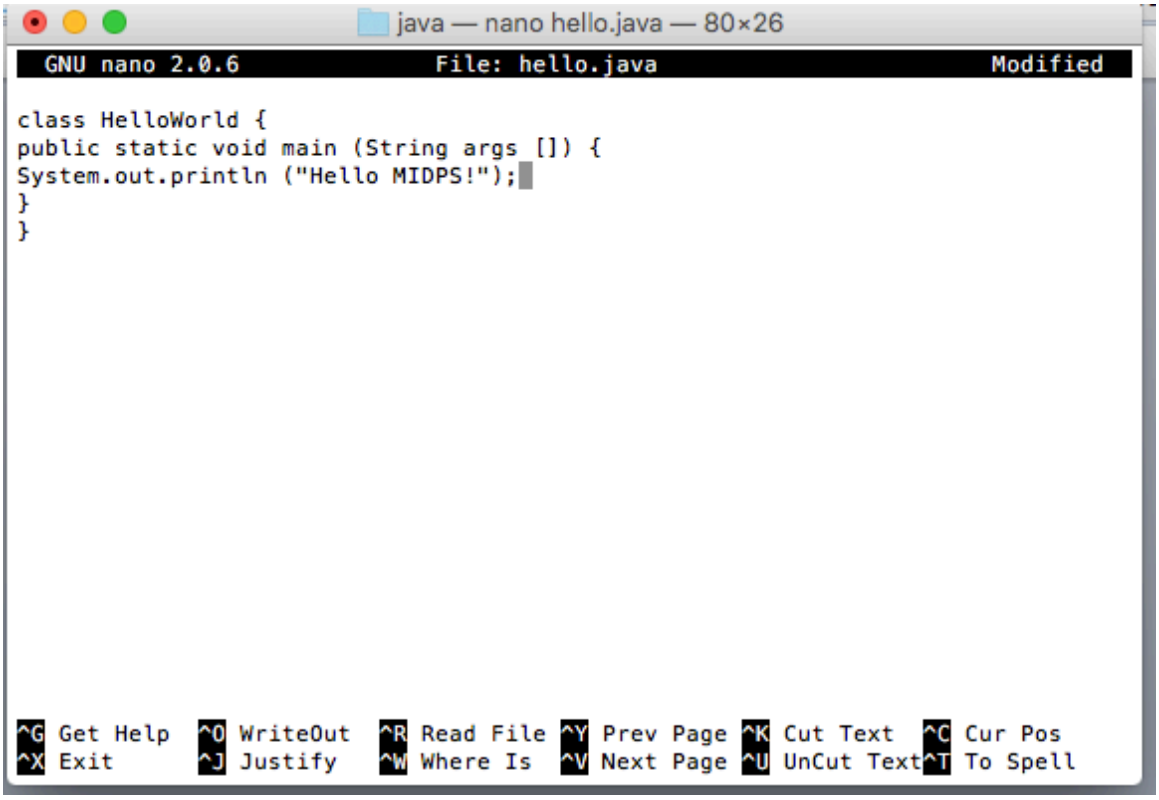


8. Adaugarea unui nou fisier hello.java la repozitoriu github

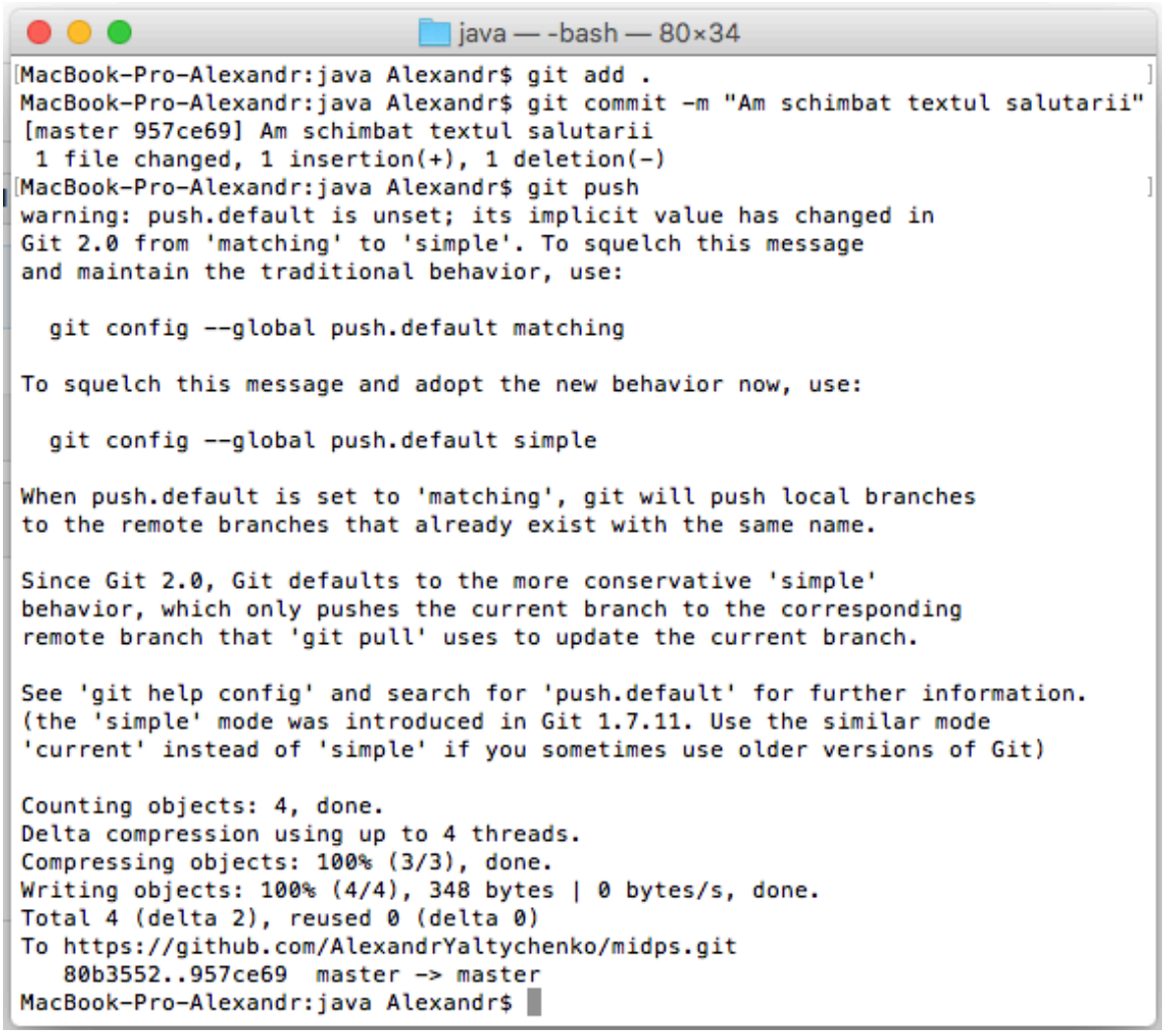

midps — -bash — 80×26
(use "git add <file>..." to include in what will be committed)
java/
nothing added to commit but untracked files present (use "git add" to track)
MacBook-Pro-Alexandr:midps Alexandr$ git add .
MacBook-Pro-Alexandr:midps Alexandr$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes to be committed:
(use "git reset HEAD <file>..." to unstage)
new file: java/hello.java
MacBook-Pro-Alexandr:midps Alexandr$ git commit -m "Am adaugat fisierul hello.java"
[master 80b3552] Am adaugat fisierul hello.java
1 file changed, 5 insertions(+)
create mode 100644 java/hello.java
MacBook-Pro-Alexandr:midps Alexandr$ git push
warning: push.default is unset; its implicit value has changed in
Git 2.0 from 'matching' to 'simple'. To squelch this message
and maintain the traditional behavior, use:
git config --global push.default matching


midps — -bash — 80×26
git config --global push.default matching
To squelch this message and adopt the new behavior now, use:
git config --global push.default simple
When push.default is set to 'matching', git will push local branches
to the remote branches that already exist with the same name.
Since Git 2.0, Git defaults to the more conservative 'simple'
behavior, which only pushes the current branch to the corresponding
remote branch that 'git pull' uses to update the current branch.
See 'git help config' and search for 'push.default' for further information.
(the 'simple' mode was introduced in Git 1.7.11. Use the similar mode
'current' instead of 'simple' if you sometimes use older versions of Git)
Counting objects: 4, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 458 bytes | 0 bytes/s, done.
Total 4 (delta 0), reused 0 (delta 0)
To https://github.com/AlexandrYaltychenko/midps.git
01f9ec2..80b3552 master -> master
MacBook-Pro-Alexandr:midps Alexandr$

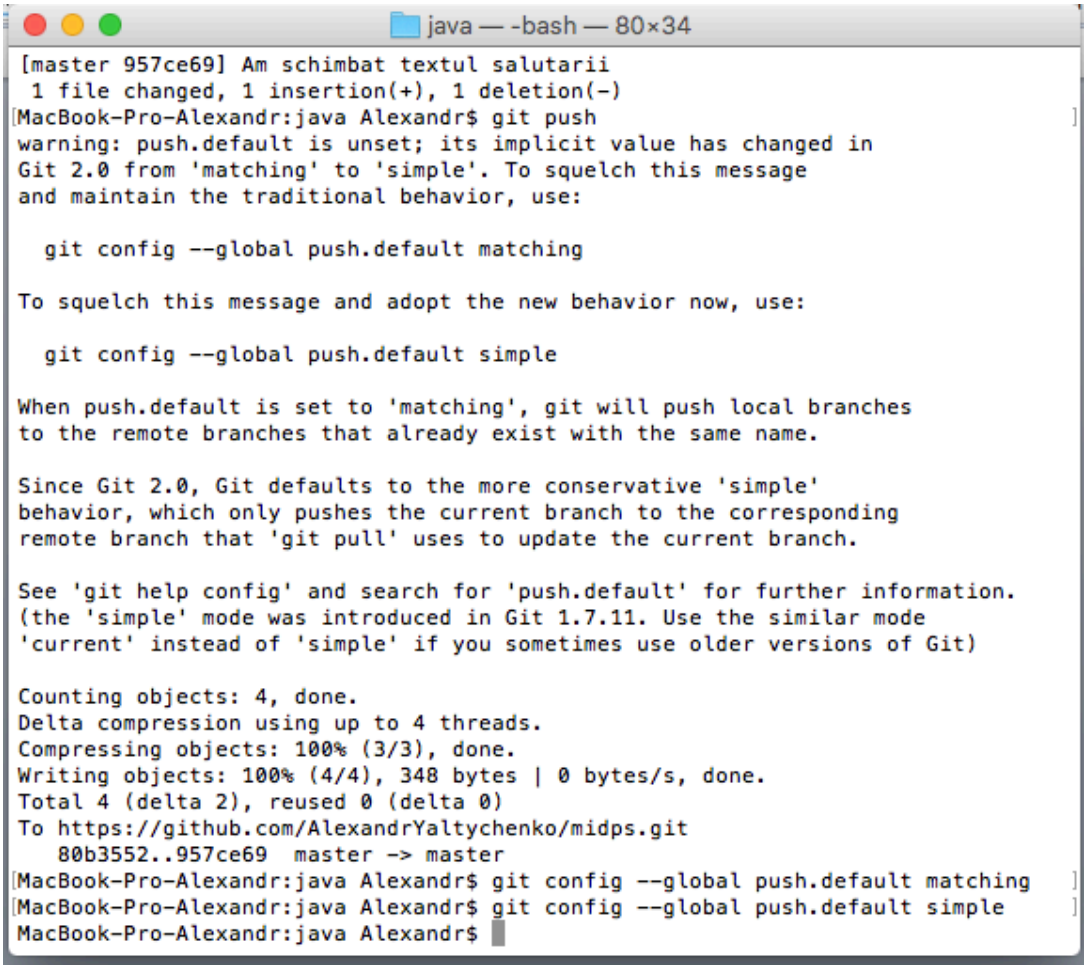
9. Editarea mesajului afisat in hello.java



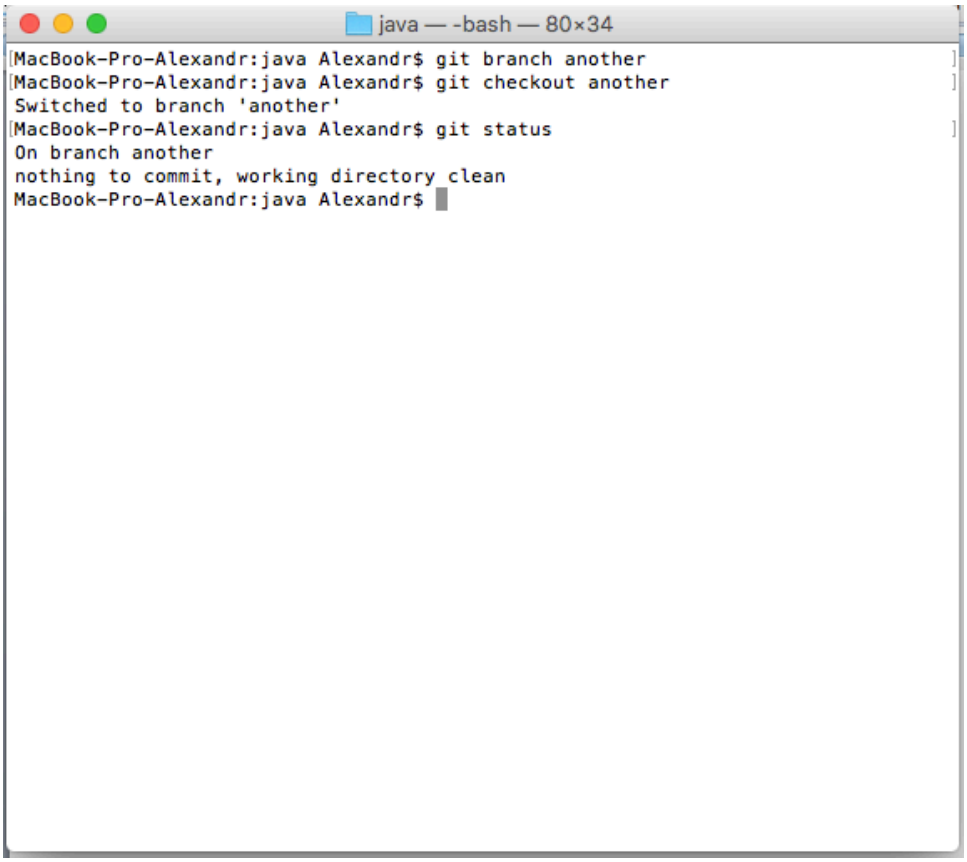
10. Inca un commit si push



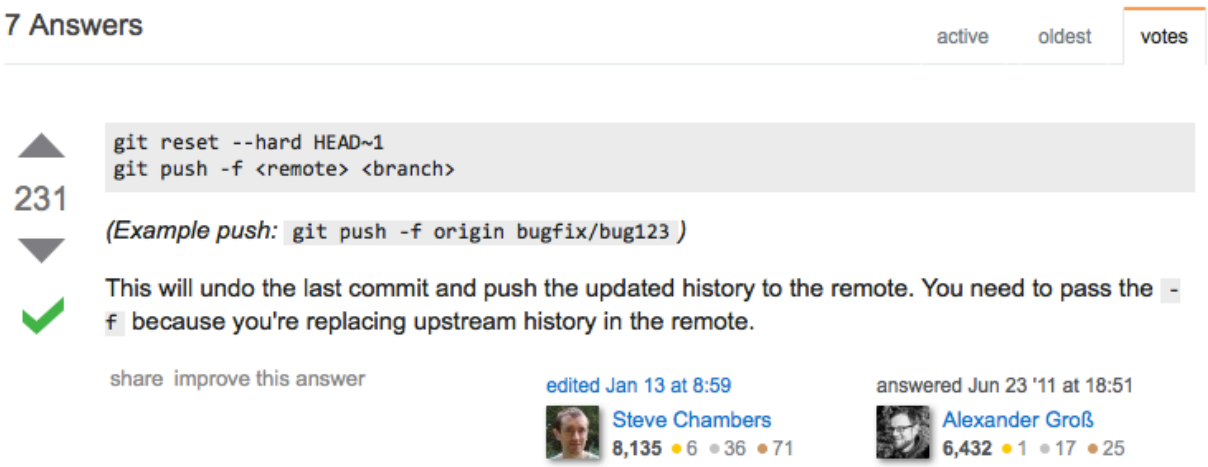
11. Implementarea recomandarilor lui git pentru ca warning-urile sa nu fie afisate



12. Crearea branch-ului ‘another’ si selectarea acestuia



13. Gasirea solutiei pe Stack Overflow cum poate fi usor indeplinita resetarea ultimului commit



7 Answers

active oldest votes

231

```
git reset --hard HEAD~1
git push -f <remote> <branch>
```

(Example push: `git push -f origin bugfix/bug123` *)*

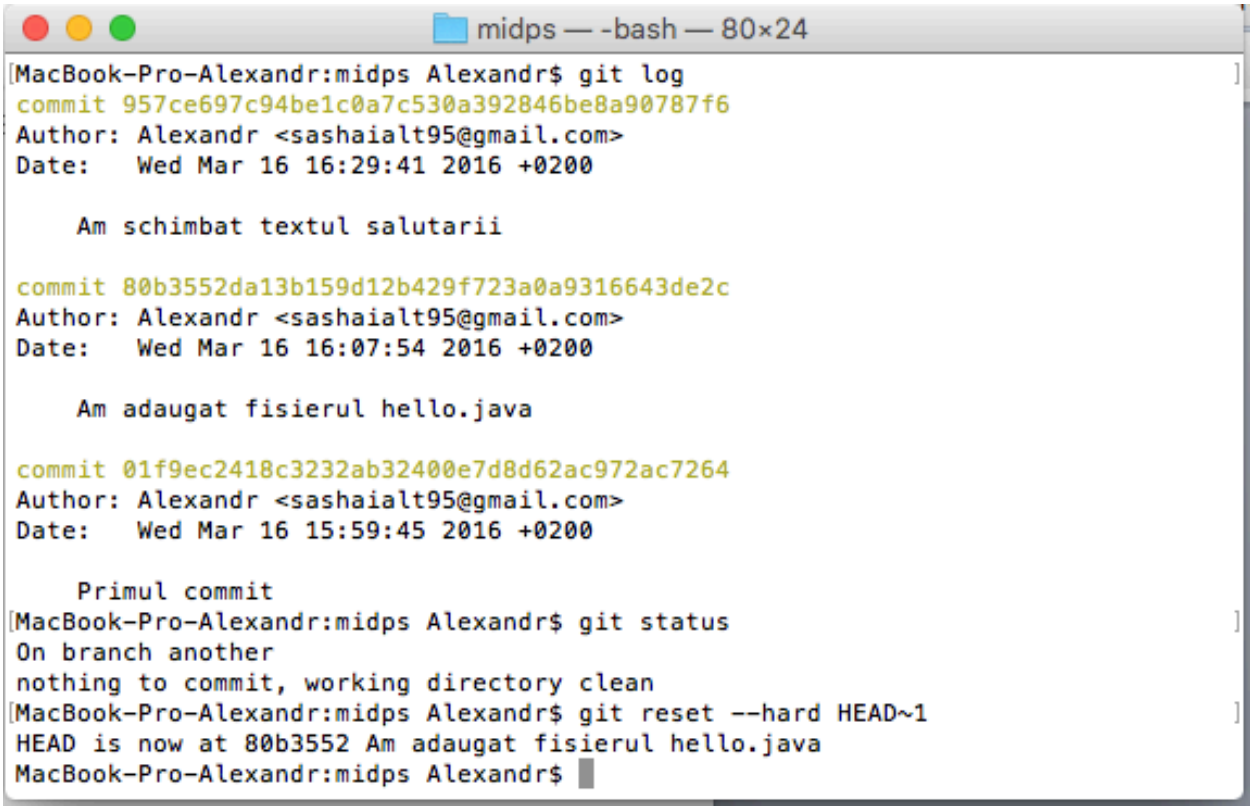
This will undo the last commit and push the updated history to the remote. You need to pass the `-f` because you're replacing upstream history in the remote.

share improve this answer

edited Jan 13 at 8:59 — Steve Chambers — 8,135 ●6 ●36 ●71

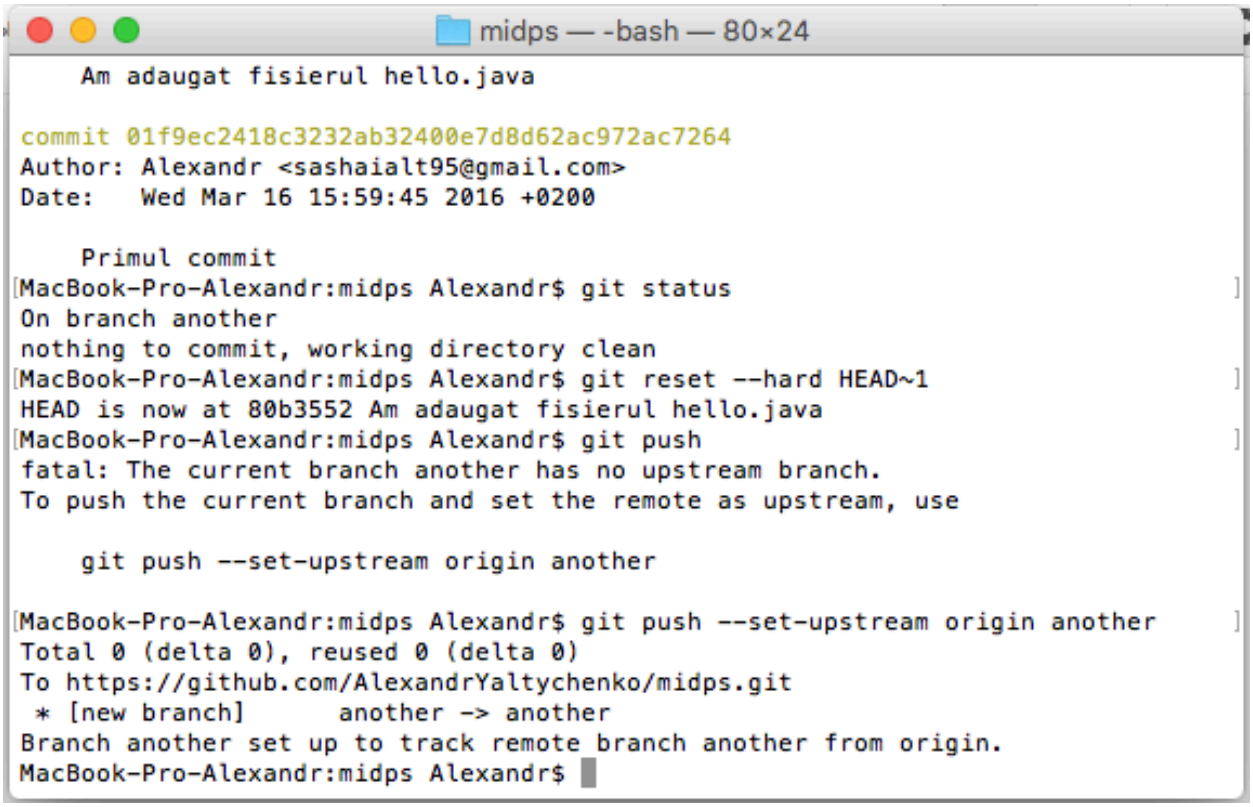
answered Jun 23 '11 at 18:51 — Alexander Groß — 6,432 ●1 ●17 ●25

14. Verificarea git-log-ului al branch-ului ‘another’ si resetarea ultimului commit

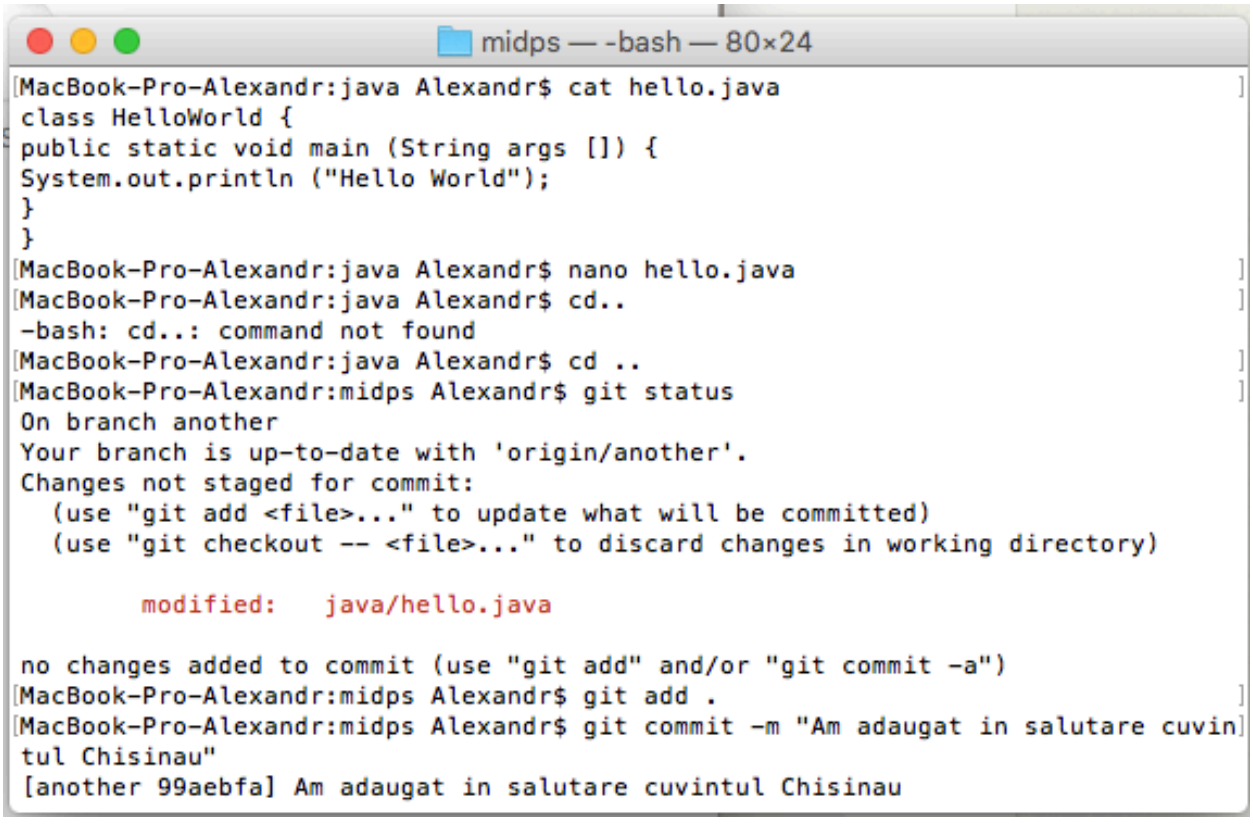


```
midps — -bash — 80×24
MacBook-Pro-Alexandr:midps Alexandr$ git log
commit 957ce697c94be1c0a7c530a392846be8a90787f6
Author: Alexandr <sashaialt95@gmail.com>
Date:   Wed Mar 16 16:29:41 2016 +0200

    Am schimbat textul salutarii

commit 80b3552da13b159d12b429f723a0a9316643de2c
Author: Alexandr <sashaialt95@gmail.com>
Date:   Wed Mar 16 16:07:54 2016 +0200

    Am adaugat fisierul hello.java

commit 01f9ec2418c3232ab32400e7d8d62ac972ac7264
Author: Alexandr <sashaialt95@gmail.com>
Date:   Wed Mar 16 15:59:45 2016 +0200

    Primul commit
MacBook-Pro-Alexandr:midps Alexandr$ git status
On branch another
nothing to commit, working directory clean
MacBook-Pro-Alexandr:midps Alexandr$ git reset --hard HEAD~1
HEAD is now at 80b3552 Am adaugat fisierul hello.java
MacBook-Pro-Alexandr:midps Alexandr$
```

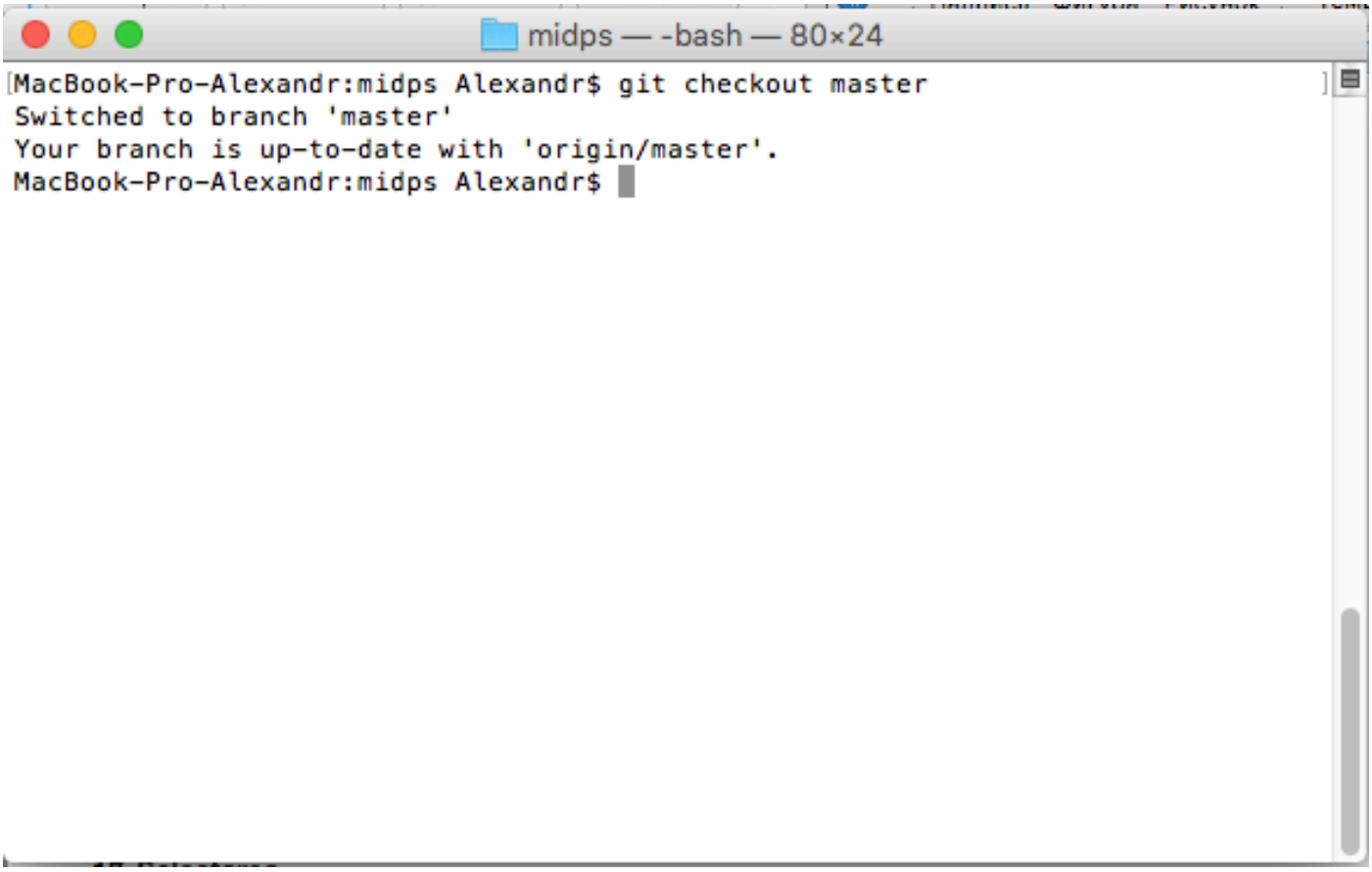
15. Inca un push



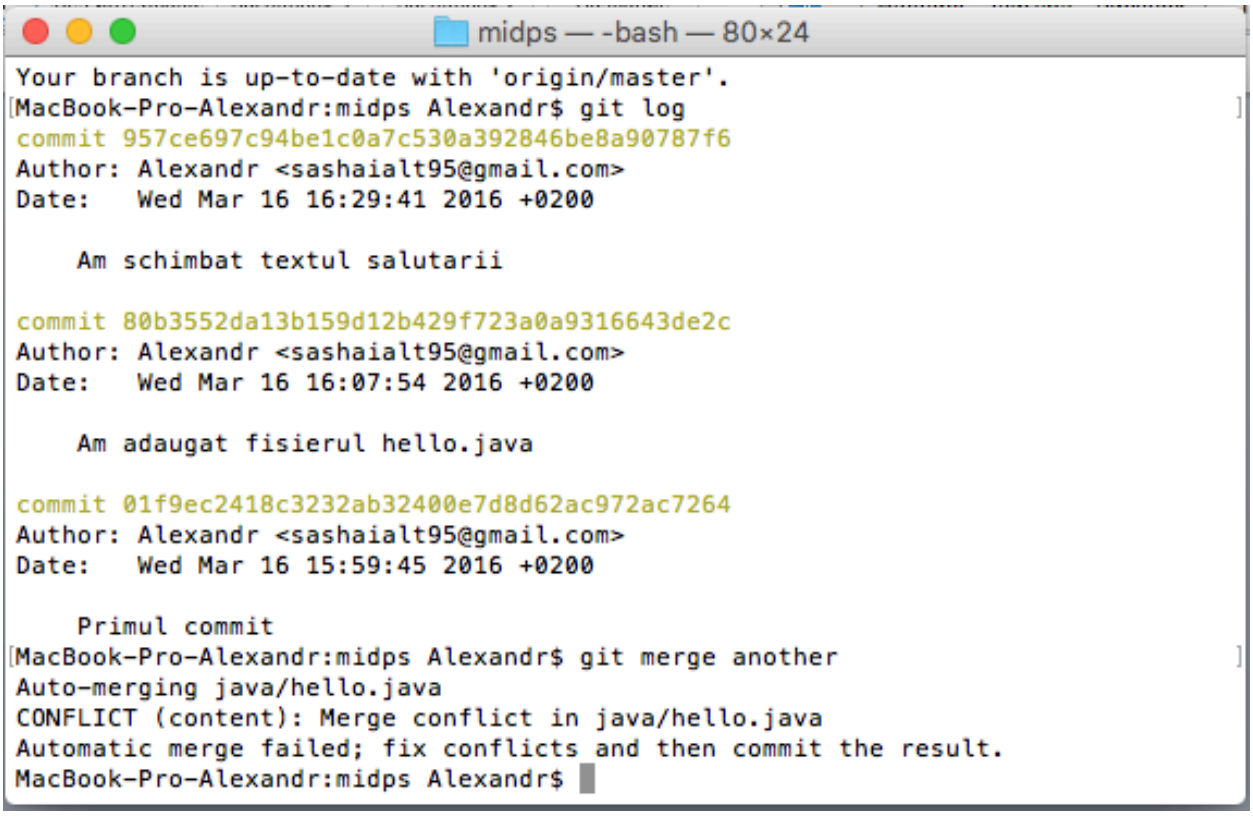
16. Inca o editare a fisierului hello.java (branch-ul ‘another’)



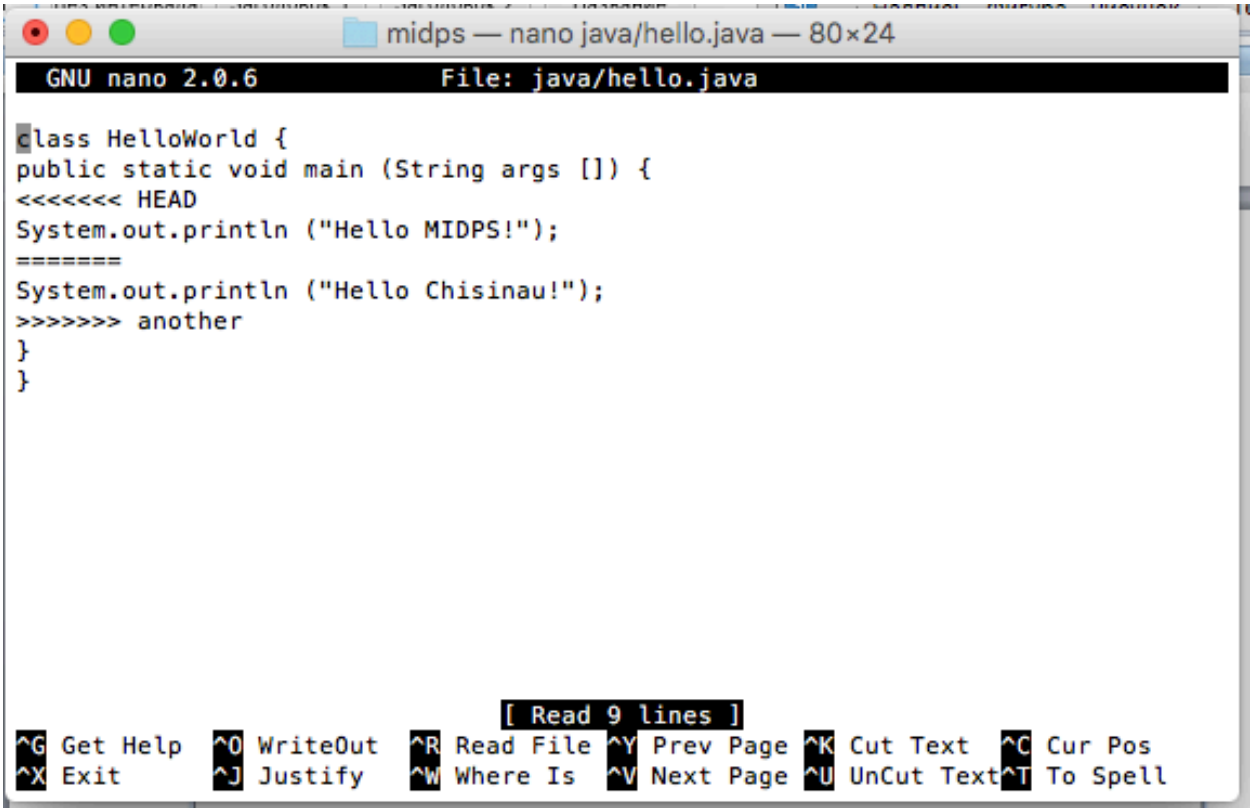
17. Selectarea branch-ului ‘master’

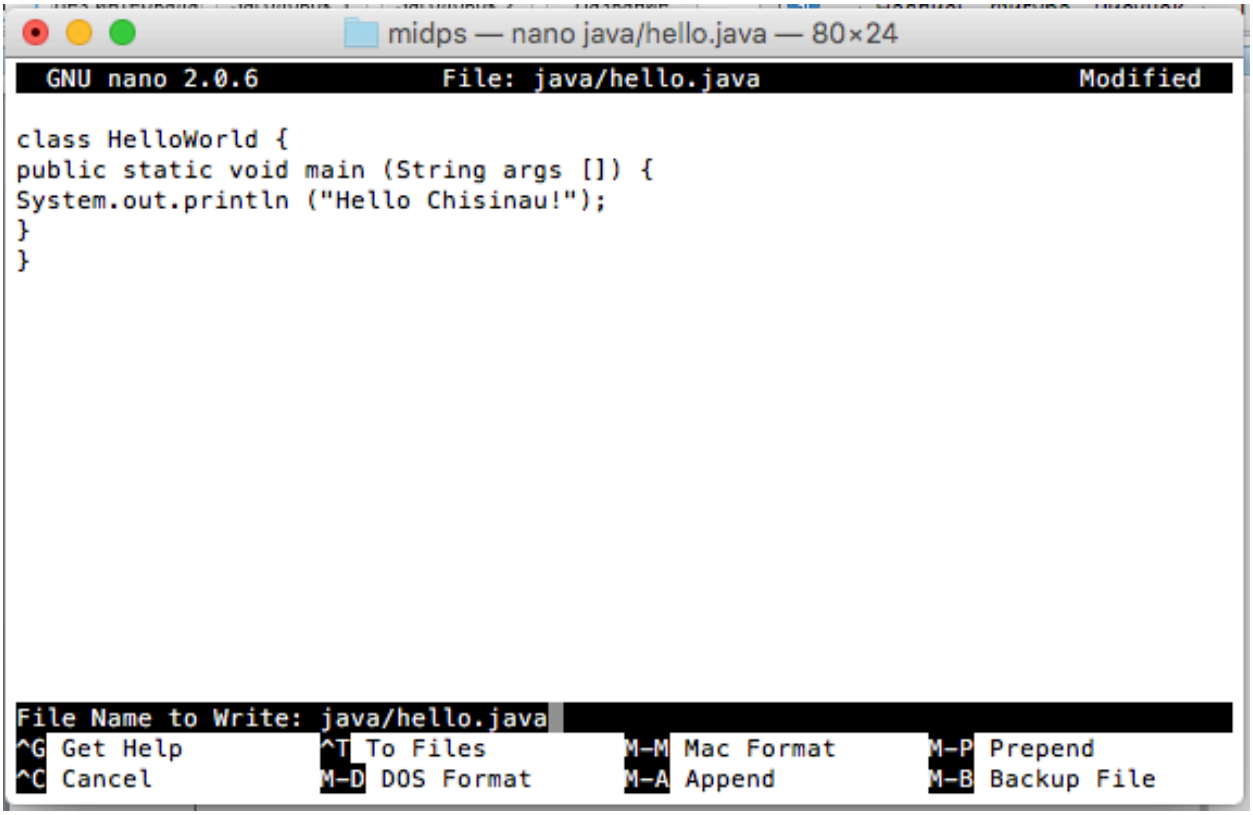


17. Verificarea log-ului si “branch merging” (apare conflictul)

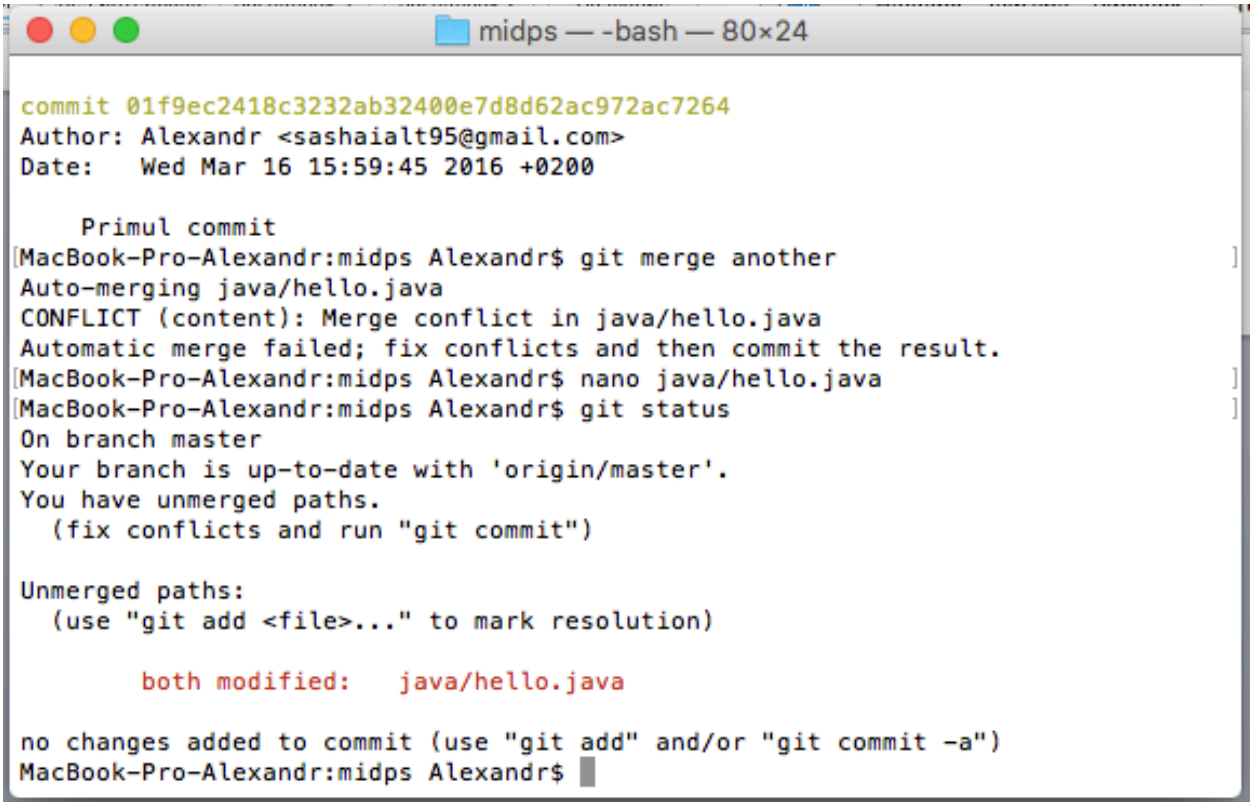


18. Solutionarea confilctului prin editarea fisierului hello.java





19. Terminarea procesului de «branch merging»



Bonus Point:

Bash-script-ul pentru compilarea hello_world-urilor in limbaje C, Java, C++, Python:

```
#!/bin/bash
gcc hello_c.c -o hello_c
javac hello_java.java
g++ hello_c++.cpp -o hello_c++
python -m py_compile hello_python.py
```

Concluziile

În cadrul acestei lucrări de laborator am studiat principiile și modul de utilizare a sistemului de control al versiunilor – Git. Prin intermediul CL am configurat SSH autentificarea, am facut primul git commit si am sincronizat dispozitoriul local cu cel remote, plasat pe server. Cunostintele obtinute pe parcursul desfasurarii lucrarii de laborator vor fi foarte utile pentru realizarea proiectelor, ce urmeaza.