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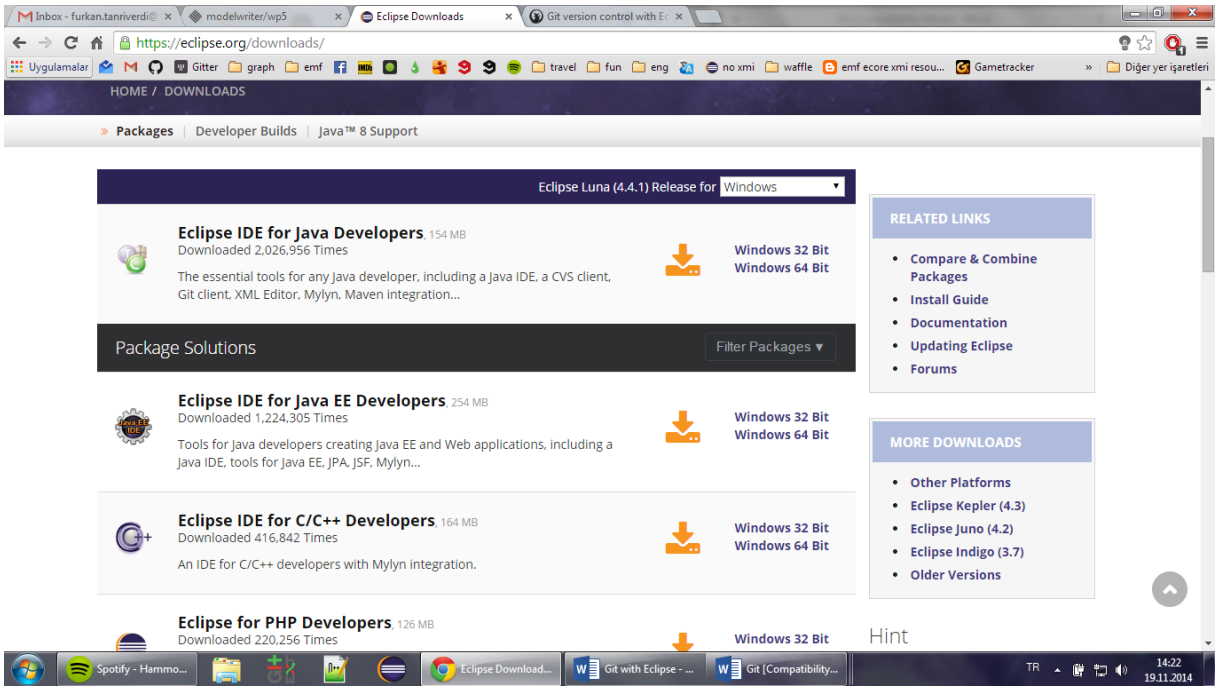
What is EGit ?

EGit is an Eclipse plug-in (software component) which allows you to use the distributed version control system *Git*directly within the Eclipse IDE.

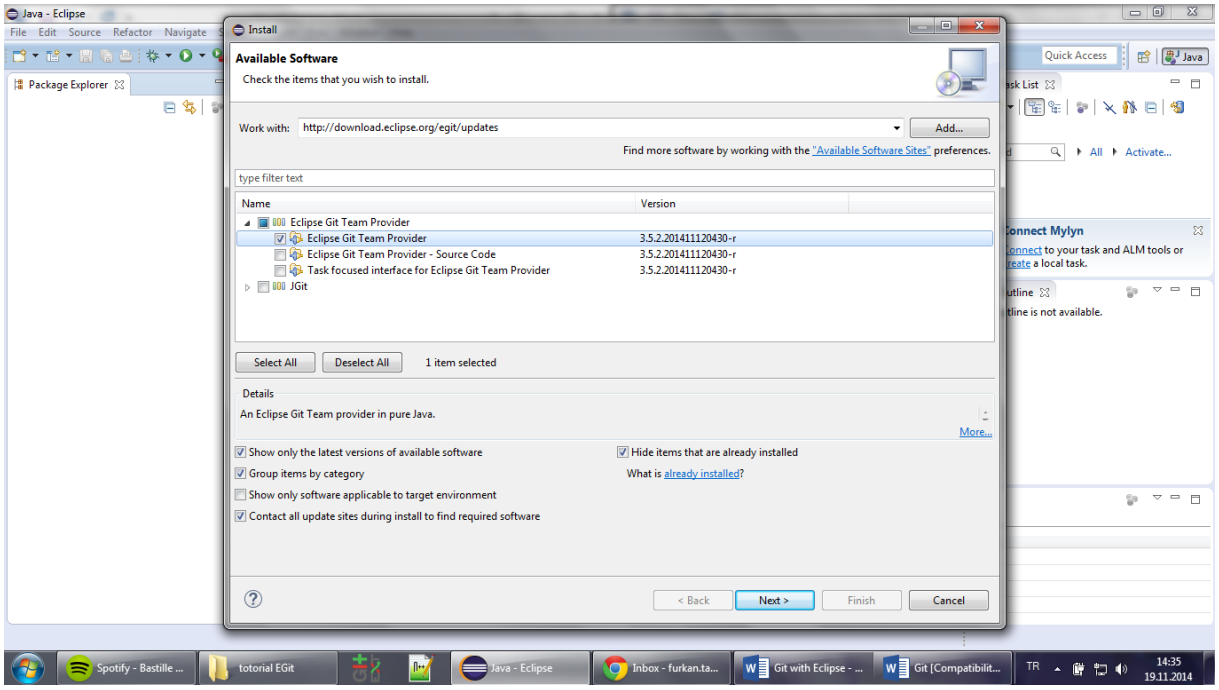
Installation

If you do not have any version of Eclipse IDE. I downloaded the standart java version(Eclipse IDE for Java Developers) for this tutorial. In addition, this tutorial is based on Eclipse Luna 4.4.1. If you have any other version, it may seem different from my screenshots.



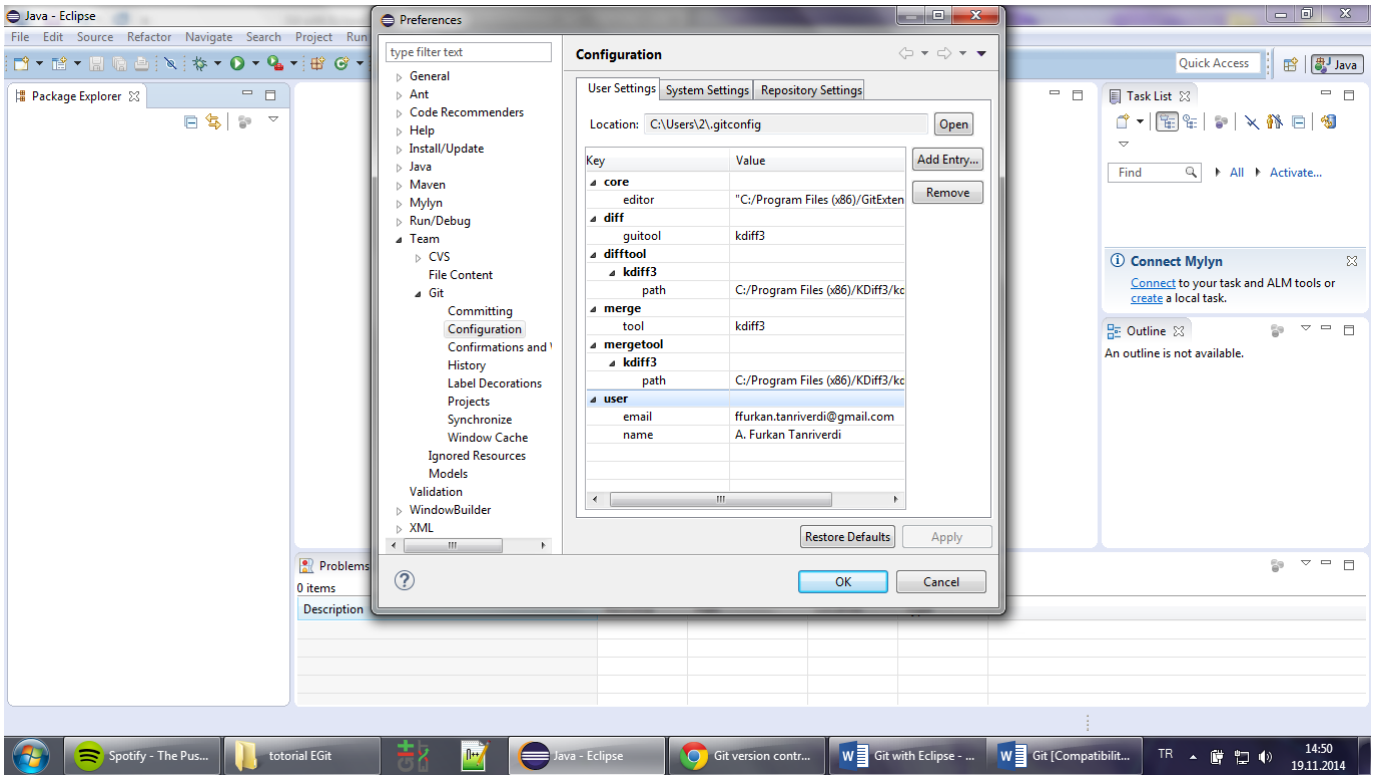
After eclipse starts, you can install Egit to your IDE. To do that, start this manager via the *Help → Install new Software* menu entry. Egit can be installed from the following link:

http://download.eclipse.org/egit/updates

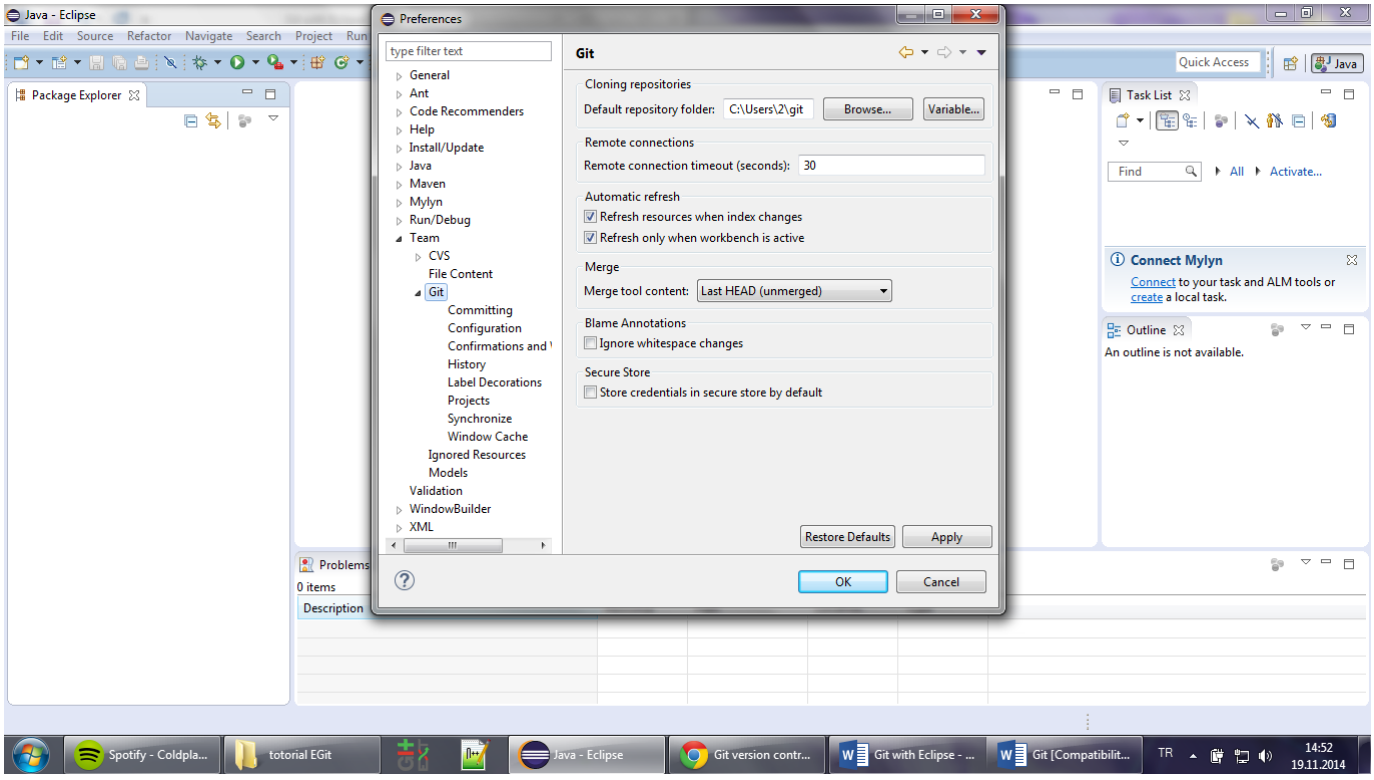


Select *Eclipse Git Team Provider*, then finish the installation.

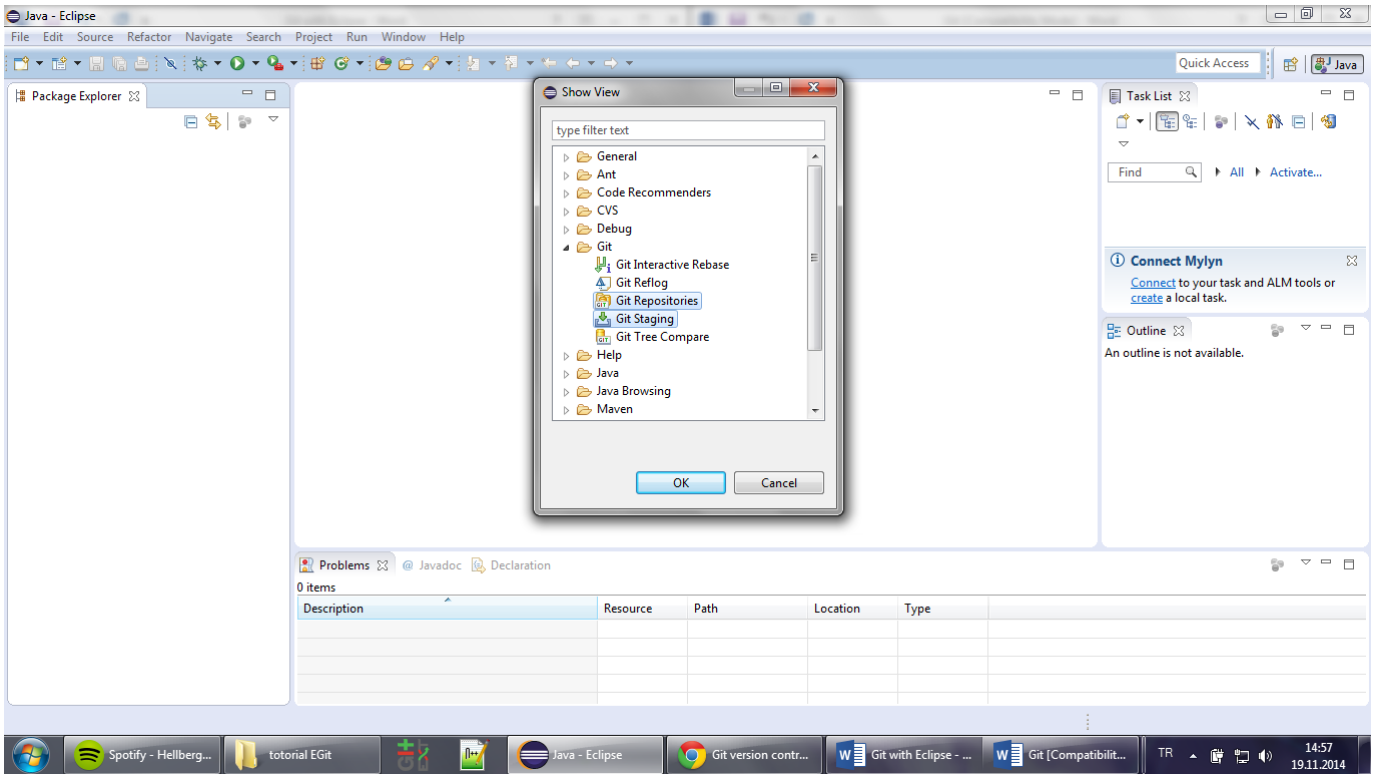
After Eclipse restarts, you should configure your name and email address which is used to fill author and committer information of commits you create. Select *Window -> Preferences -> Team -> Git -> Configuration* to see the current configuration and to change it.



Egit has a default clone location. To change, select *Window -> Preferences -> Team -> Git.* You can change the repository from *Cloning repositories* section.



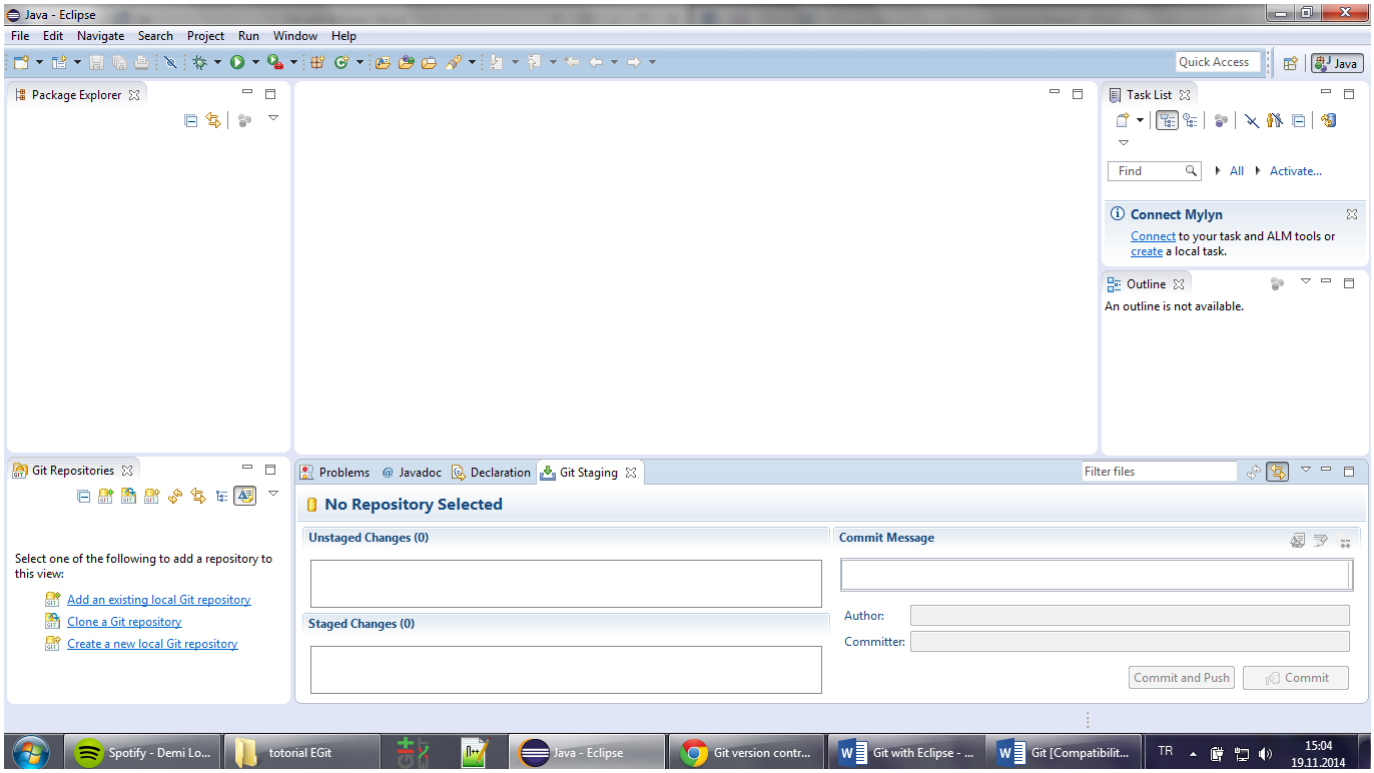
To manage repositories and commits, you can add some views. Select *Window -> Show View -> Other -> Git.* Select *Git Repositories* and *Git Staging* under Git folder.



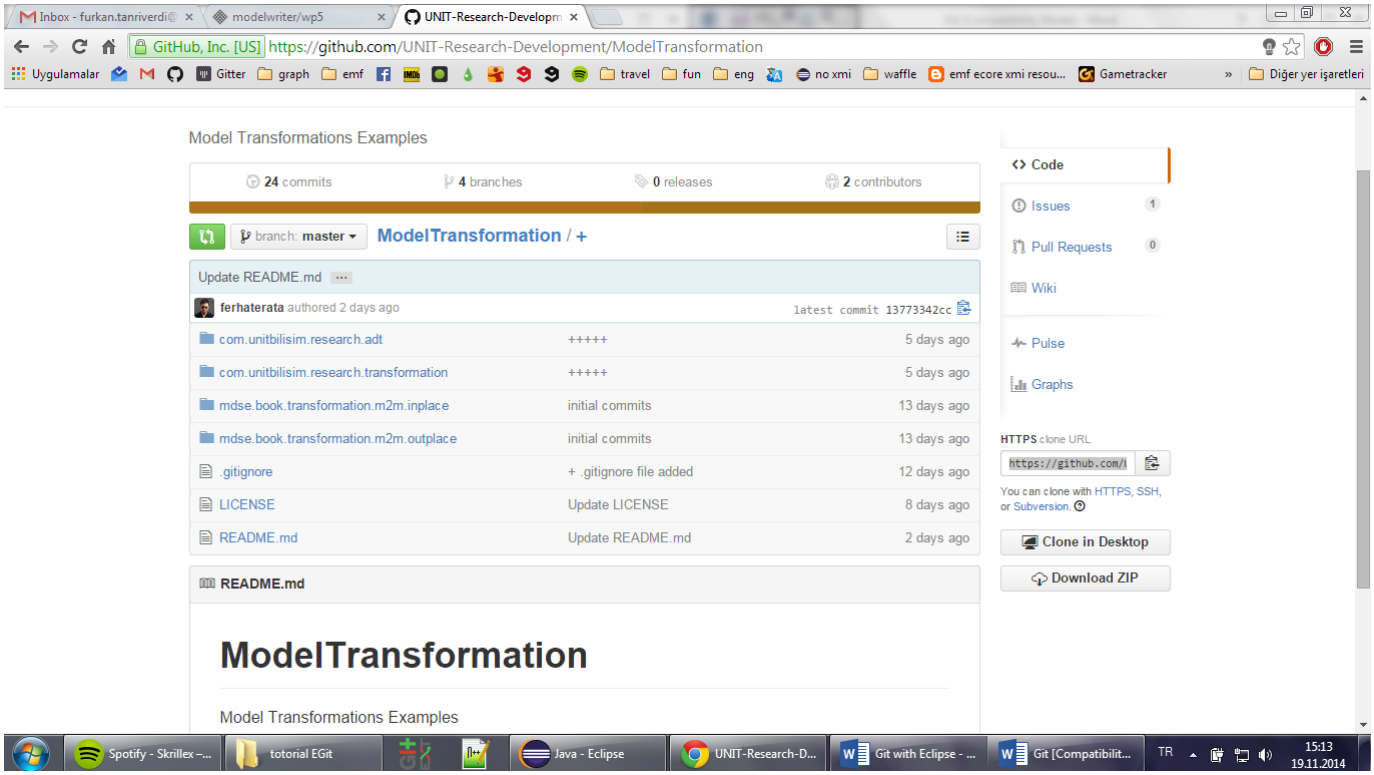
Finally, we completed Egit installation.

Clone existing project

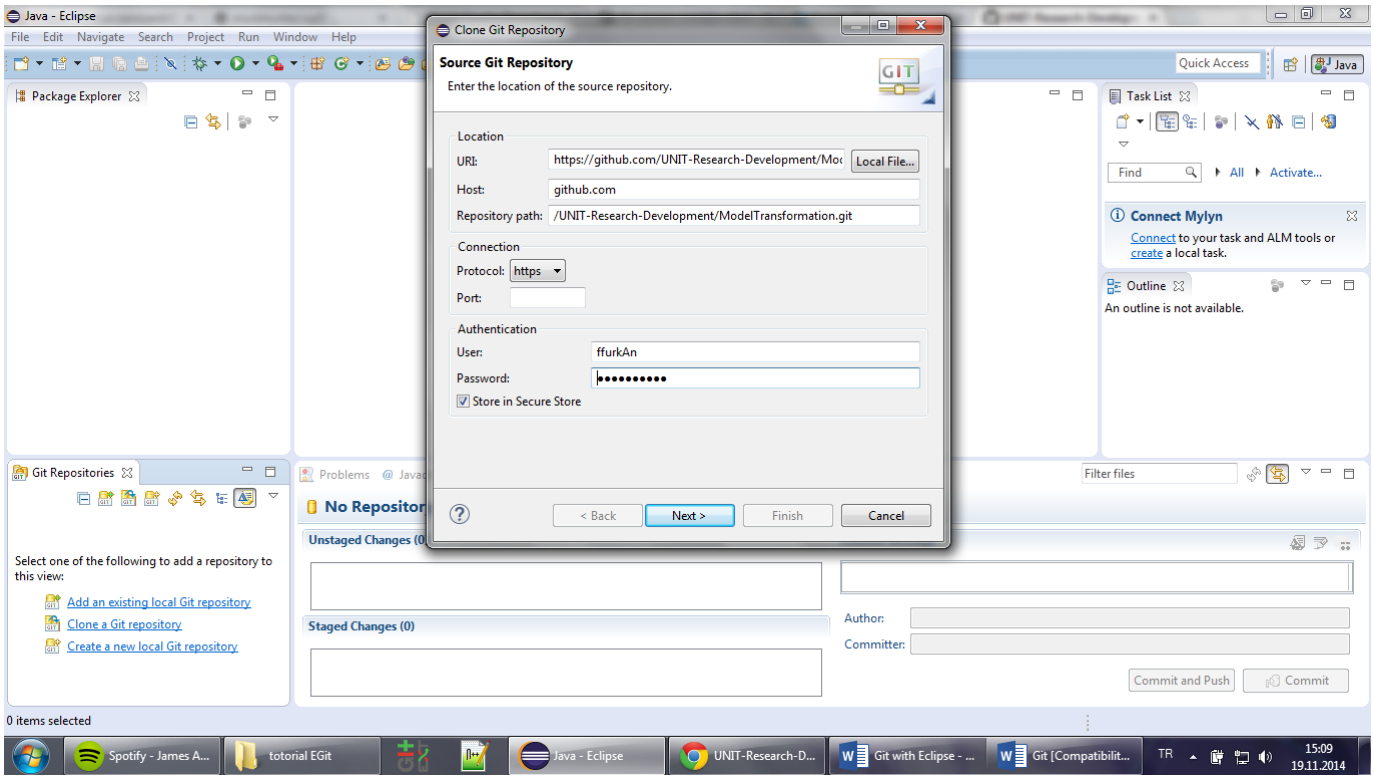
Eclipse allows you to clone an existing Git repository and to import existing projects from this repository into your Eclipse workspace by using a wizard. Select *Clone a Git Repository*.



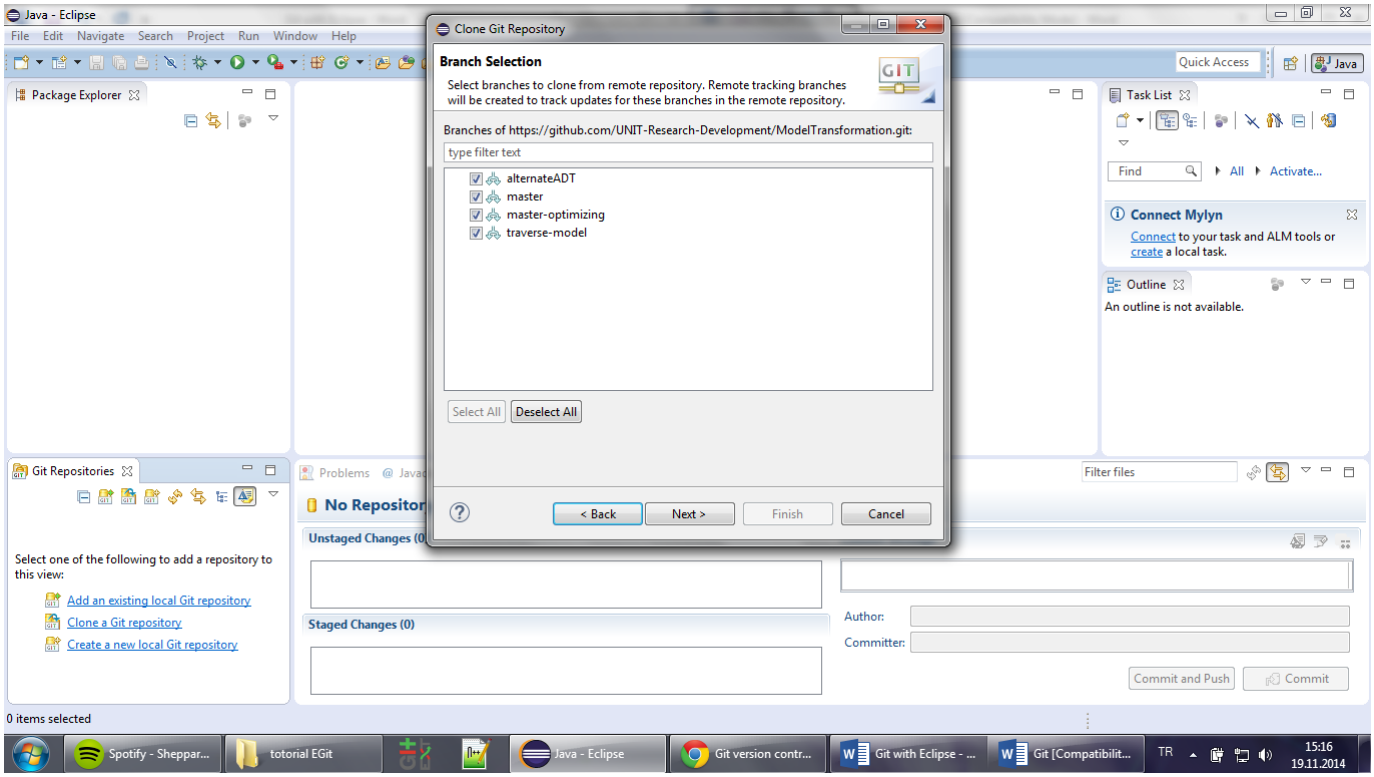
I will clone my current project on GitHub. Just copy the HTTPS URL.



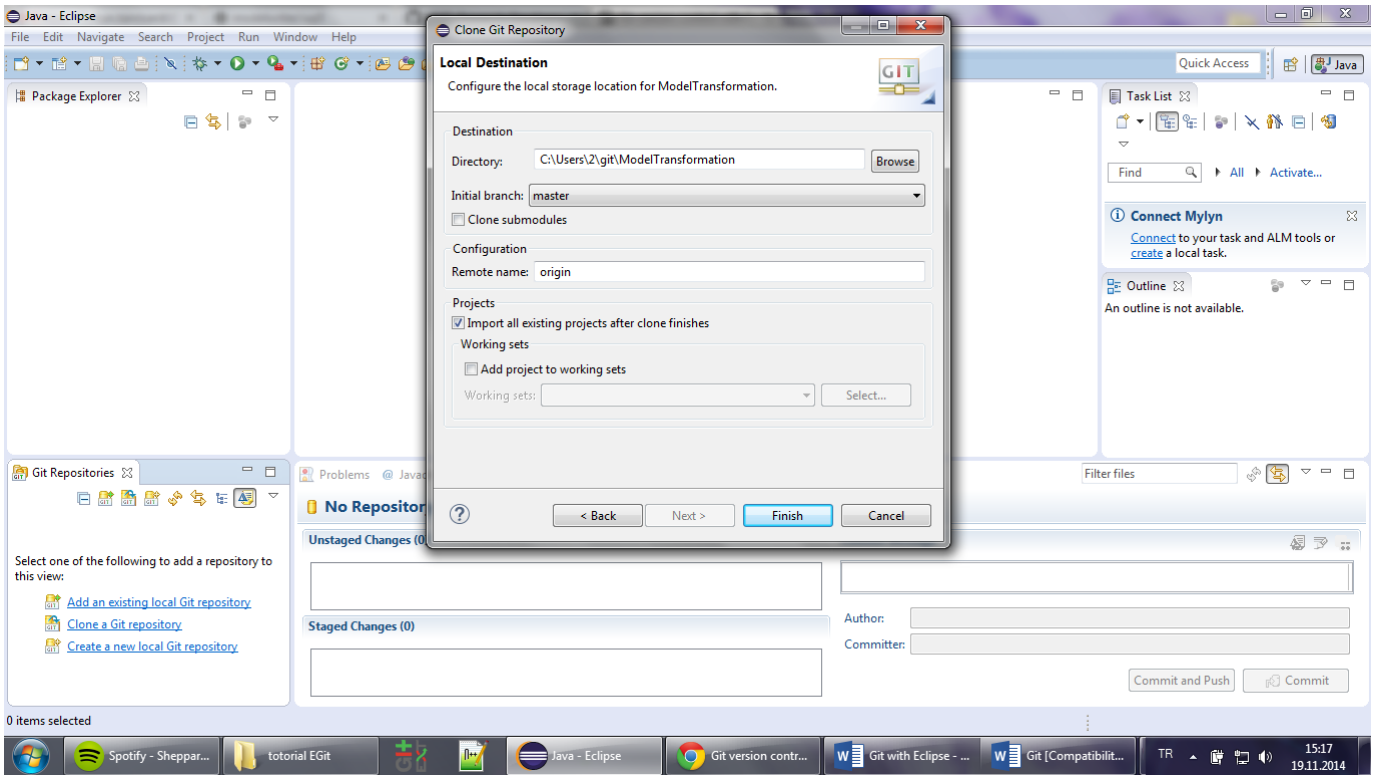
You only have to paste the URL to the first line of the dialog, the rest will be filled out automatically.



After pressing the *Next* button the system will allow you to import the existing branches. You should select at least *master* as this is typically the main development branch.



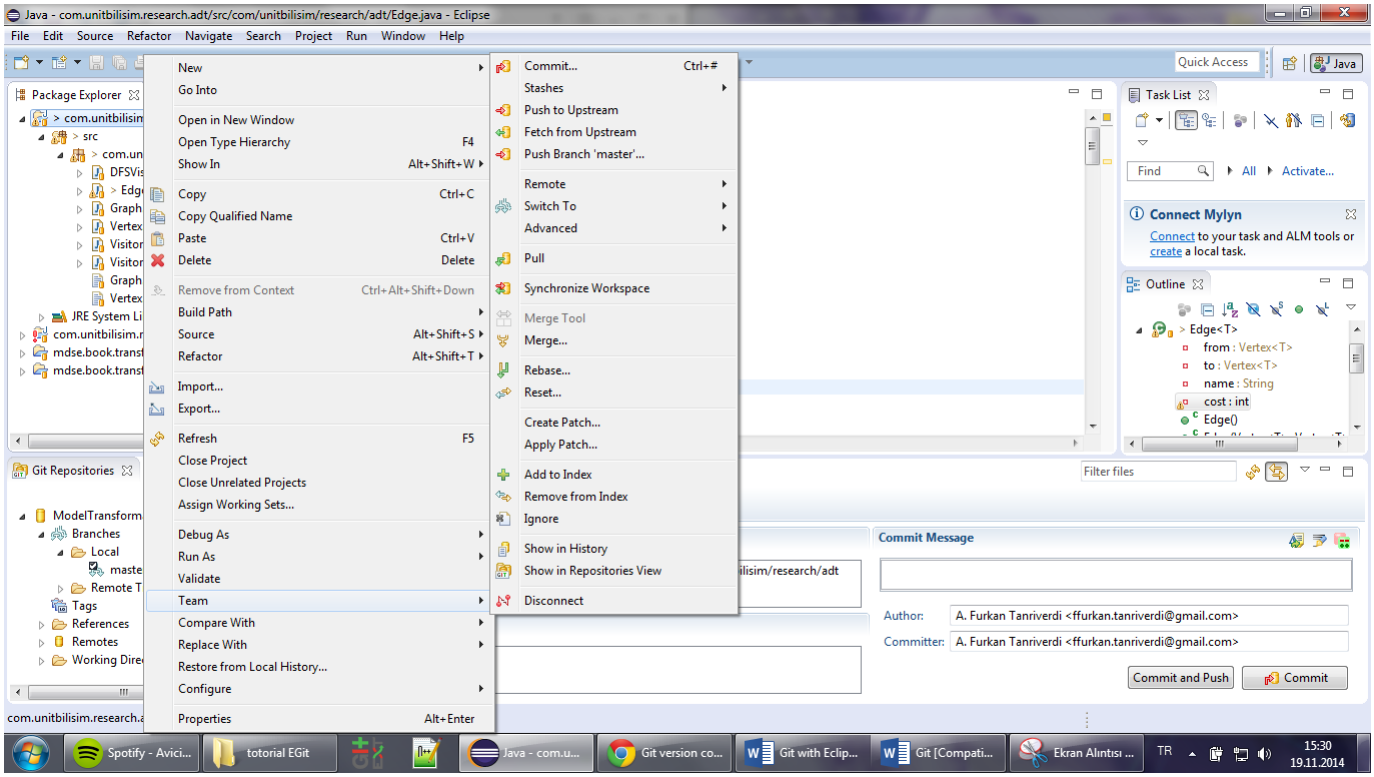
The next dialog allows you to specify where the project should be copied to and which branch should be initially selected. You can also import projects inside the rapository at that time with checking *Import all existing projects after clone finishes.*



Once this dialog is completed, you have checked out (cloned) the projects into a local Git repository and you can use Git operation on these projects.

Basic operations

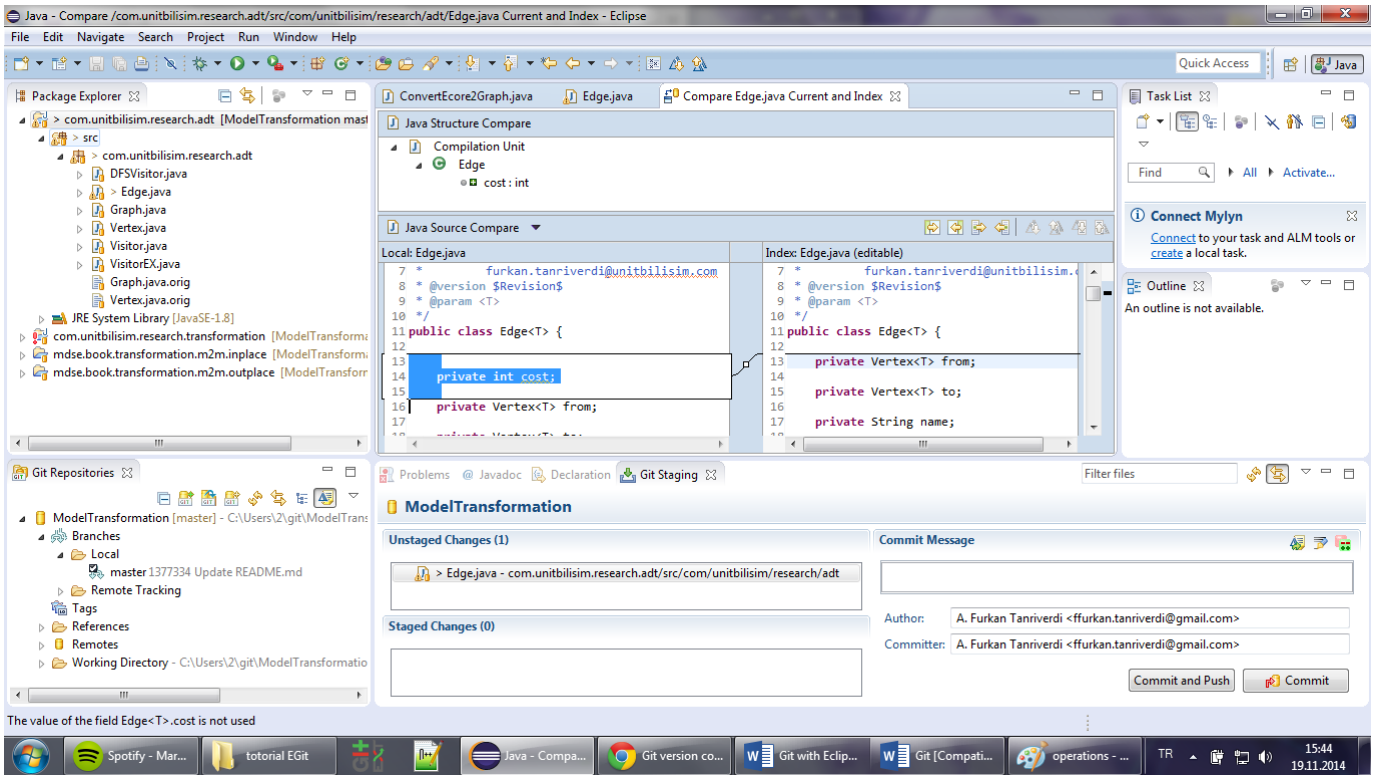
Once you have placed a project under version control you can start using team operations on your project. The team operations are available via right-click on your project or file. The most important operations are described in the following list.



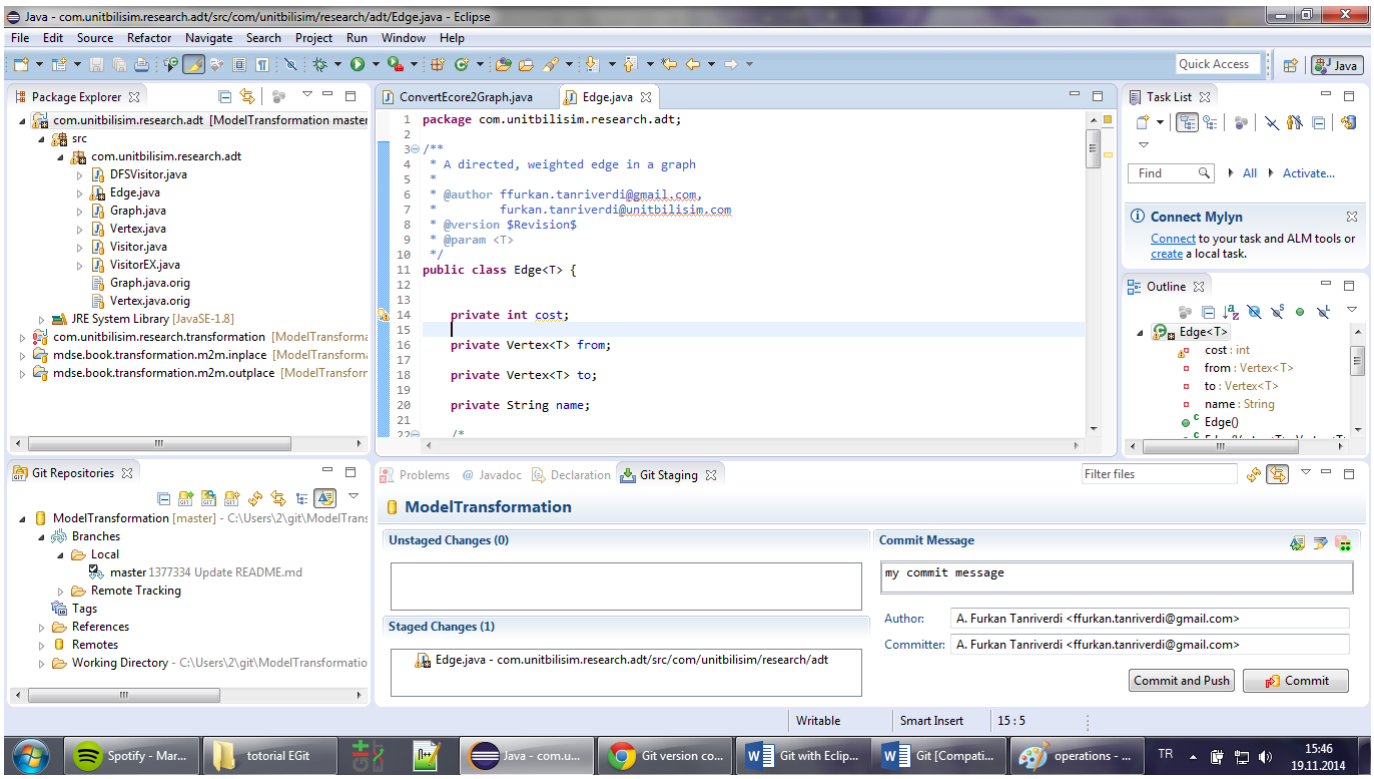
- *Team → Add to index*, to add the selected resource(s) to the index of Git
- *Team → Commit*, to open the commit dialog for committing to your Git repository
- *Team → Create Patch...*, to create a patch
- *Team → Apply Patch...*, to apply a patch to your file system
- *Team → Ignore*, to add the file to a .gitignore file
- *Team → Show in History*, to display the selected files and folders in the *History* view
- *Team → Pull* to pull in changes from your remote Git repository
- *Team → Fetch* to fetch the current state from the remote repository
- *Team → Switch To* to switch or create new branches
- *Team → Push* to push changes to your remote Git repository

Commit

When you make changes on project, it appears under the Git Staging view. I added a property to Edge class named *cost*. You can see below.



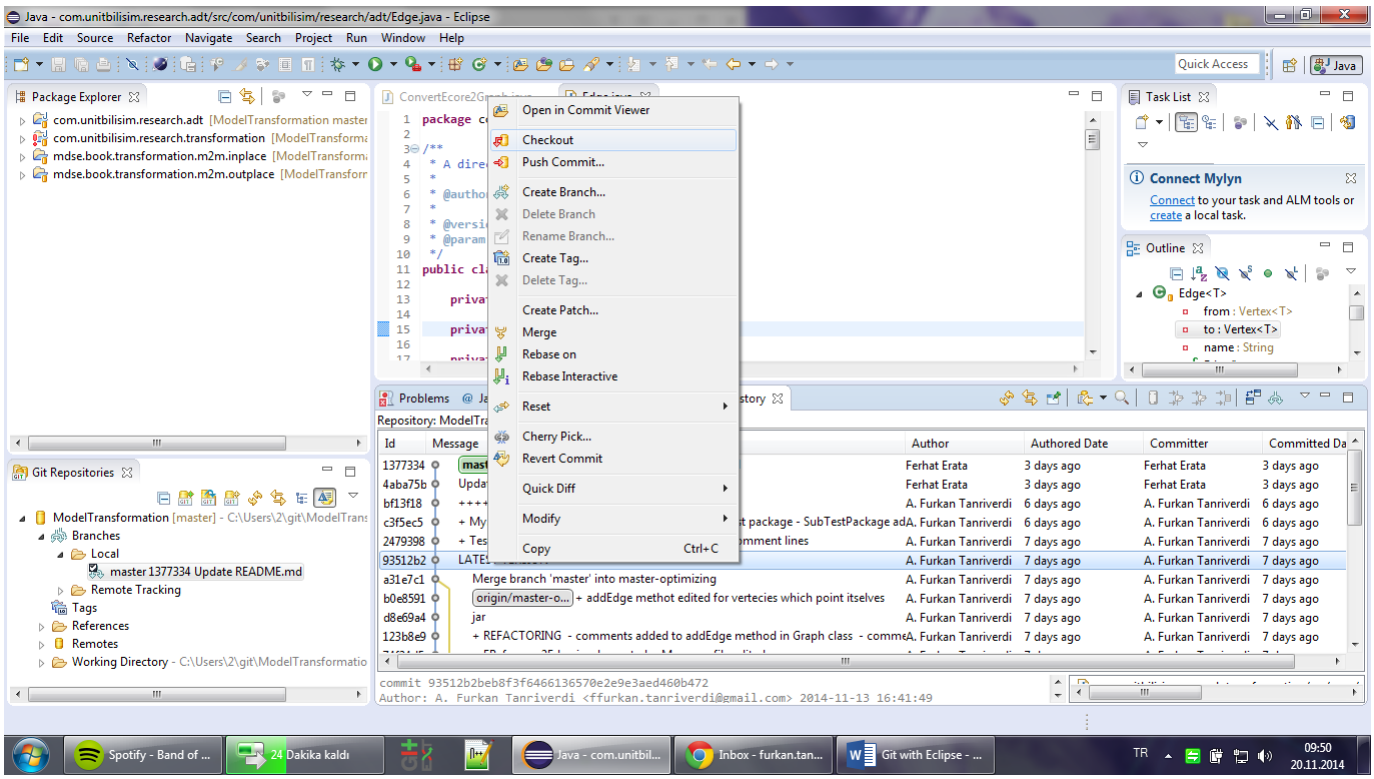
If you want to stage changes, right-click on file then click *Add to Index.* Do not forget to add commit message(s).



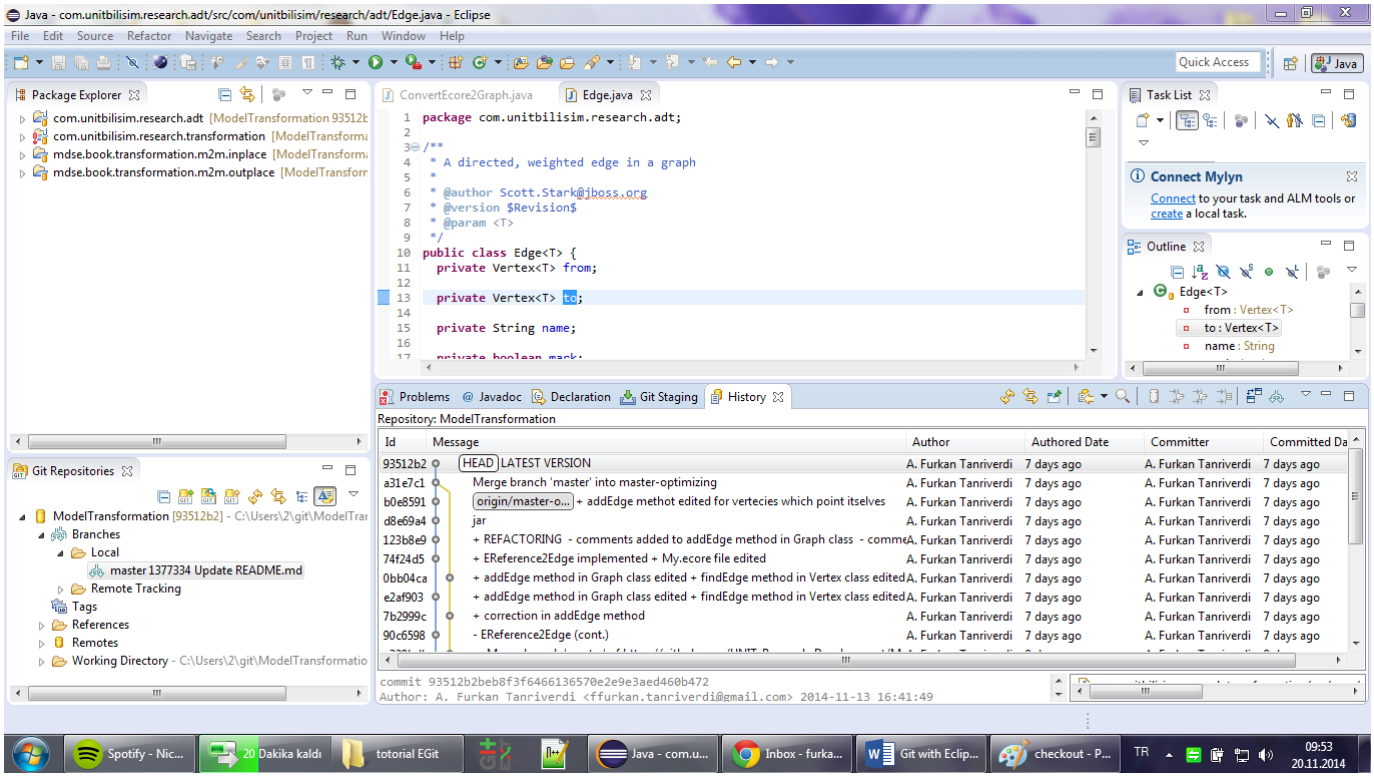
Click on *Commit* to store changes on local. Other option is *Commit and Push* which is for commit and push to remote.

Checkout

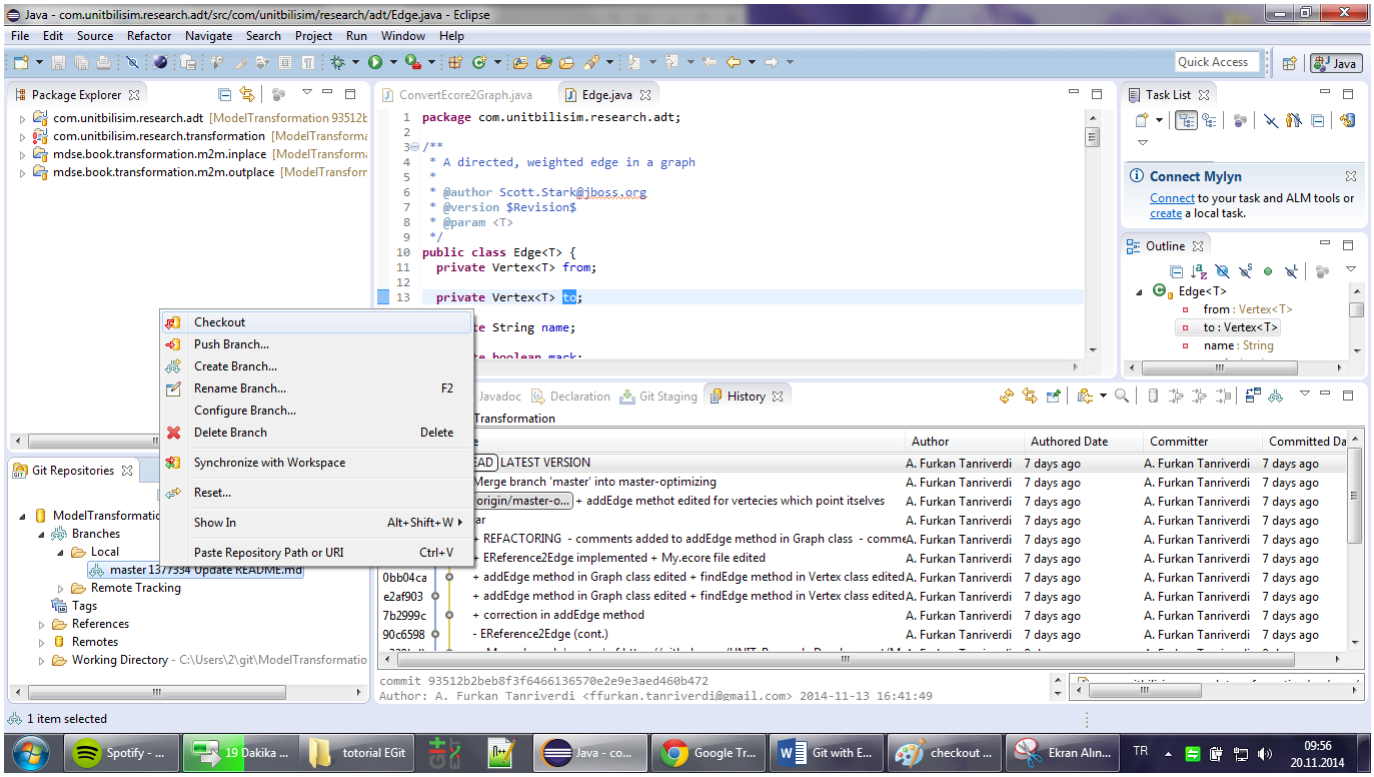
Checkout is used if you want to take a look your previous versions and see the differences. Right-click on repository or branch that you want to checkout, then *Show In -> History.* You will see commit history of that particular branch. Right-click on a commit and click *Checkout.*



Now, *HEAD* is on *LATEST VERSION* as you can see below. This means I returned the 7 days prior version of my codes.

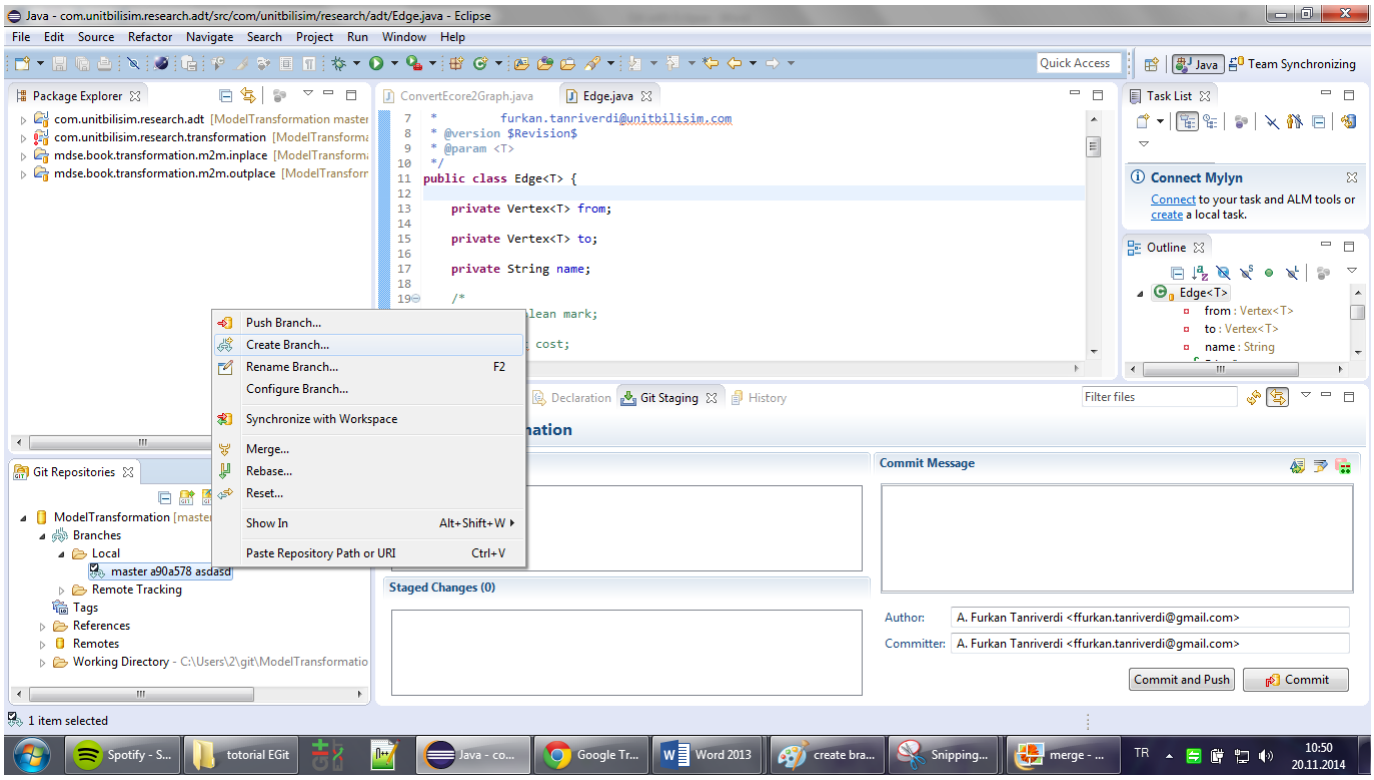


You can return back to your current position with checking-out master.

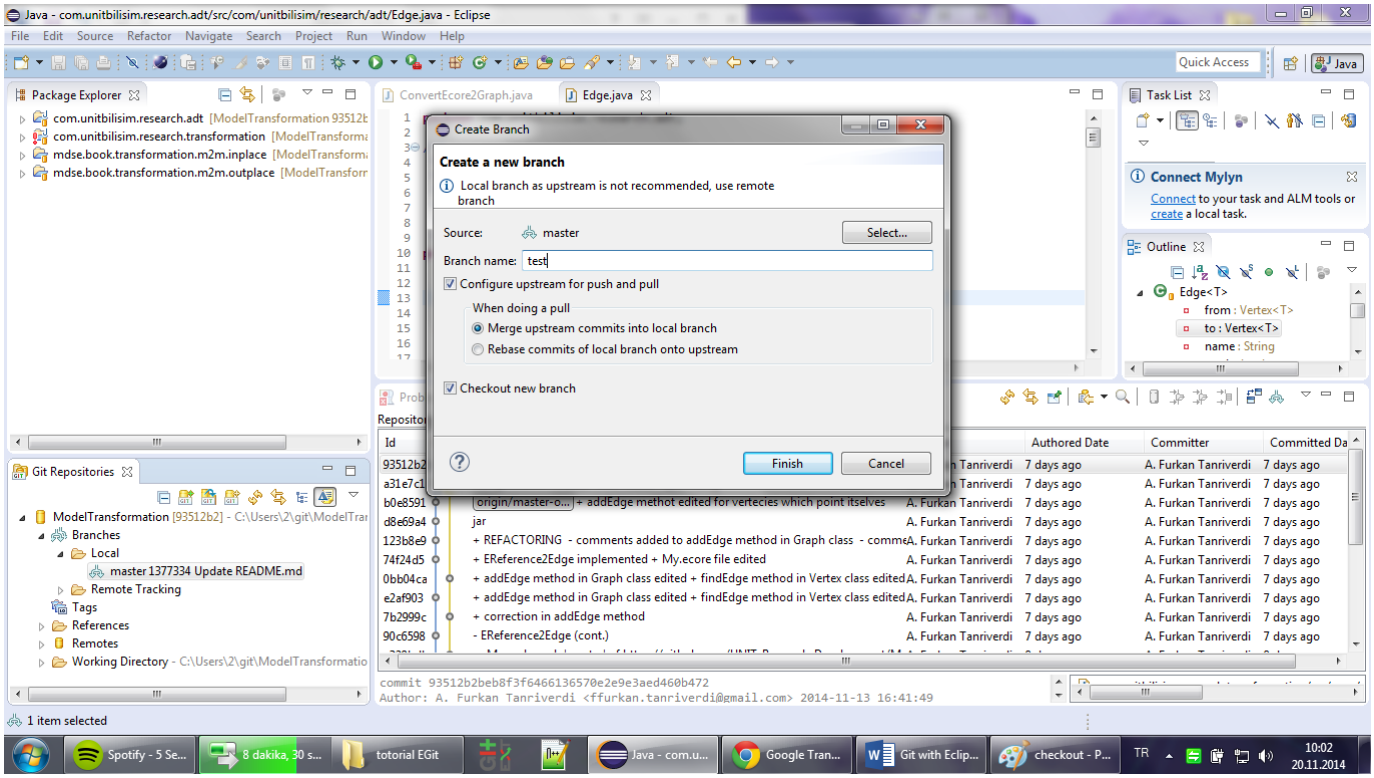


Create Branch

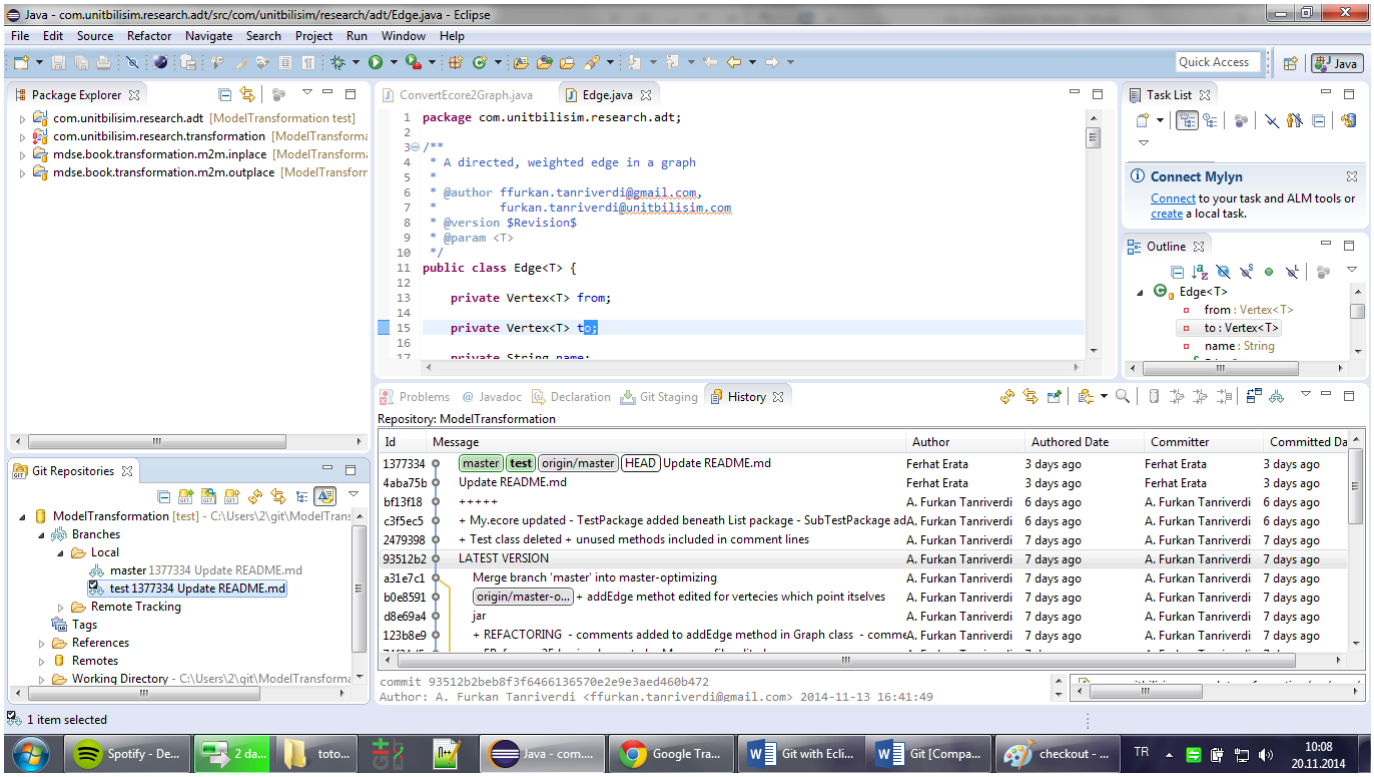
Right-click on a branch(in our case *master*) and click *Create Branch.*



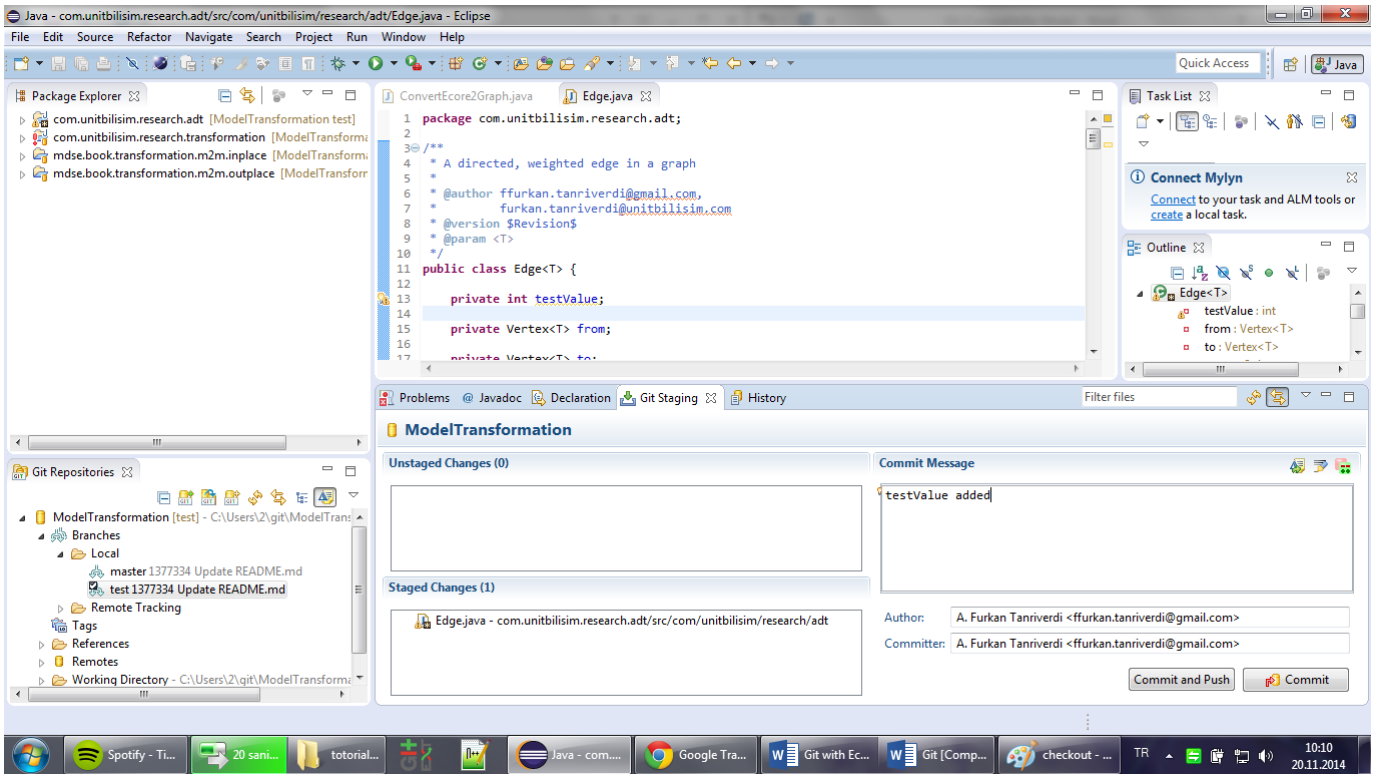
In the dialog window, enter your branch name and check *Merge upstream commits into local branch* as your pull strategy.



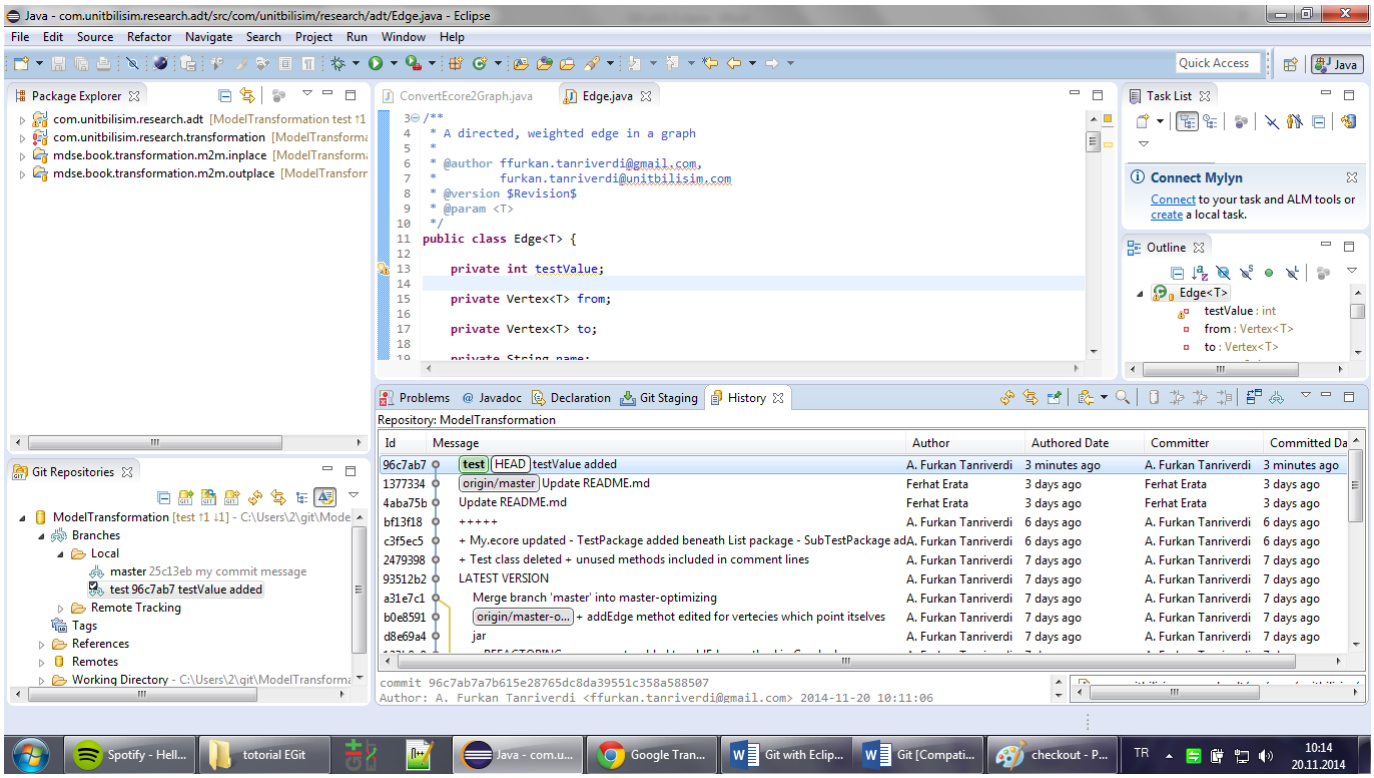
You can see the new branch named *Test.* Let's make some changes on it.



I added a new property which is *testValue*.



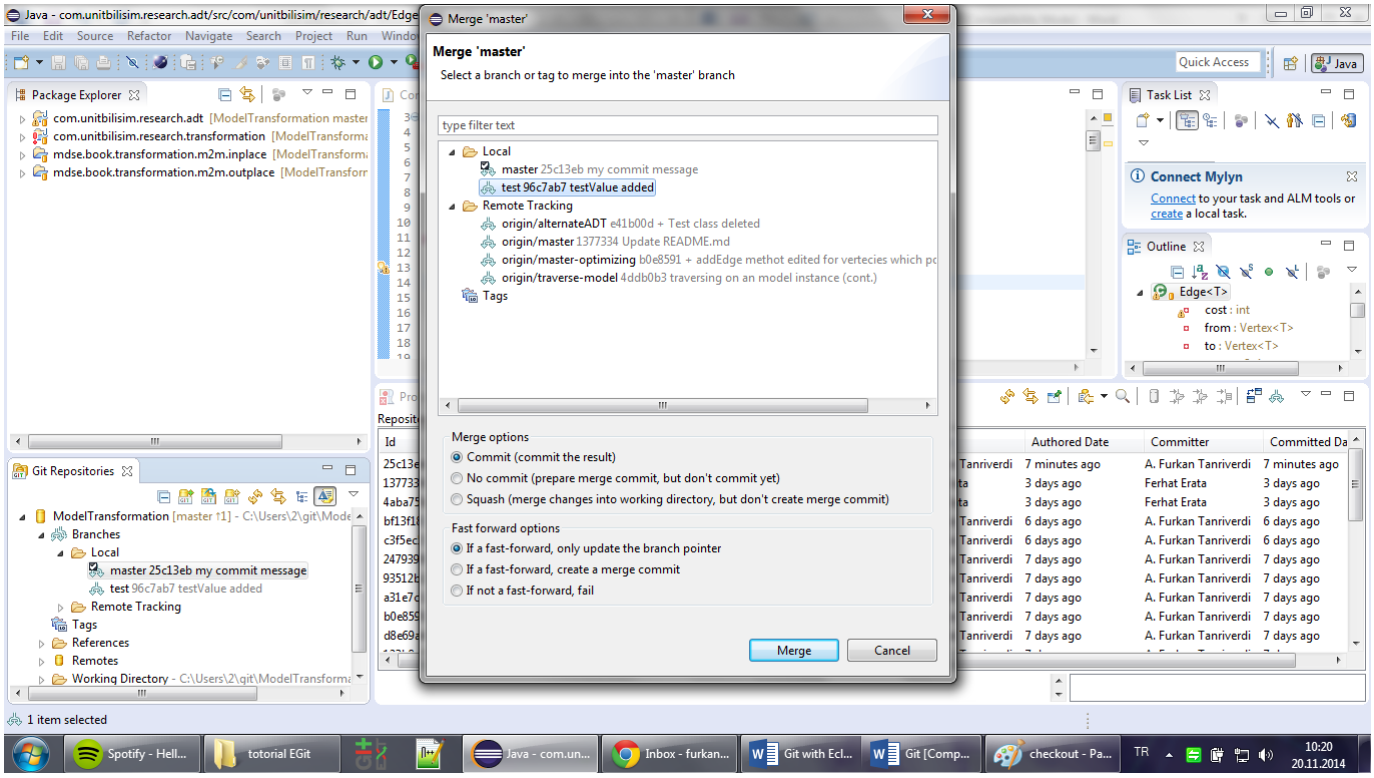
After commits the changes, it is shown in history as below.



Merge

It combines two branches into one. In our case, merging *master* with *test.* You have to checkout master first.

Right-click on *master* branch and select *Merge.* Select the branch you want to merge with.



As you can see below, *test* and *master* branches point the same commit.