STM32 Ecosystem workshop

T.O.M.A.S Team

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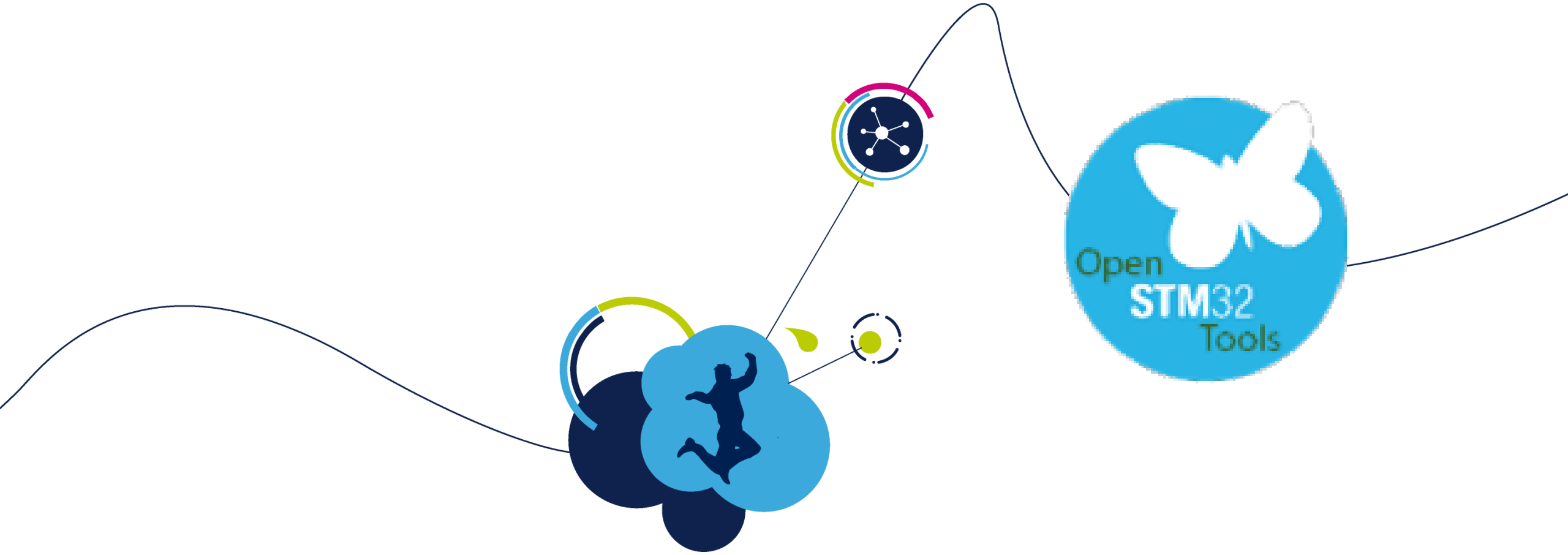
Now it is a right time for some theory

- We will present basic information about version control systems SVN and GIT within SW4STM32 to share the projects within the team

Goal of this part

- Demonstrate SNV and GIT mechanisms implemented within SW4STM32 tool
- Gain knowledge about SVN and GIT repositories creation
- Gain knowledge about manipulating on files between local project and its repository
- Gain knowledge about importing projects from SVN and GIT repositories



Sharing projects with the team (SVN)

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Benefits of using project sharing tools

- Registering of all changes
  - Possibility to compare all previous changes
  - Get recent version at anytime later
  - Automatic log – changes description
- Sharing the source code among developers
  - Several developers can work on the same project and sharing their changes
  - In case of conflict (i.e. two developers working on the same file) you are warned and merging options are available
- Branching of software versions

Let’s try first SubVersion (SVN)

SubVersion (SVN)

general points

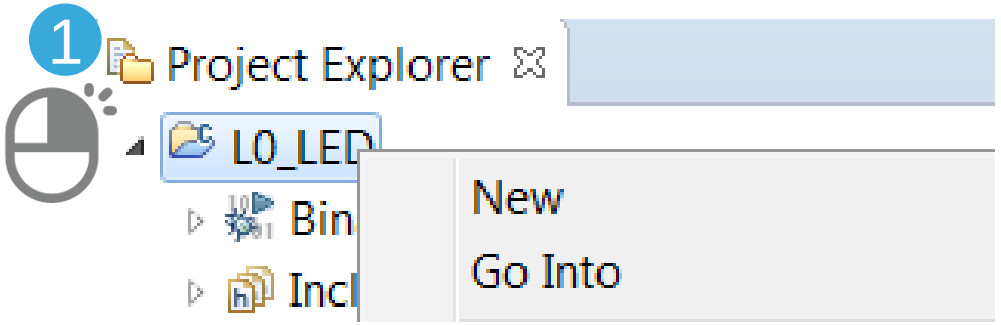
- SubVersion is a GNU project, Server-Client type

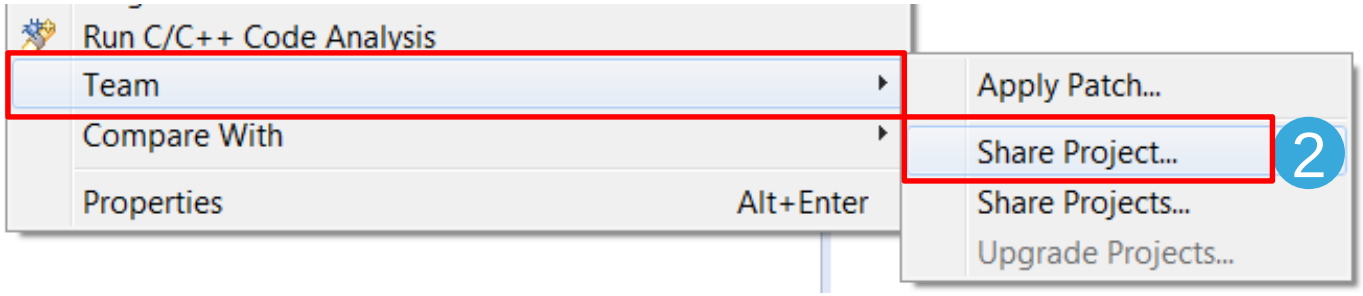
- It requires:
  - Installation of SVN server application on the PC which would contain the projects repository
  - Installation of SVN client application on each PC which would like to use the projects repository:
    - It can be a standalone application, like TurtoiseSVN:

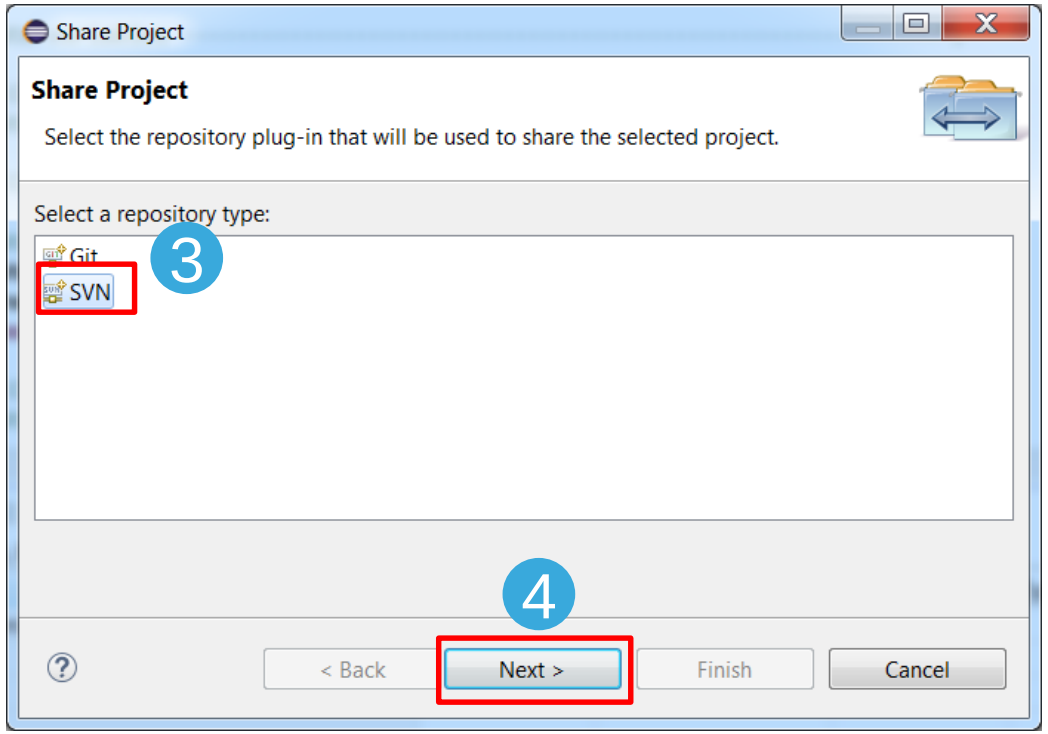
      www.tortoisesvn.net
    - Or it can be a build in Eclipse plugin (like present in SW4STM32)

Sharing projects with the team - SVN

1. In order to send your project to SVN repository, click the right button on mouse on project name
2. From menu select *Team->Share Project(s)*
3. From pop-up window select SVN
4. Click Next

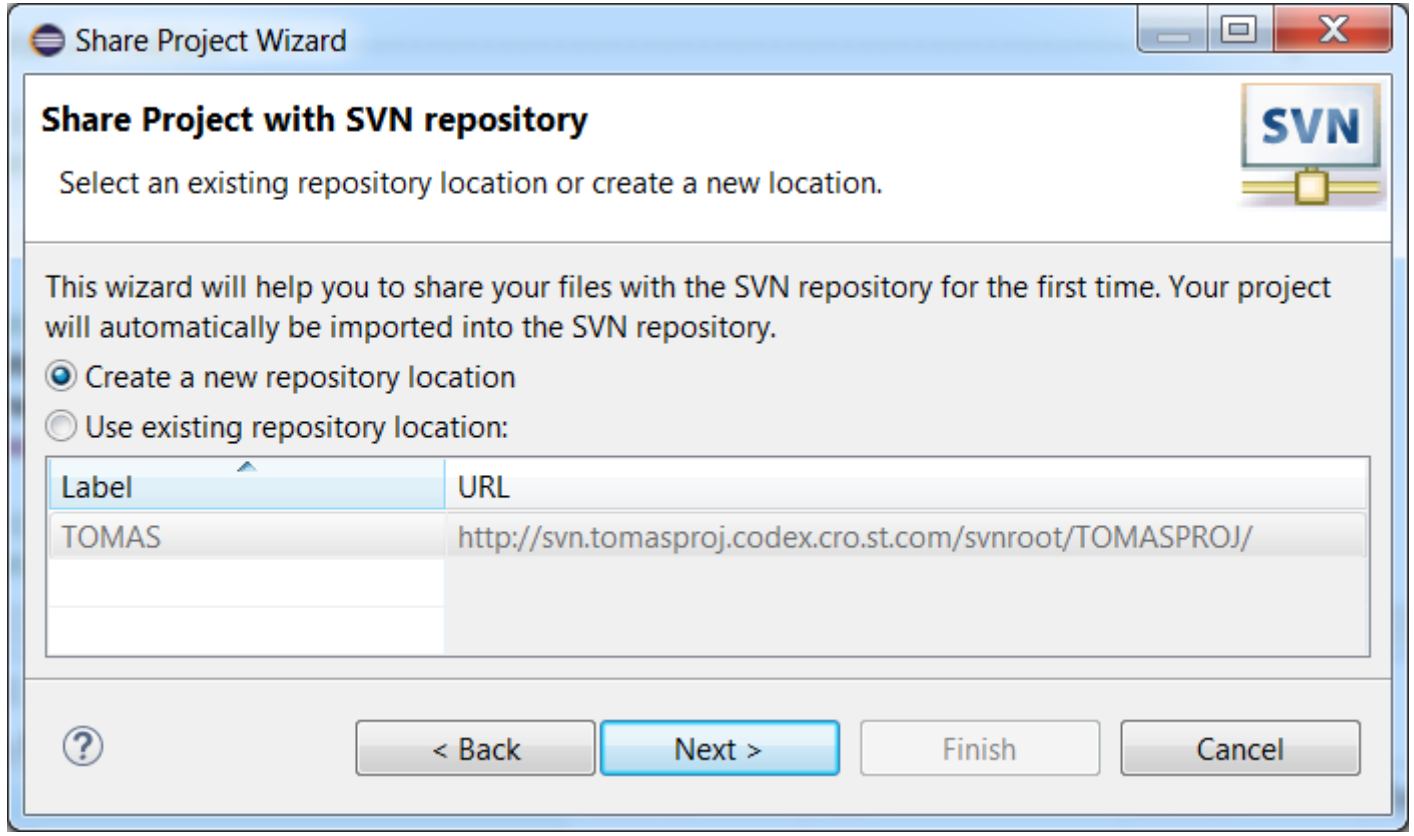






Sharing projects with the team - SVN

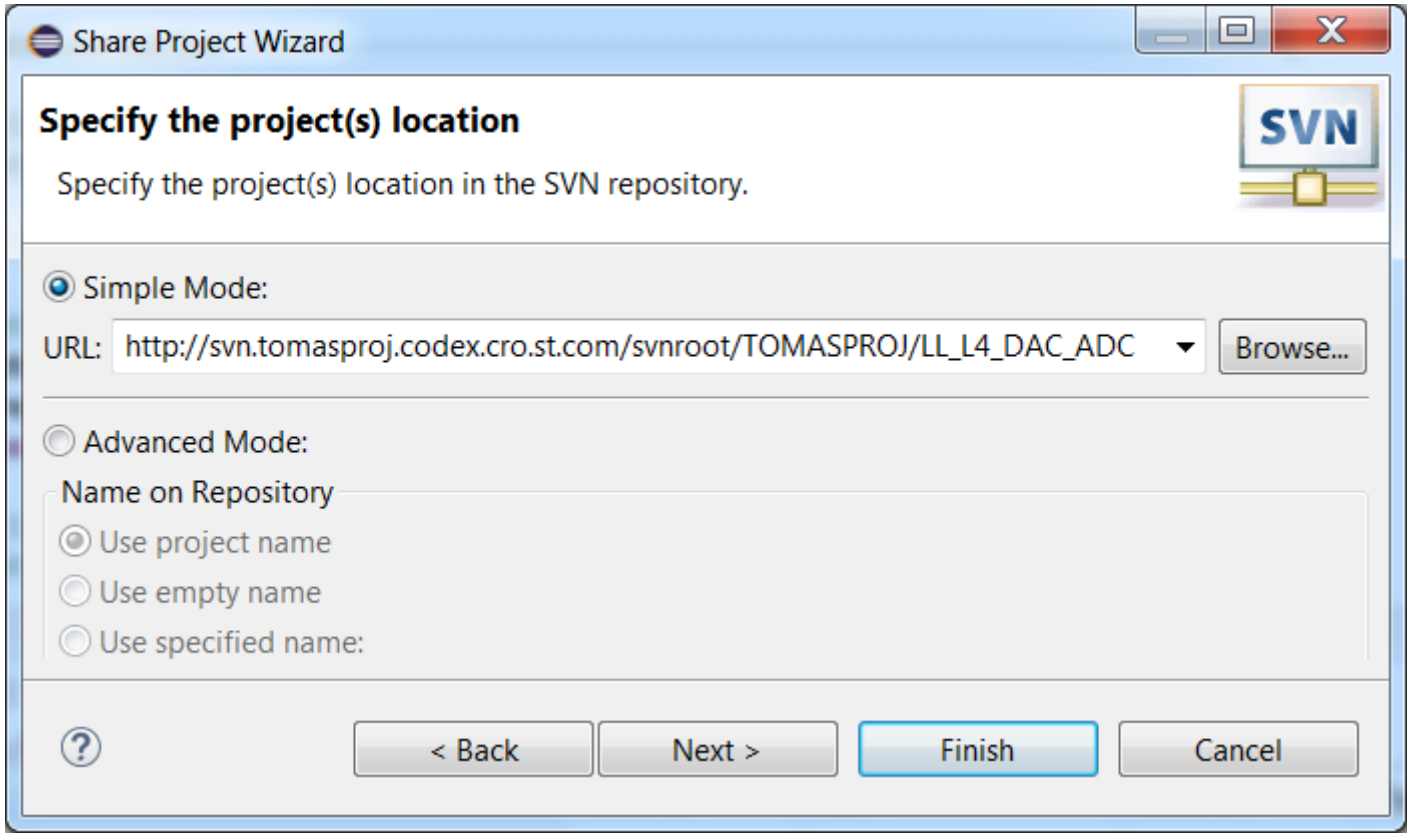
5. Next step would be selection of the SVN repository:
   a. Create a new one
   b. Use existing one
6. Press Next for further configuration



Sharing projects with the team – SVN

using existing repository location

7. Select the project folder location on the server
8. Press Finish

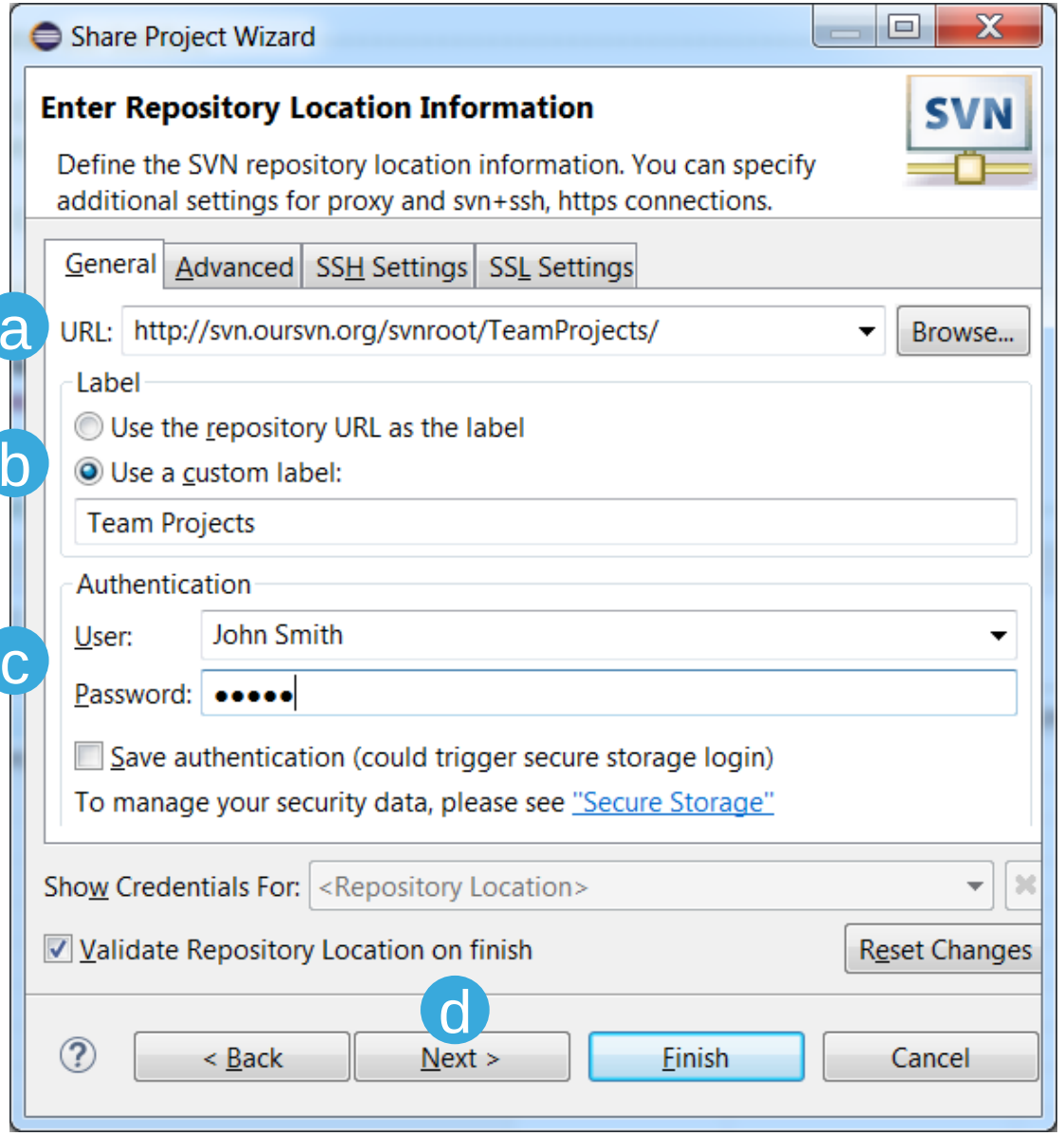


Sharing projects with the team – SVN

creating a new repository location

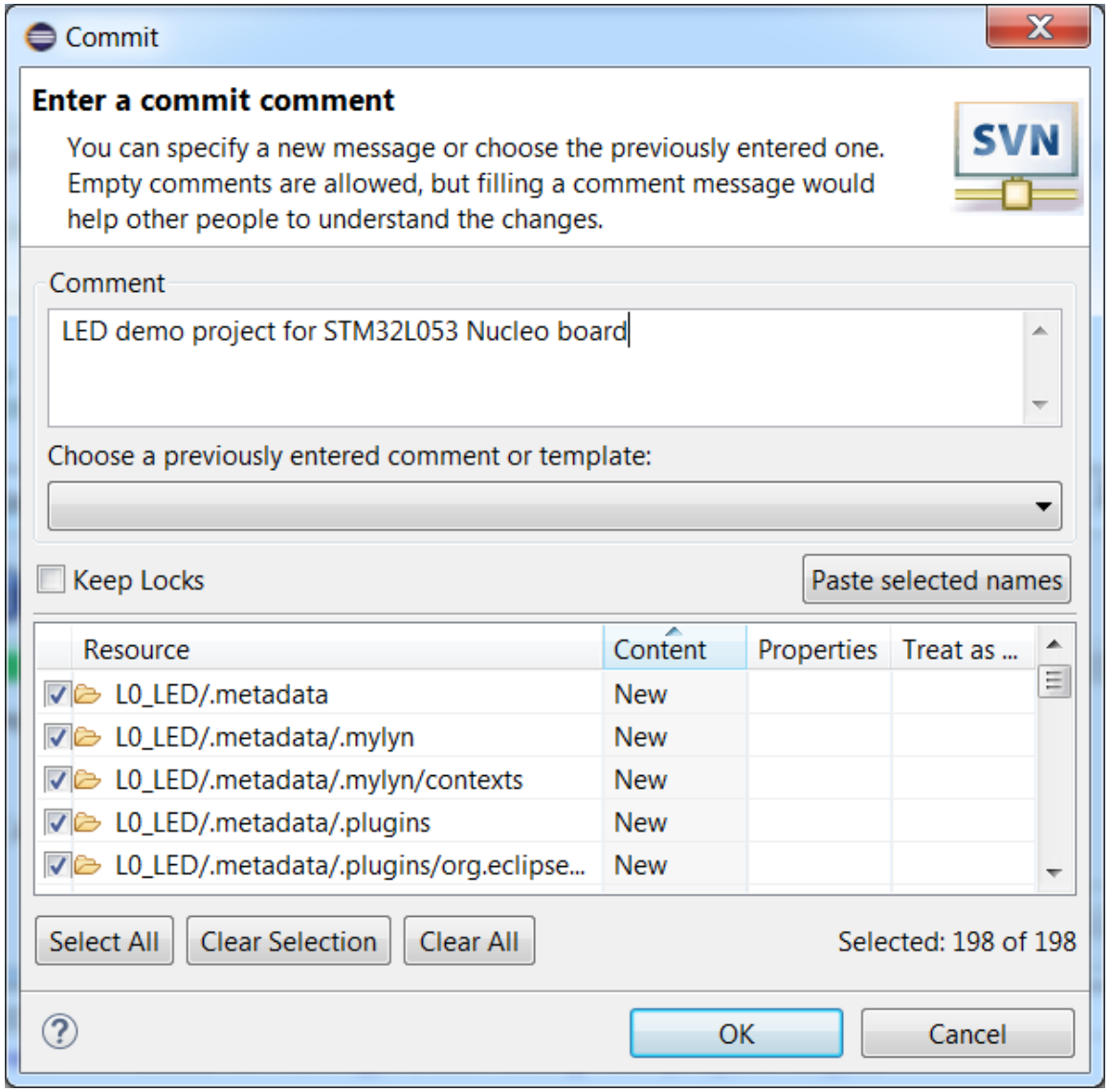
7. In *General* tab, please fill:
   a. URL address of SVN repository server
   b. Custom label of the repository (if any)
   c. User name and password for log-in
   d. Click **Next**

8. Follow instructions inline with your SVN repository configuration and at the end press **Finish**



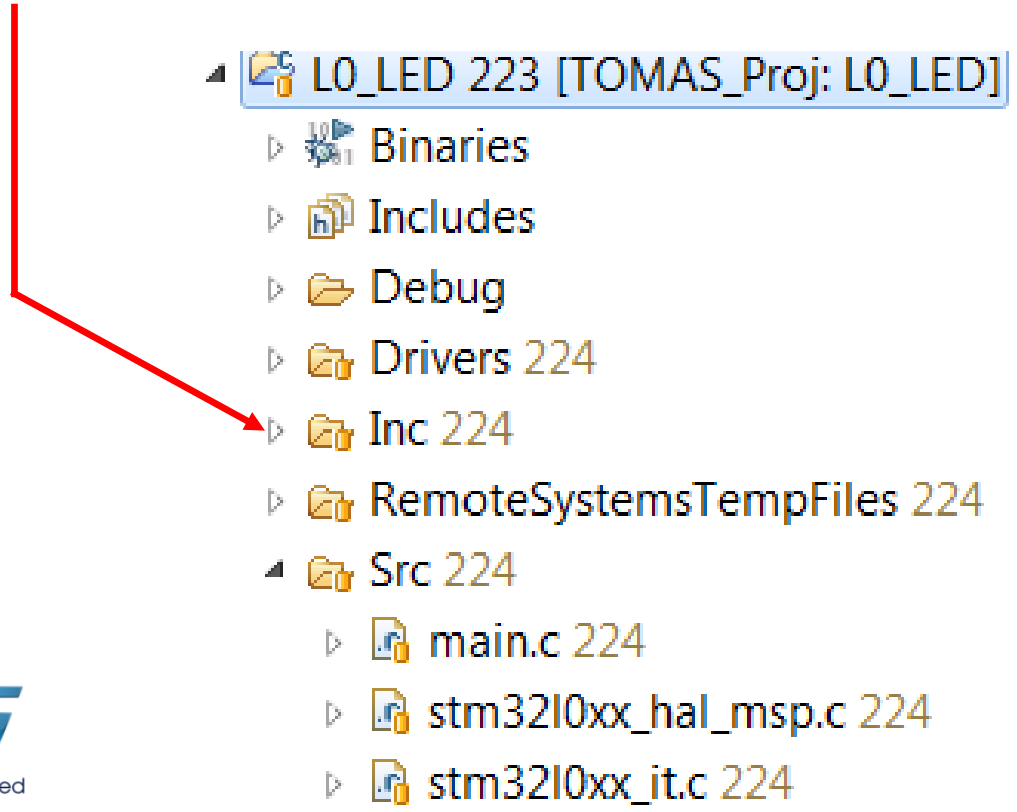
Sharing projects with the team - SVN

- Enter project comment/description
- Select files to be copied
- Click **OK** to copy selected files to repository

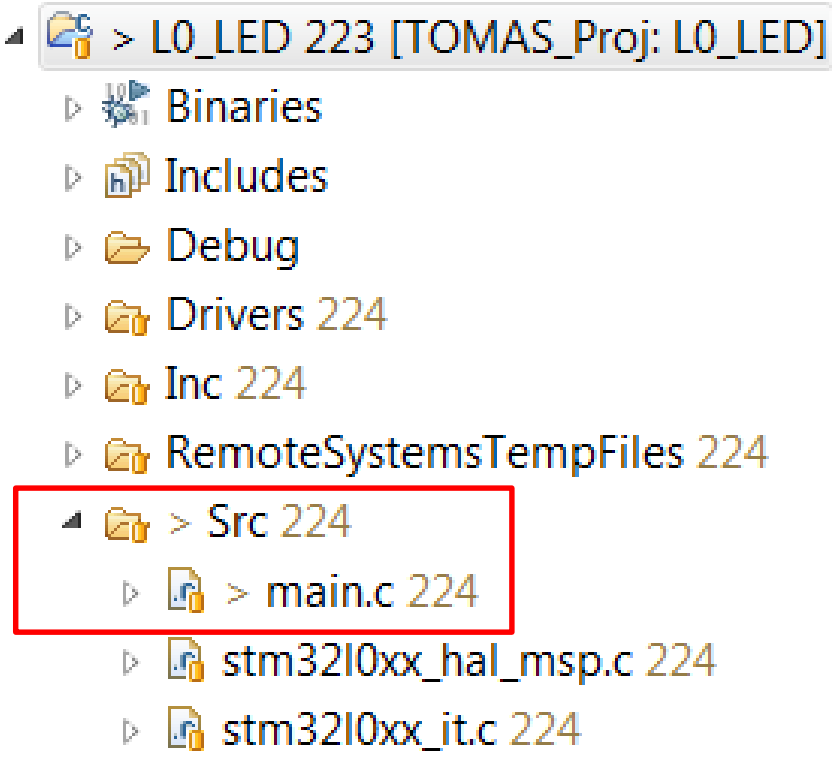


Sharing projects with the team - SVN

1. After sending to repository, all project files are marked differently and have added the version number (224 in this case)

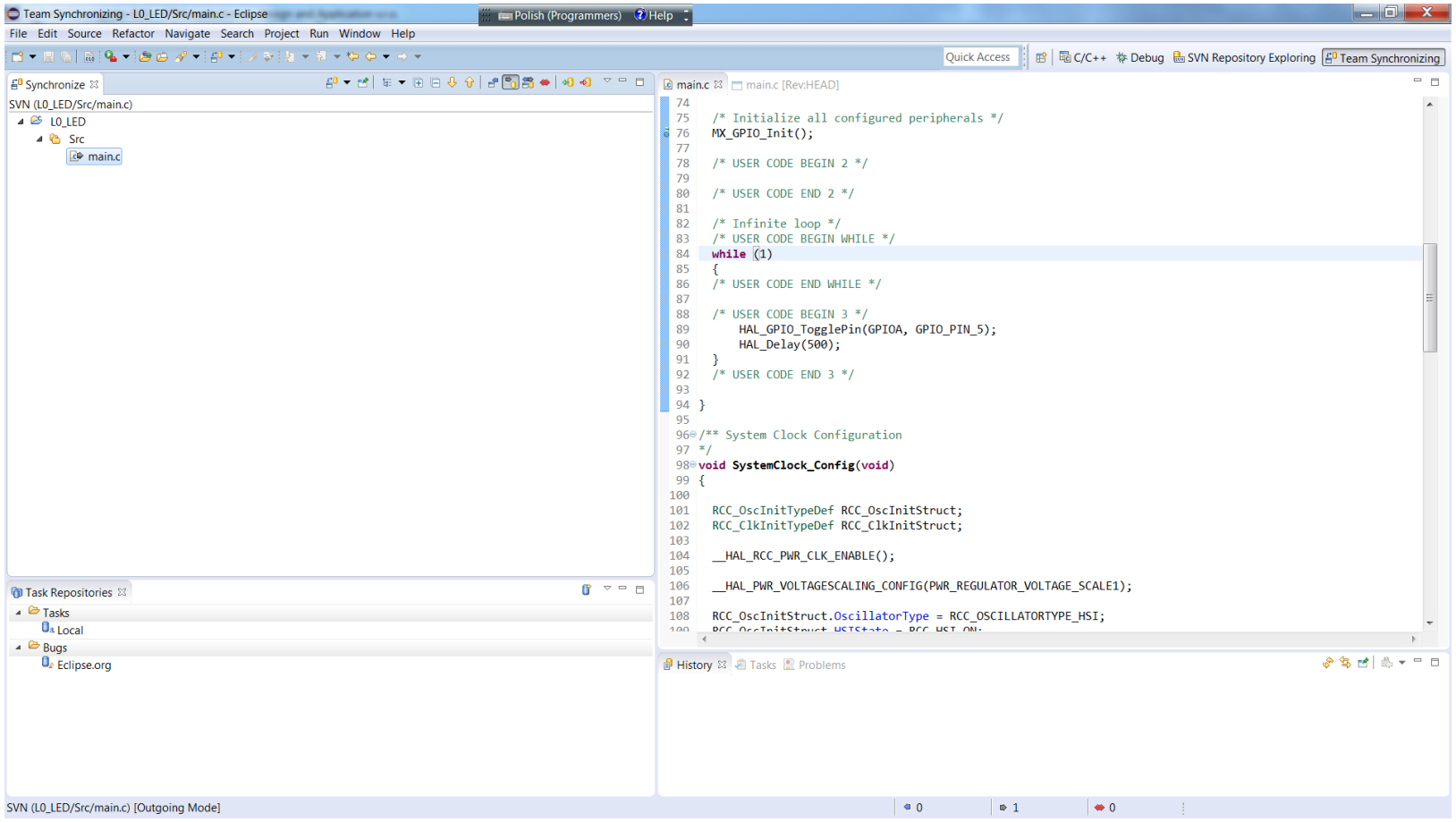


2. Each file modified after this operation is marked as “modified” (using ‘>’ symbol) like below:



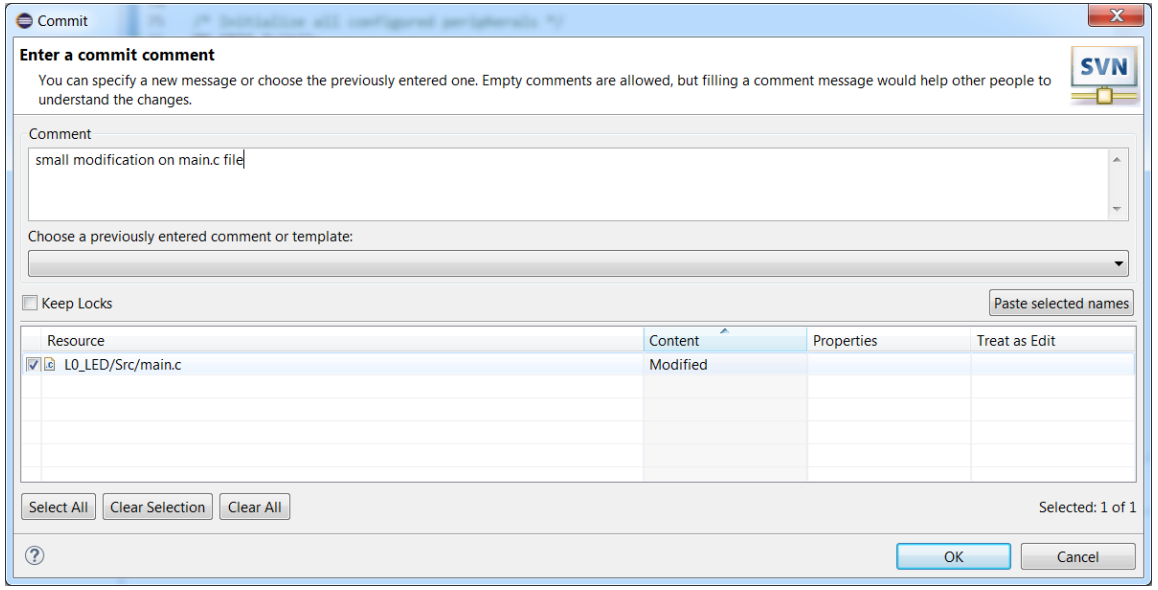
Team Synchronizing perspective

- In case of synchronization with repository, Eclipse will switch to Team Synchronizing perspective
- Here we can track any conflicts, differences and control synchronization in both directions (from and to repository)



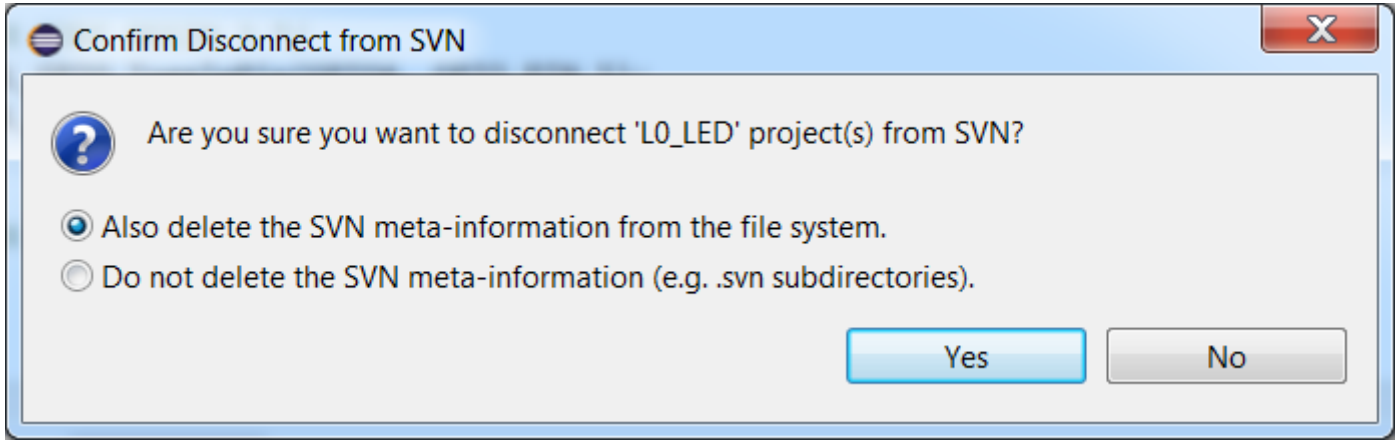
Sharing projects with the team - SVN

- To synchronize modified files with repository:
  - Either right-click selected file (single file synchronization)
  - Or right-click project itself (complete project synchronization)
- Select *Team->Commit*
- Add a comment if any and select files to be synchronized
- Press **OK** -> files in repository will be updated



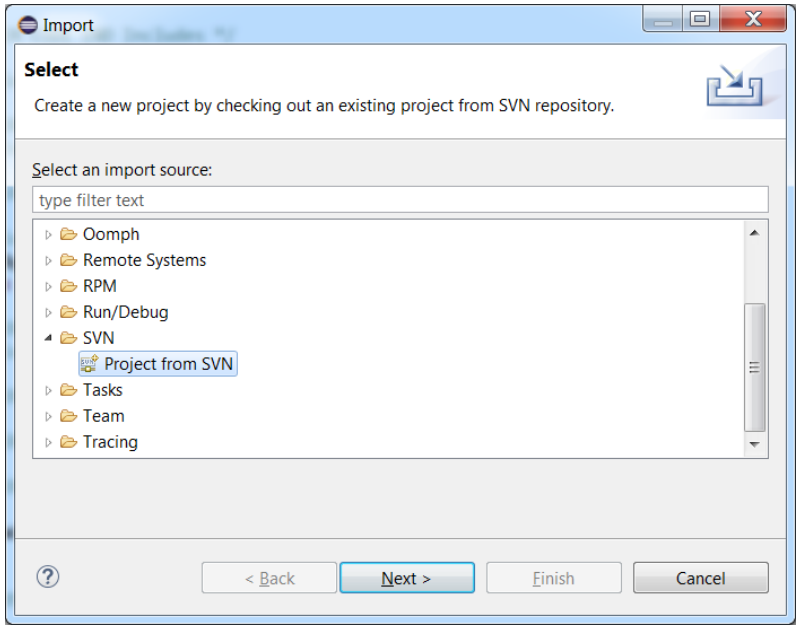
Disconnecting project from SVN

- Right-click project name
- Select *Team->Disconnect*
- Select appropriate option concerning SVN meta-information

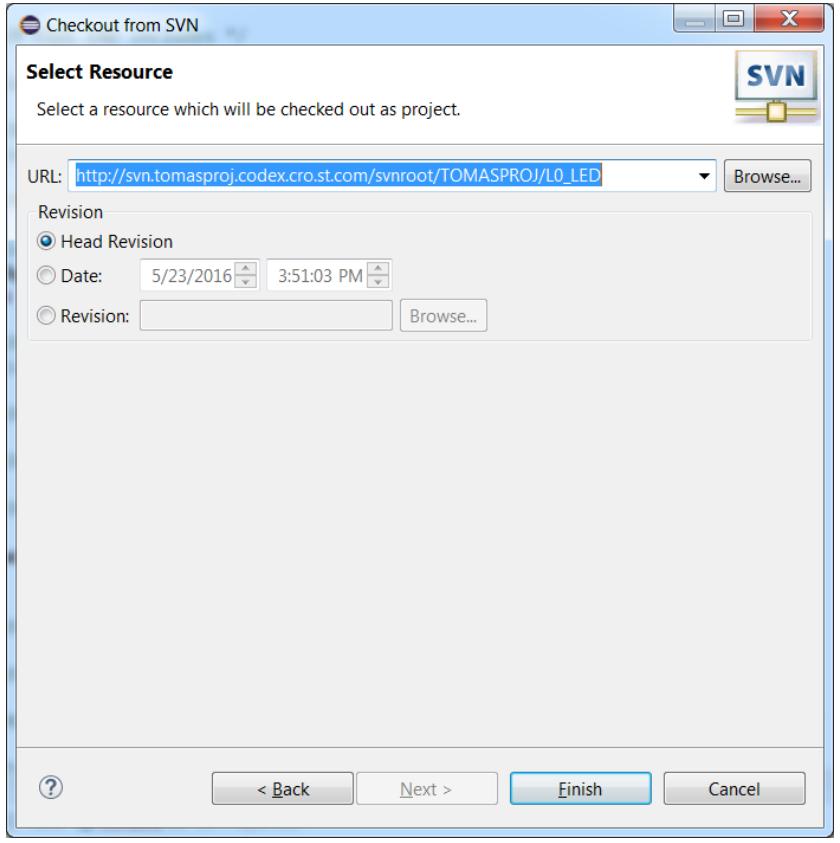


- All files are marked like before SVN connection
- The project is not automatically removed from the SVN repository

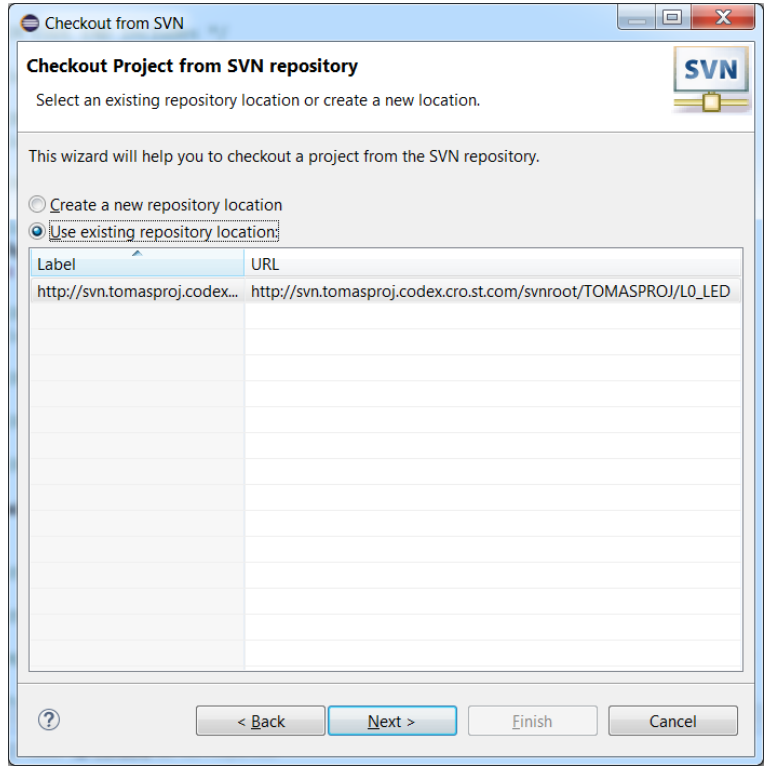
Importing projects from SVN



From already opened workspace select *Import->SVN->Project from SVN*

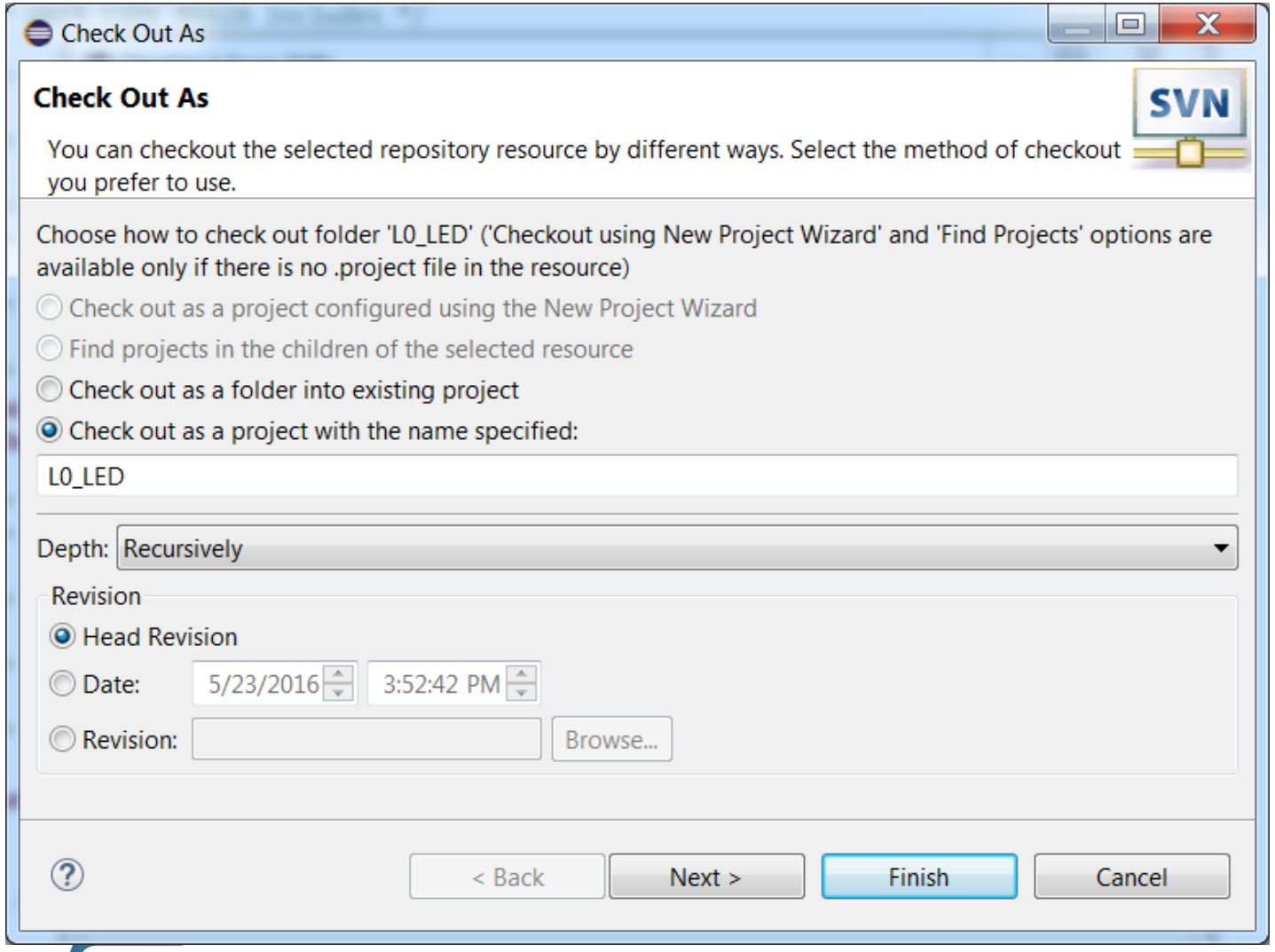


Select repository

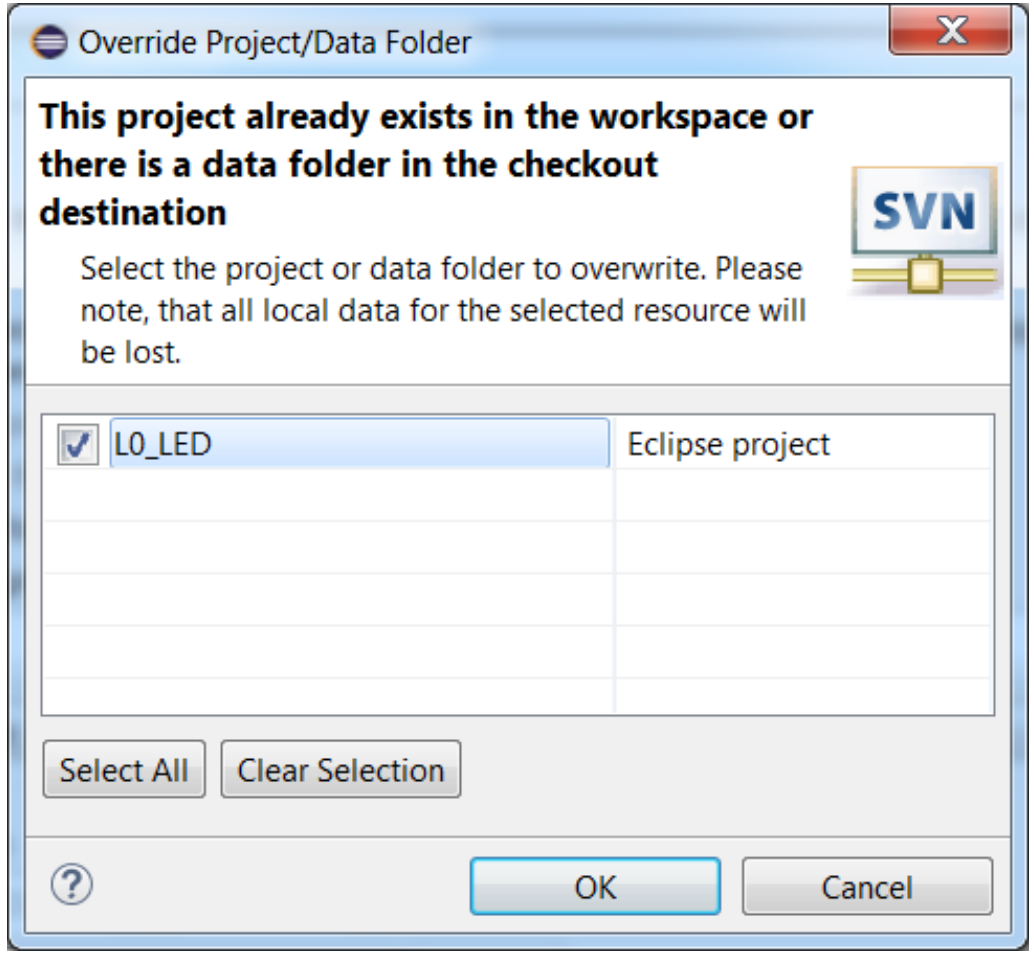


Select project to be checked-out

Importing projects from SVN



Set additional project options



In case of adding existing project warning message would appear

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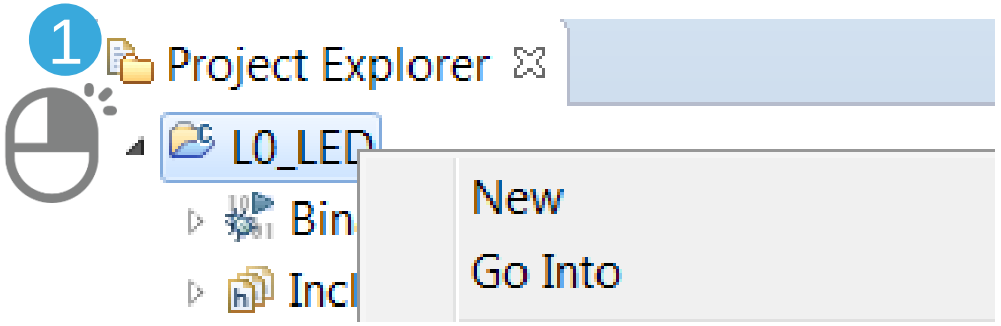
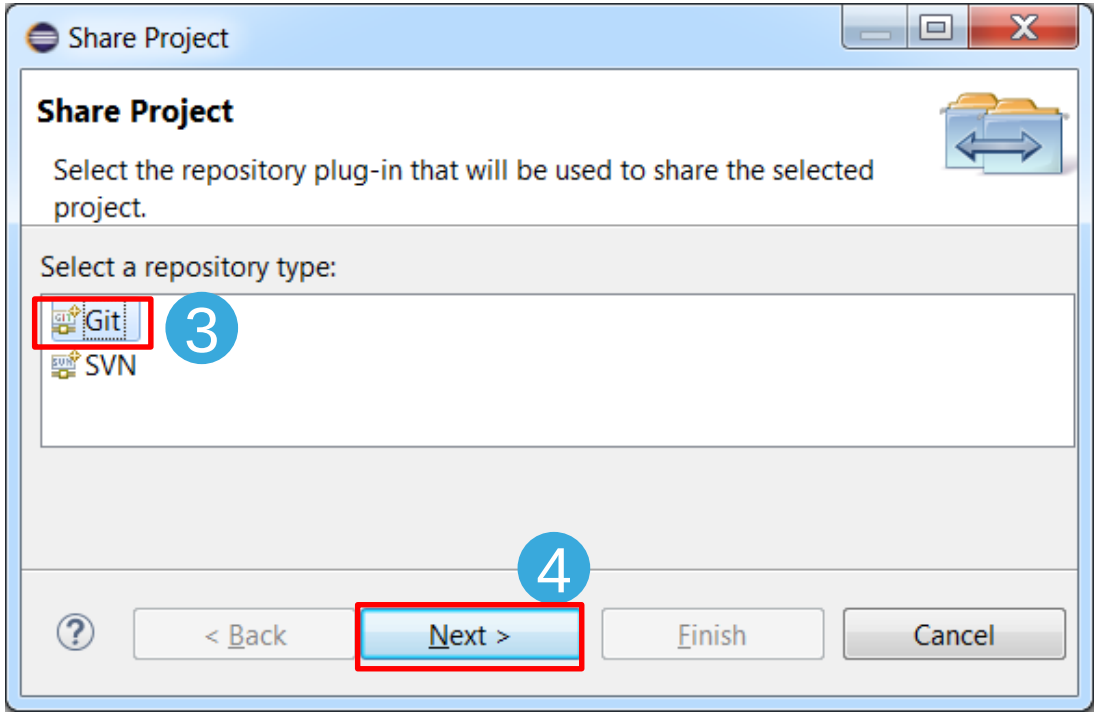
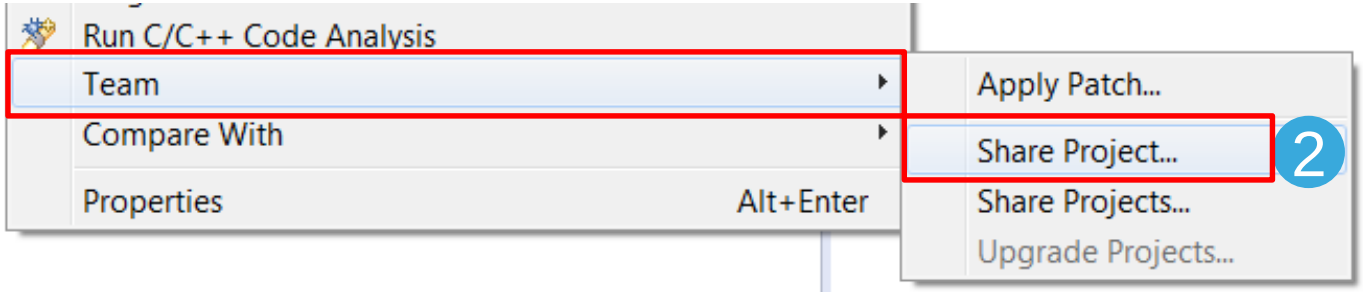
Now we can try GIT

Sharing projects with the team - GIT

1. In order to send your project to Git repository, click the right button on mouse on project name
2. From menu select *Team->Share Project(s)*
3. From pop-up window select ***Git***
4. Click **Next**



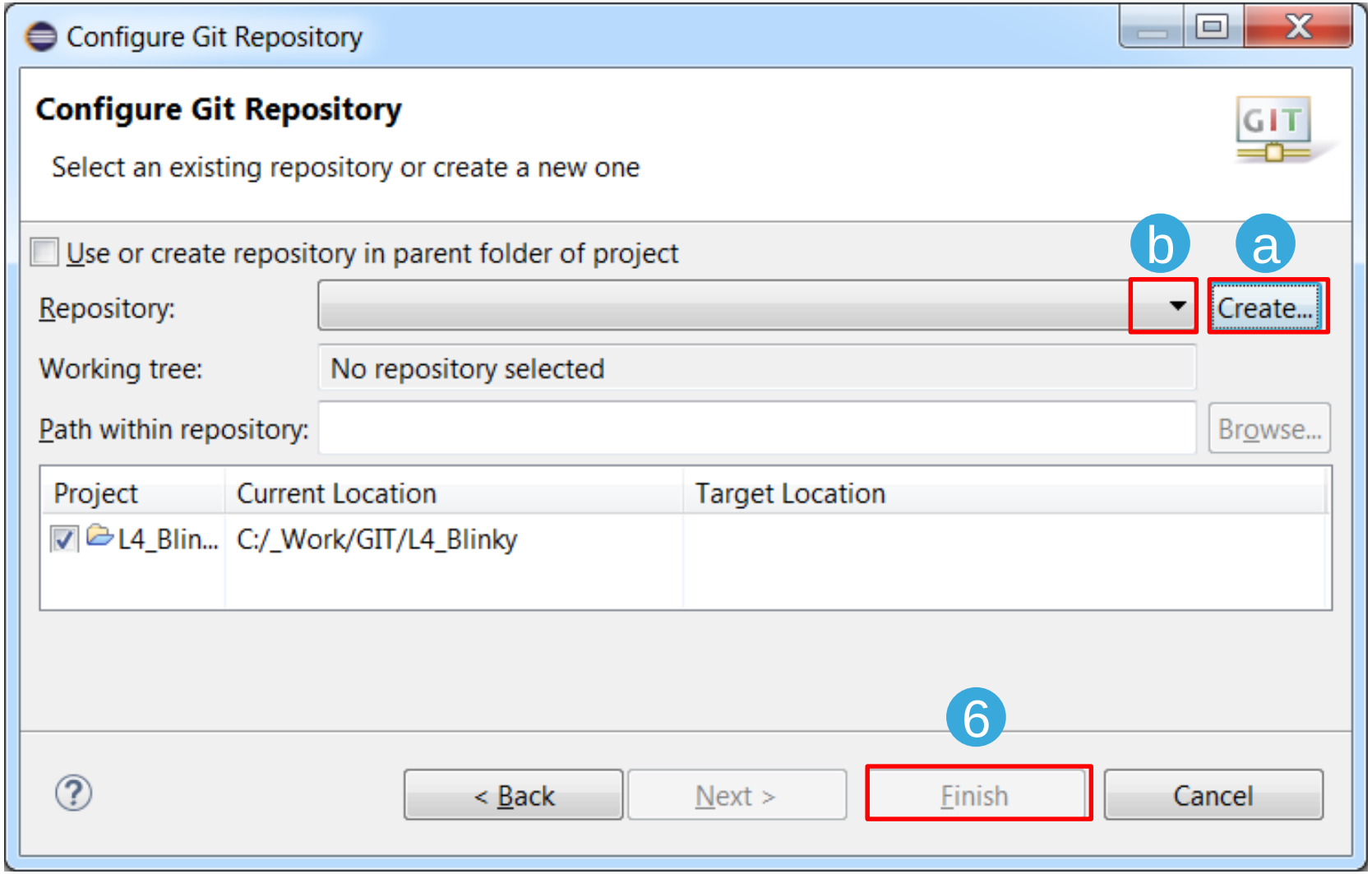




Sharing projects with the team – GIT

creation of new repository 1/4

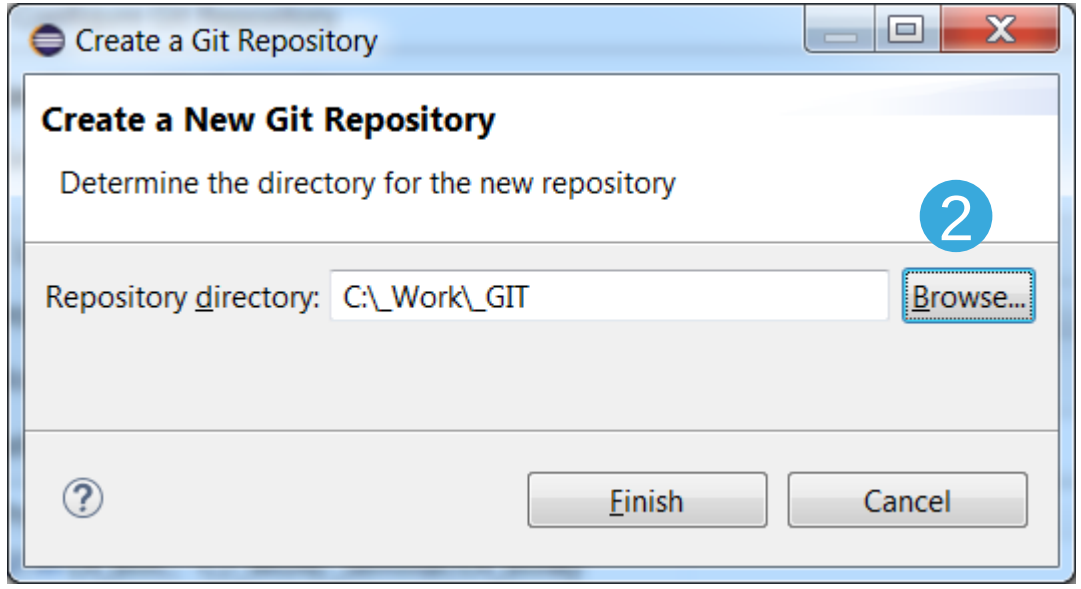
5. Next step would be selection of GIT repository:
   a. Create a new one
   b. Use existing one
6. Press **Finish** for further configuration

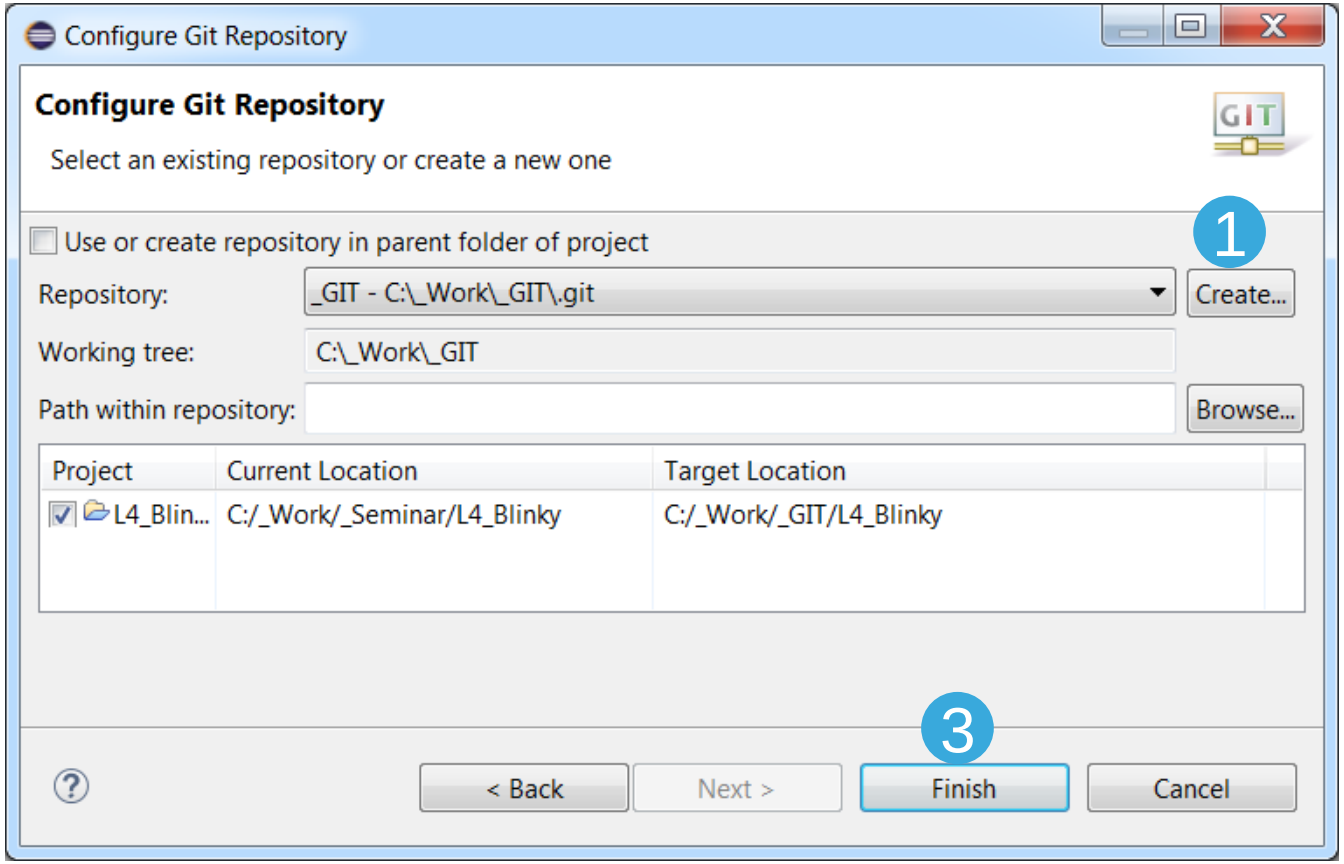


Sharing projects with the team – GIT

creation of new repository 2/4

1. Click Create button
2. Specify the location of the repository
3. Click Finish



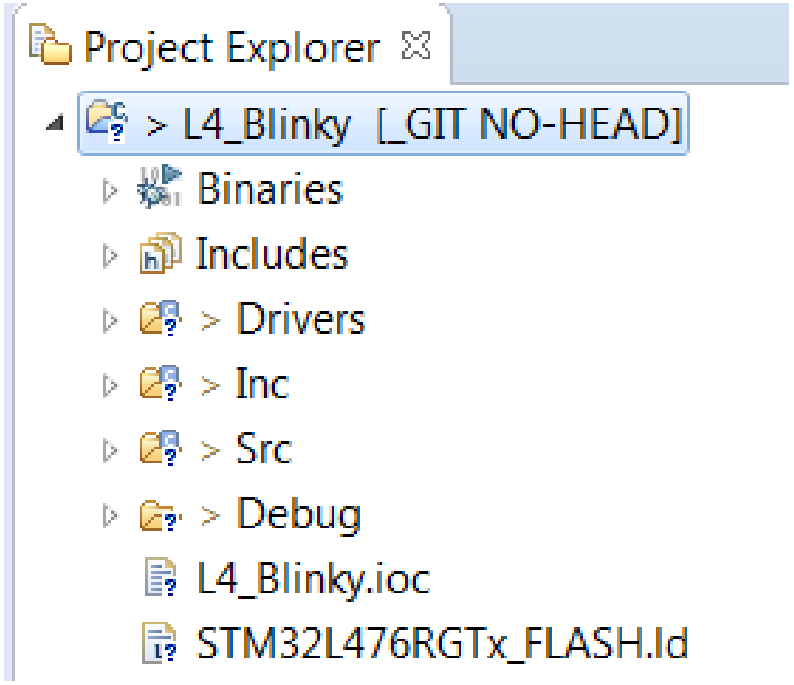


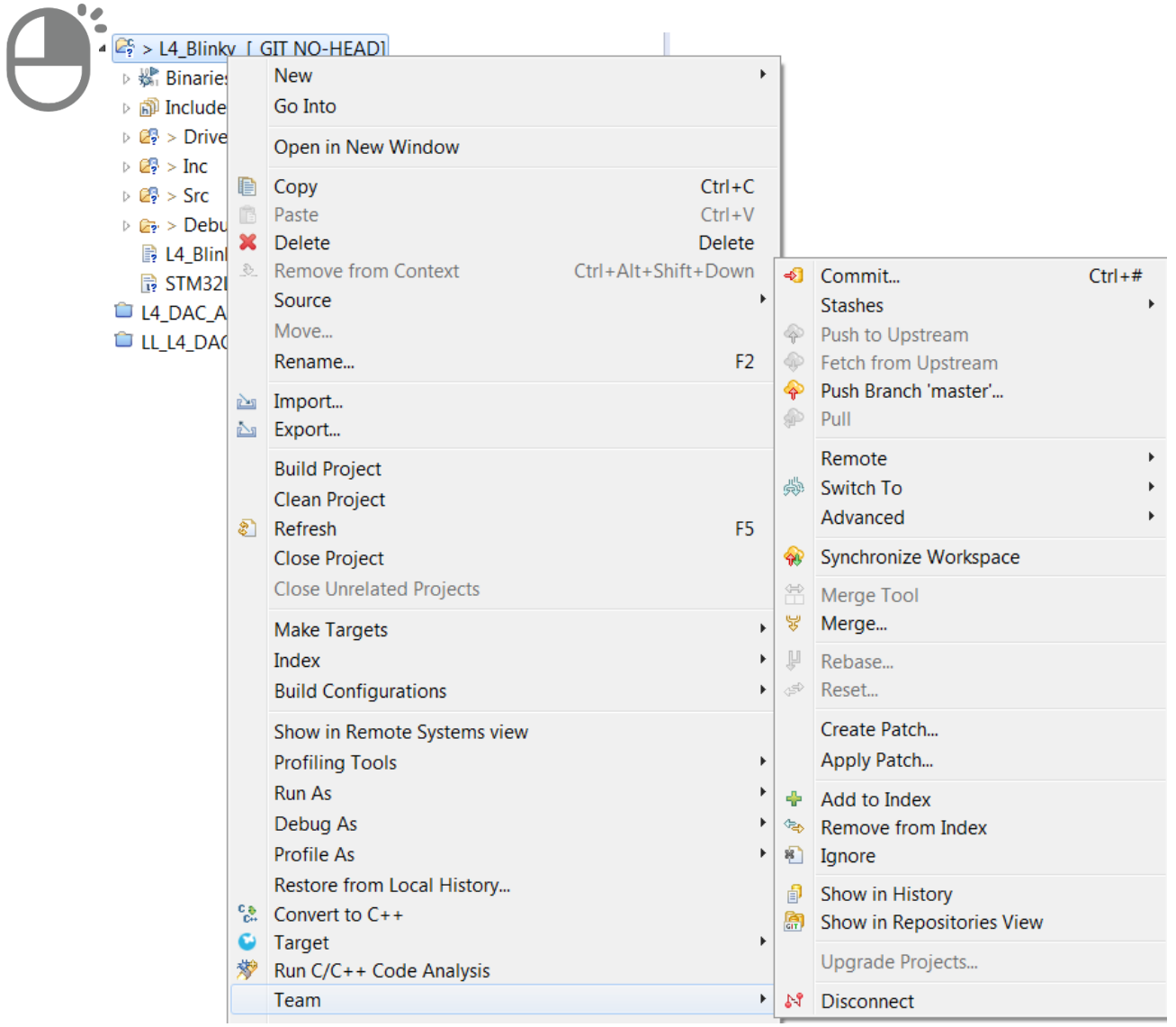
Sharing projects with the team – GIT

creation of new repository 3/4

4. Further we need to “commit” the project files to the repository

5. It is done by right mouse button on project name, *Team->Commit*



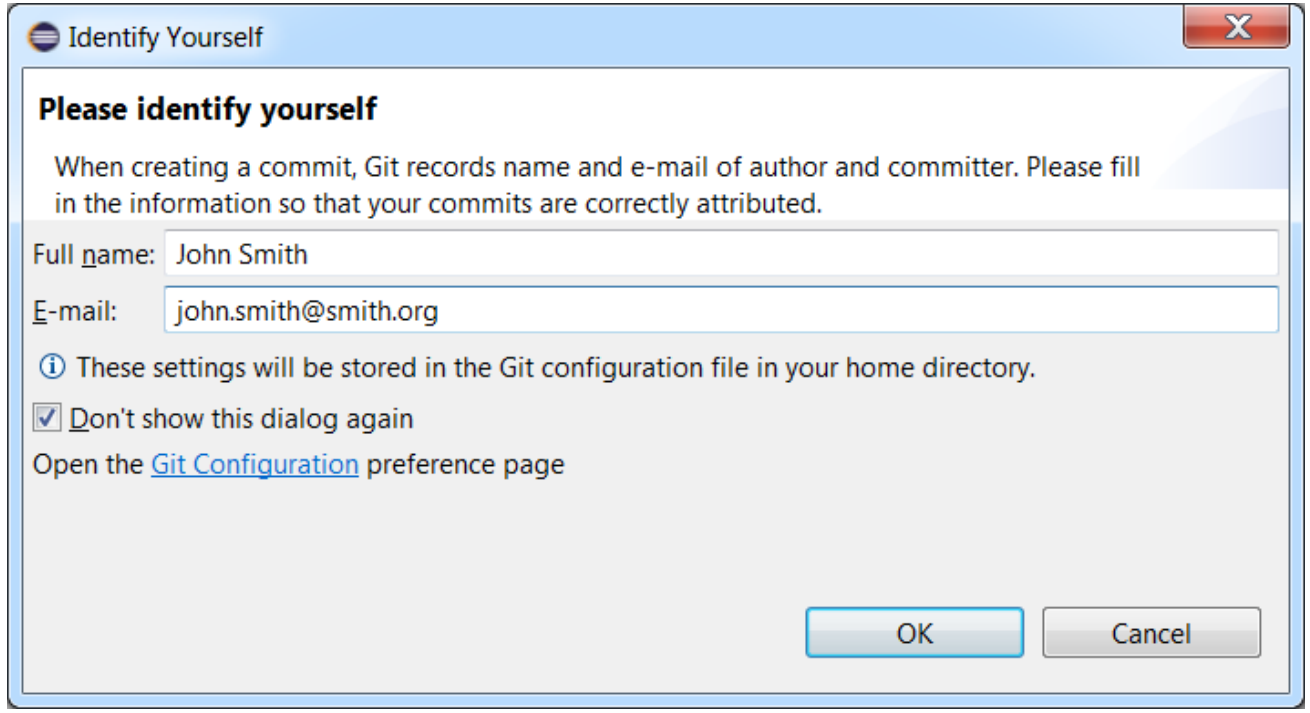


Sharing projects with the team – GIT

creation of new repository 4/4

6. Before sending the project to the repository it is necessary to identify ourselves by giving
   a. Full name, i.e. John Smith
   b. Email address: i.e. john.smith@smith.org

7. Press **OK**



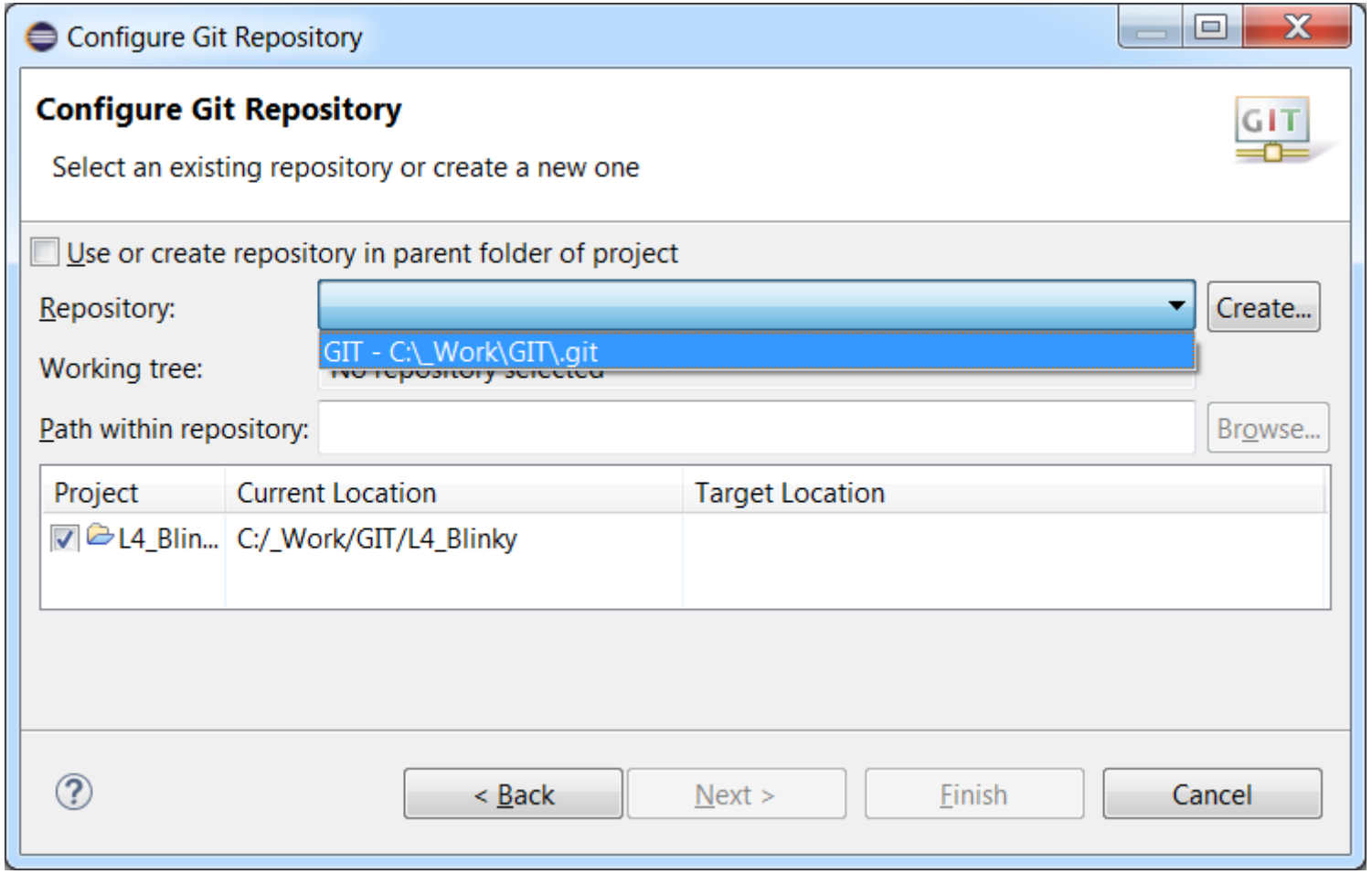
a

b

Sharing projects with the team – GIT

using existing repository location 1/2

1. Select repository from the list
2. Press **Finish**



Sharing projects with the team – GIT

using existing repository location 2/2

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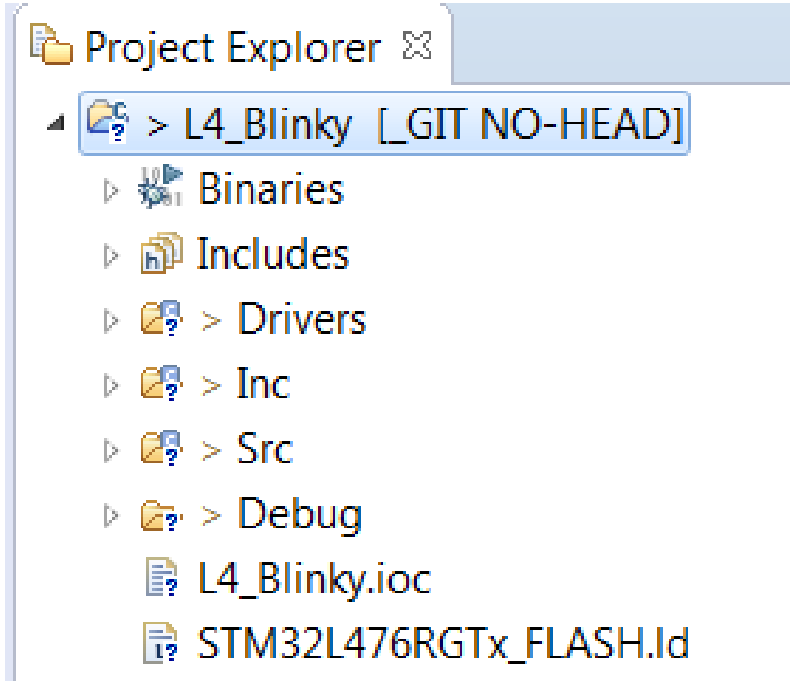
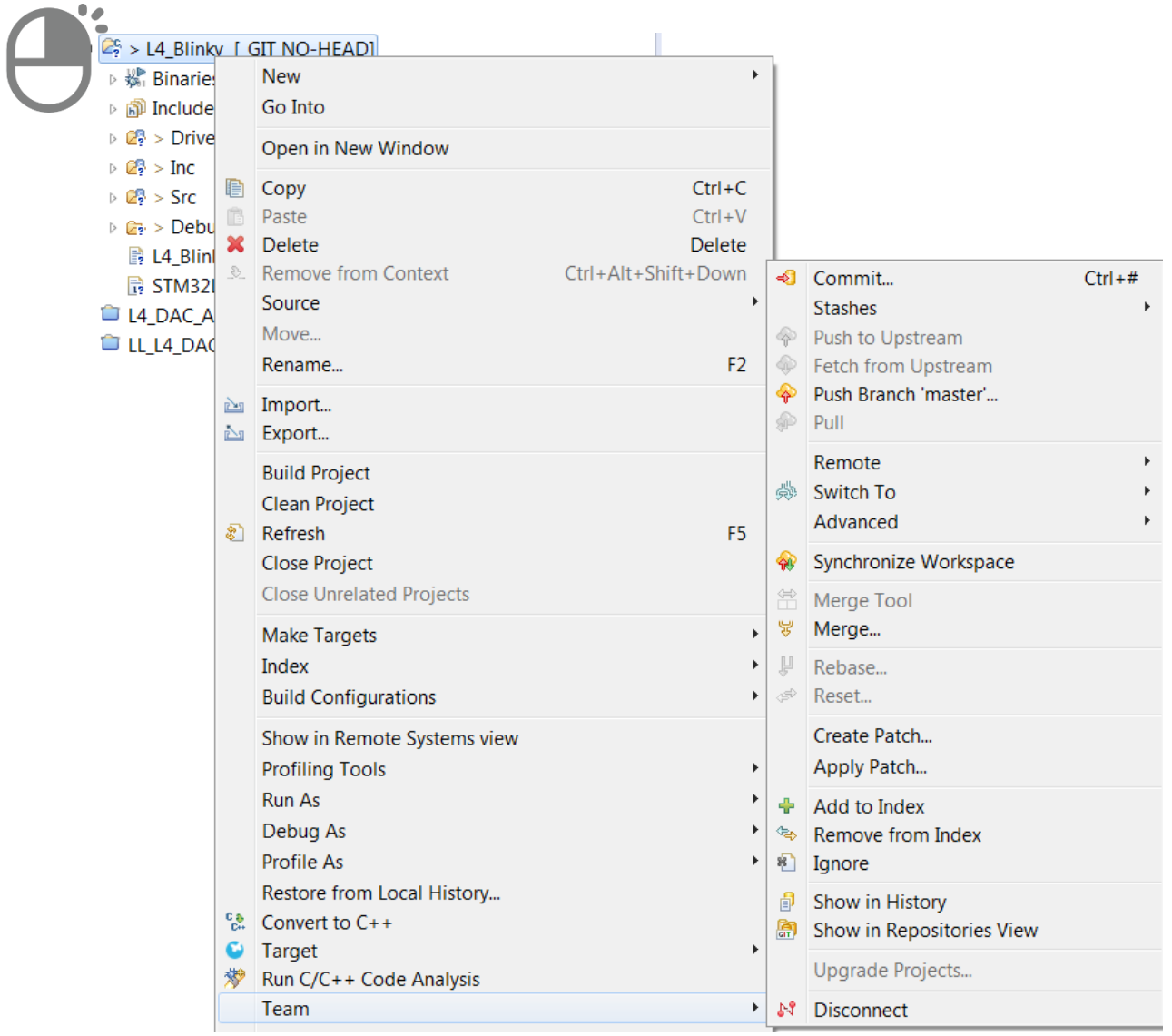
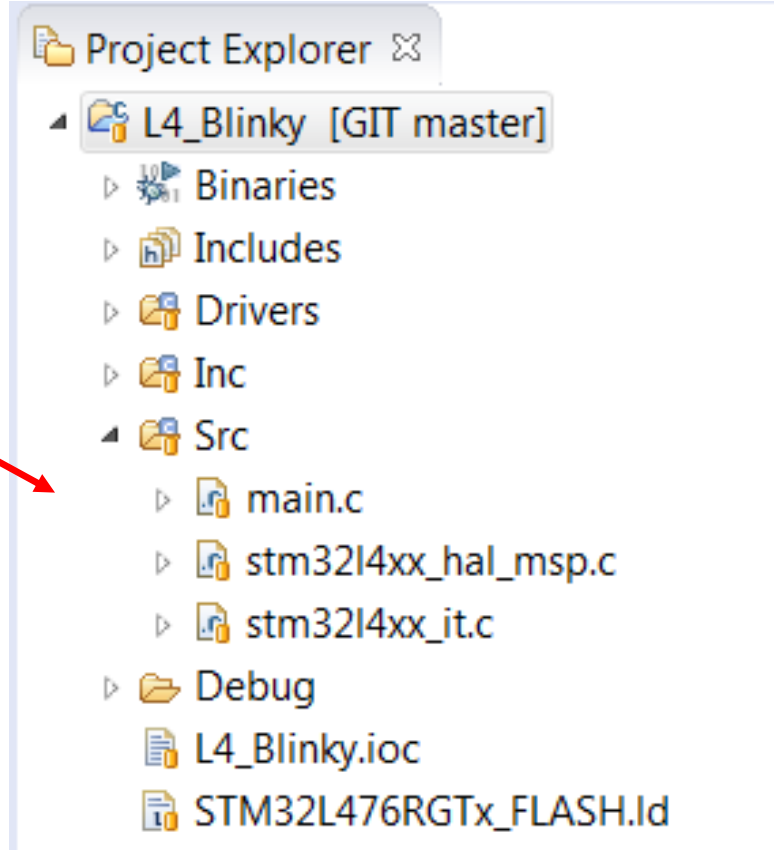




Sharing projects with the team - GIT

1. After sending to repository, all project files are marked differently



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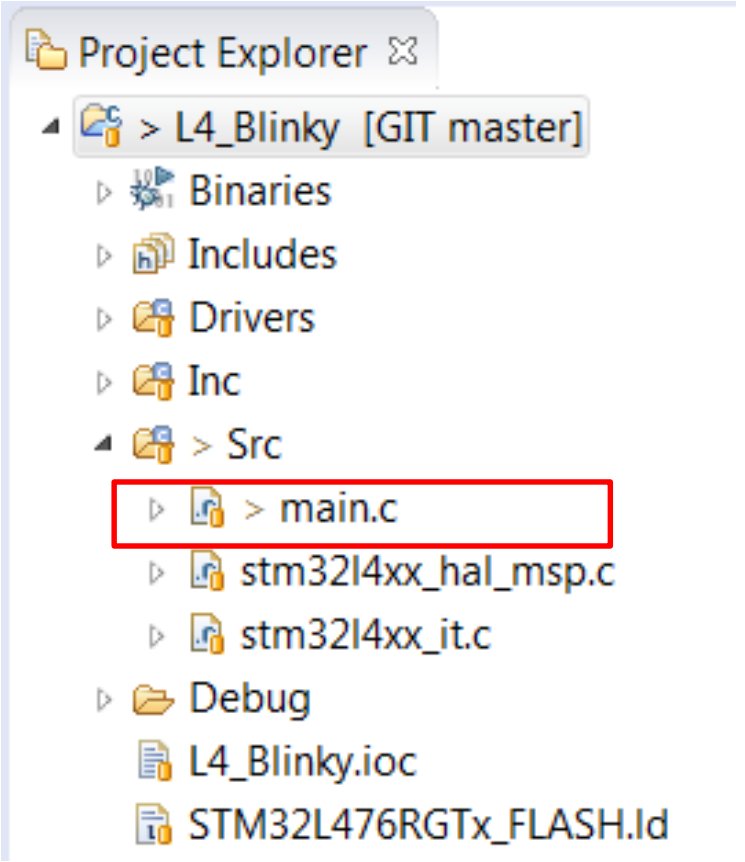

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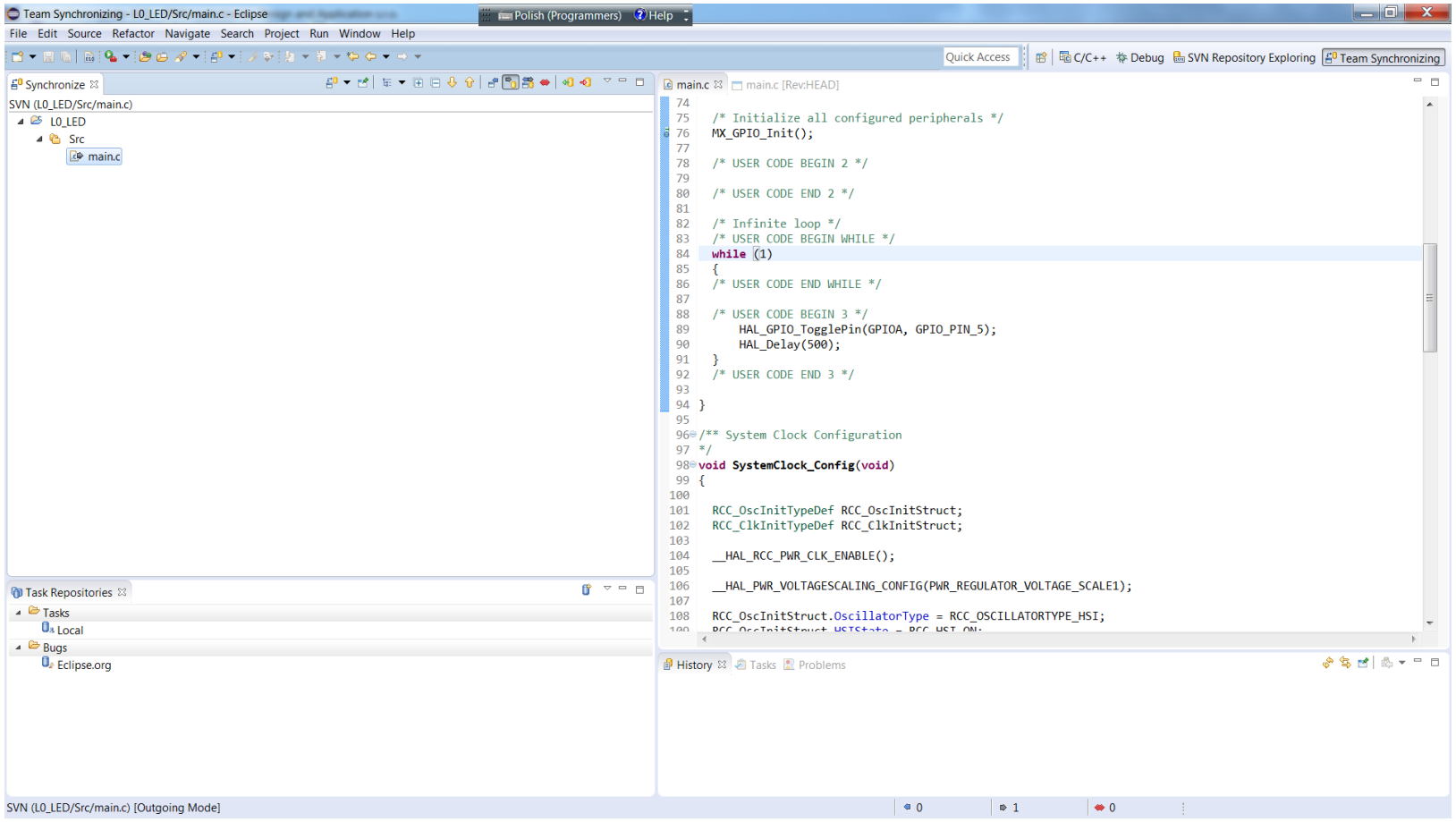

Sharing projects with the team - GIT

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  - Either right-click selected file (single file synchronization)
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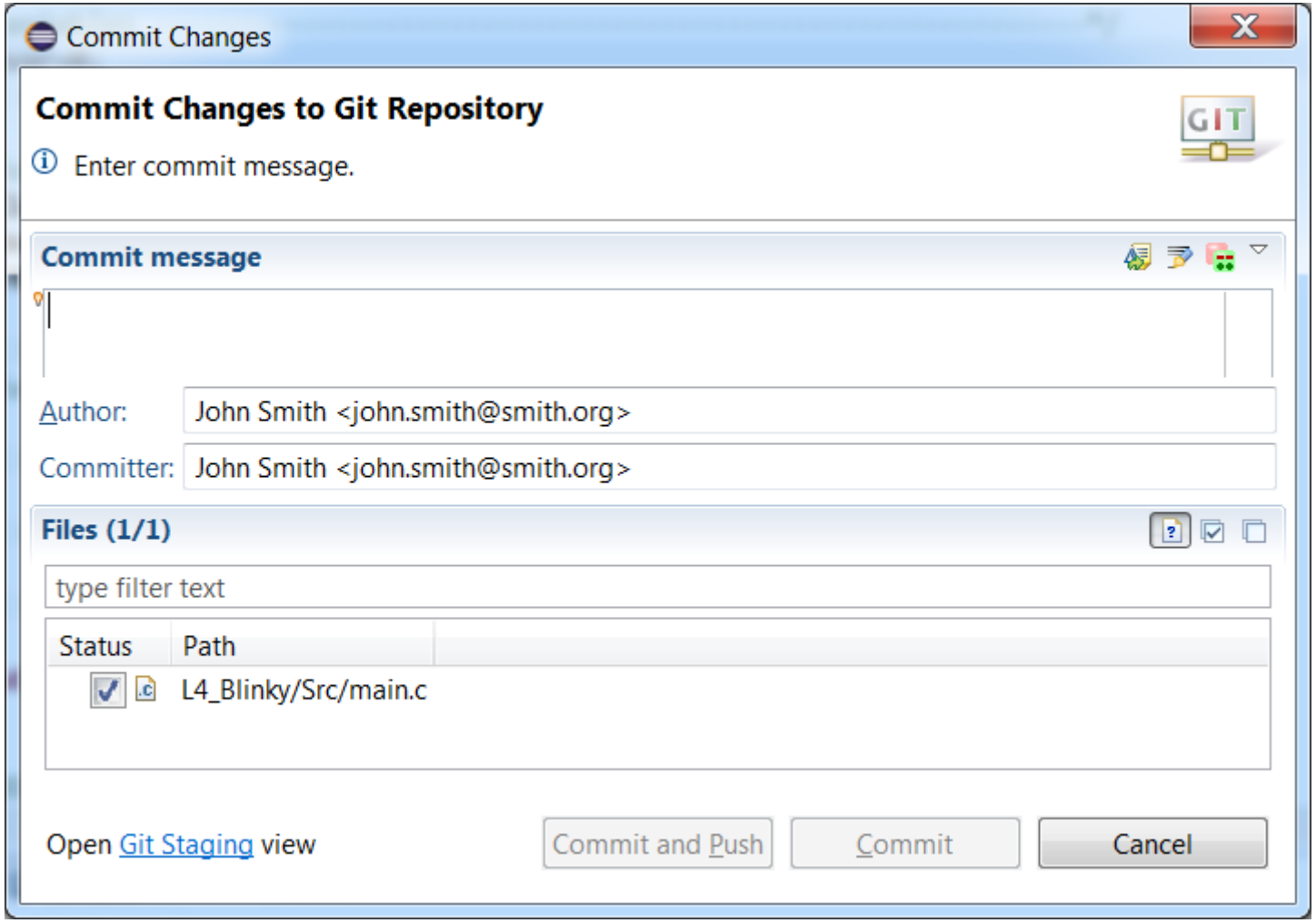
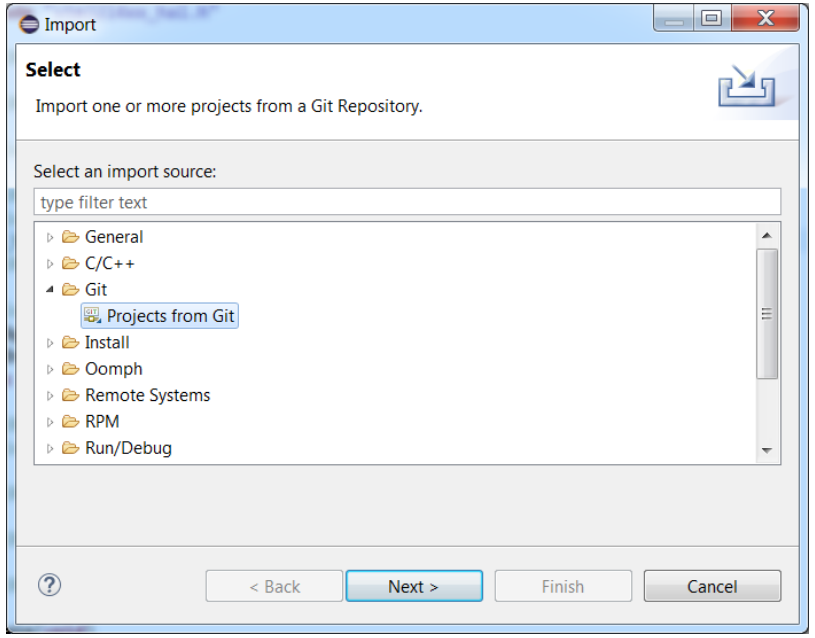
- Select *Team->Commit*
- Add commit message
- Press **Commit** -> files in repository will be updated



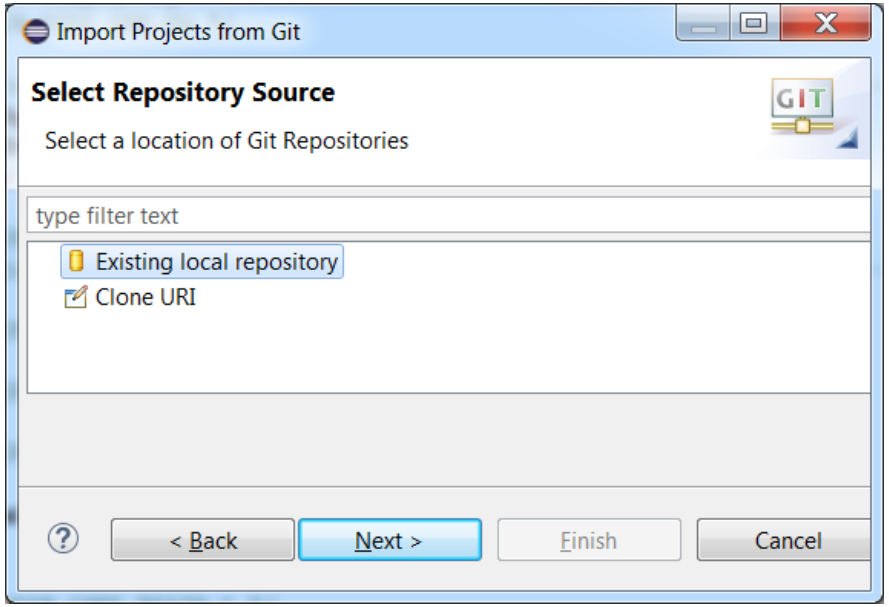
Disconnecting project from GIT

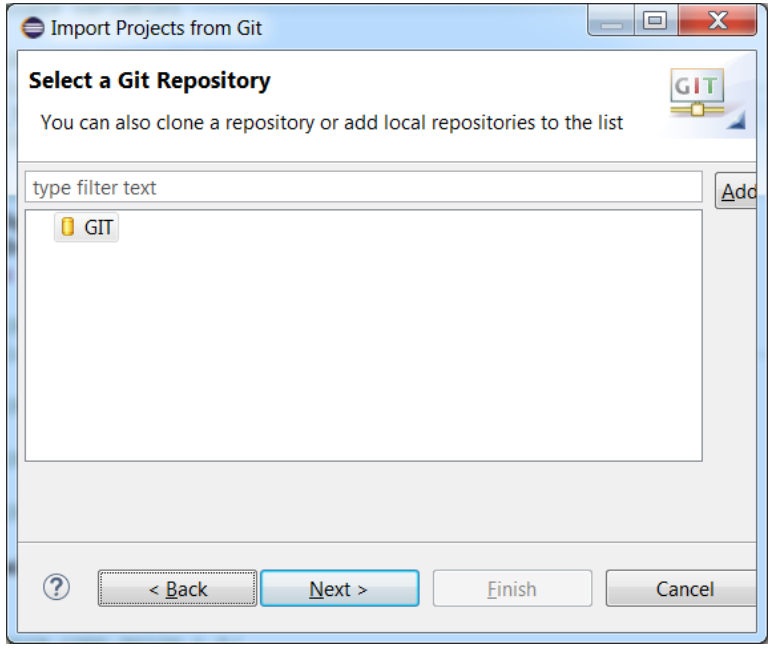
- Right-click project name
- Select *Team->Disconnect*

Importing projects from GIT



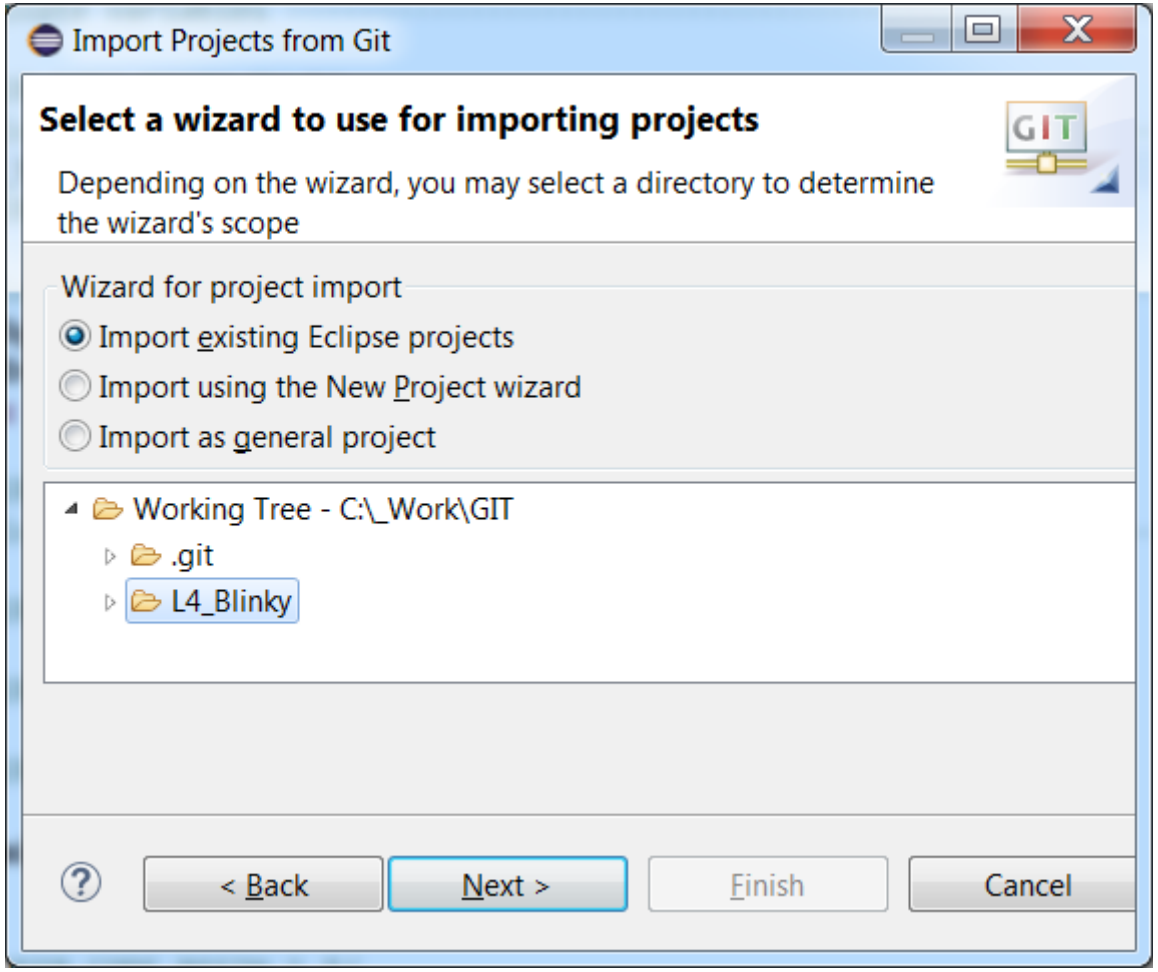
From already opened workspace select *Import->Git->Project from Git*



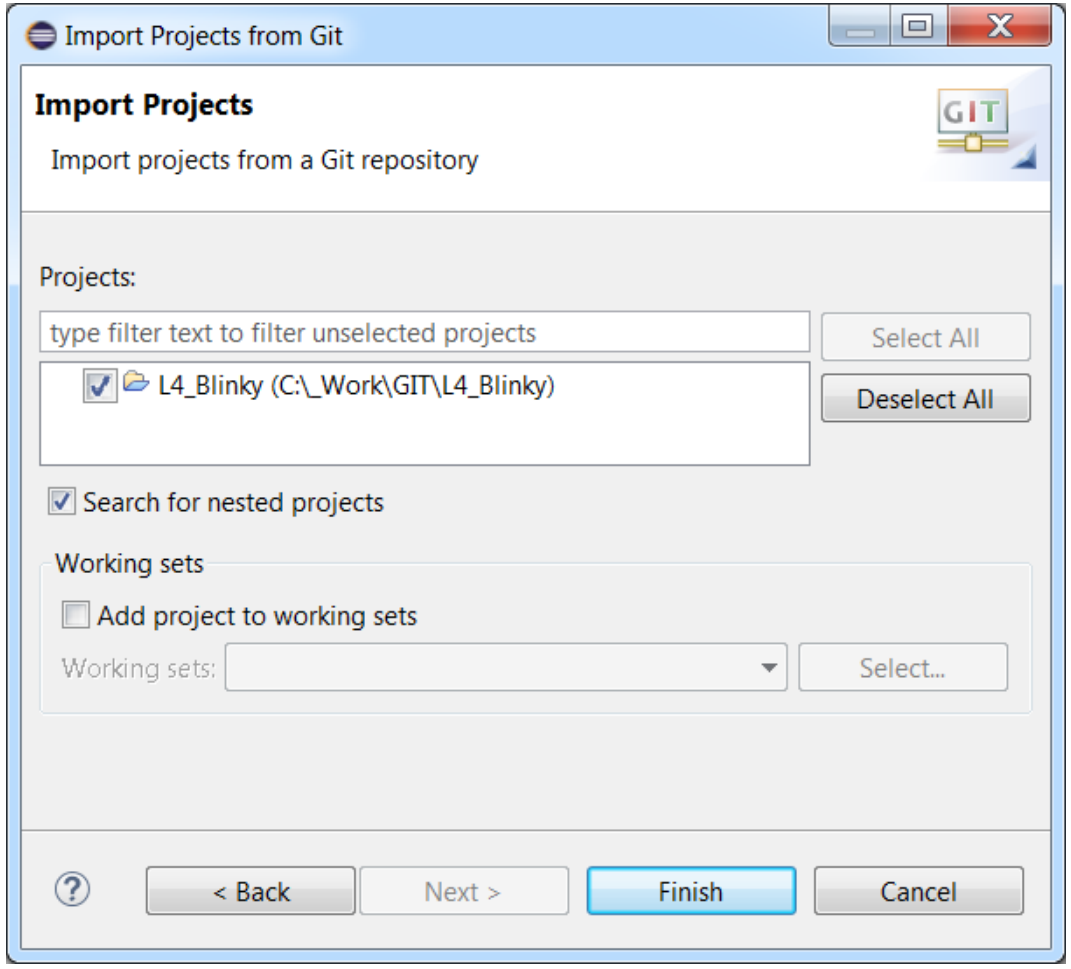


Select repository

Importing projects from GIT



Select project to be imported



In case of adding existing project warning message would appear

What have we learnt?

- ✓Demonstrate SNV and GIT mechanisms implemented within SW4STM32 tool
- ✓Gain knowledge about SVN and GIT repositories creation
- ✓Gain knowledge about manipulating on files between local project and its repository
- ✓Gain knowledge about importing projects from SVN and GIT repositories

Enjoy!

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