



## JavaFX windows application - Readme file

### Submission:

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### Known Issues:

- 1 Blocking the option to select 'head' as branch name.
- 2 Changing language sometimes throws exception, but the changing is applied anyway.
- 3 On reset branch's pointed commit the commit tree is goes broke
- 4 In commit's tree some lines are over the circles
- 5 I didn't add any mark to branches in the commit's tree, I did add a list of all commits beside the tree and a branch list with his color.
- 6 Sometimes the application got stuck, I didn't found any cause for that, no exception, just stuck, user need to reload application.
- 7 Some of property variables can called only once, I couldn't fix that, one of its side effects is branches choice box in the top bar sometimes not updated, when load repository and it's failed it's can't load it again.  
To fix that you need to reload the system.

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## Bonuses:

- 1 Animation:**
  1. On make new commit the new circle in tree will be mark.
  2. Click on branch name from the menu button will makes all related commits.
  - All animation can be turn off in the menu, and by default is turn off.  
**Tools -> Animation** (is checked menu item)
- 2 Change application theme:**

User can change application theme via the top main bar -> Tools > Settings

In settings window user can choose in Color picker any color he wants.

(Using default button can recover basic theme and language)

There's also option to change the application language and choose between **English** and **Hebrew**.
- 3 Context menu on commit tree:**

User can right-click on every commit in the tree and see a context menu.

In the context menu user can do:

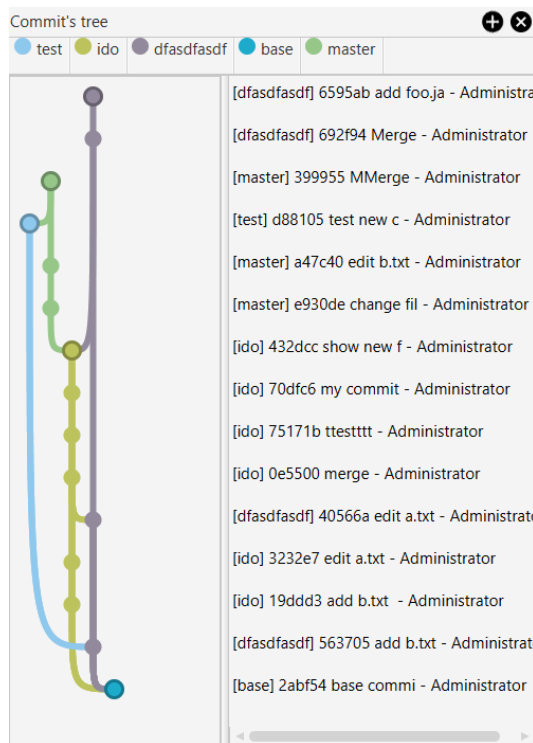
  1. Create new branch pointed to the selected commit.
  2. Reset the active branch to the selected commit.
  3. Merge active branch to the selected commit (*if any other branch is pointed*).
  4. Delete pointed branch to the selected commit (*if any other branch is pointed*).

#### 4 Push branch to remote repository:

User can now push local branch to remote repository with all his history.

*Execute this command via Repository -> push branch*

#### 5 A beautiful commit's tree:



1. Left – commit's tree  
Right – commits list
2. Each row in commits list include:  
[branch name] – 6 digits of SHA-1,  
10 letters of comment and the creator.
3. Right click on each node will marks all related nodes and show information about the commit (in the main screen).
4. Each color in the commit's tree related to specific branch. (on top user can see which color related to each branch)
5. If it's pointed commit of some branch, I add stroke for the circle and within mouse hover (2 sec delay) a tool tip will show-up with branch's name.

#### 6 User can see all related commits to each branch in few ways:

1. Click on each commit node in the tree will marks all related commits.
2. Click on branch's name on top bar will marks all commits.
3. When branch manager window is open, click on each branch will marks all commits in the tree.

#### 7 Add none-pointed commits:

Click on plus icon on right-top corner will update the tree and add all commits from history.

#### 8 Support showing all commits on history

within click on plus (+) icon on top bar of commit's tree window, all commit's that created in the history of the repository will show with all data – **AMAZING!**

## Application Explanation:

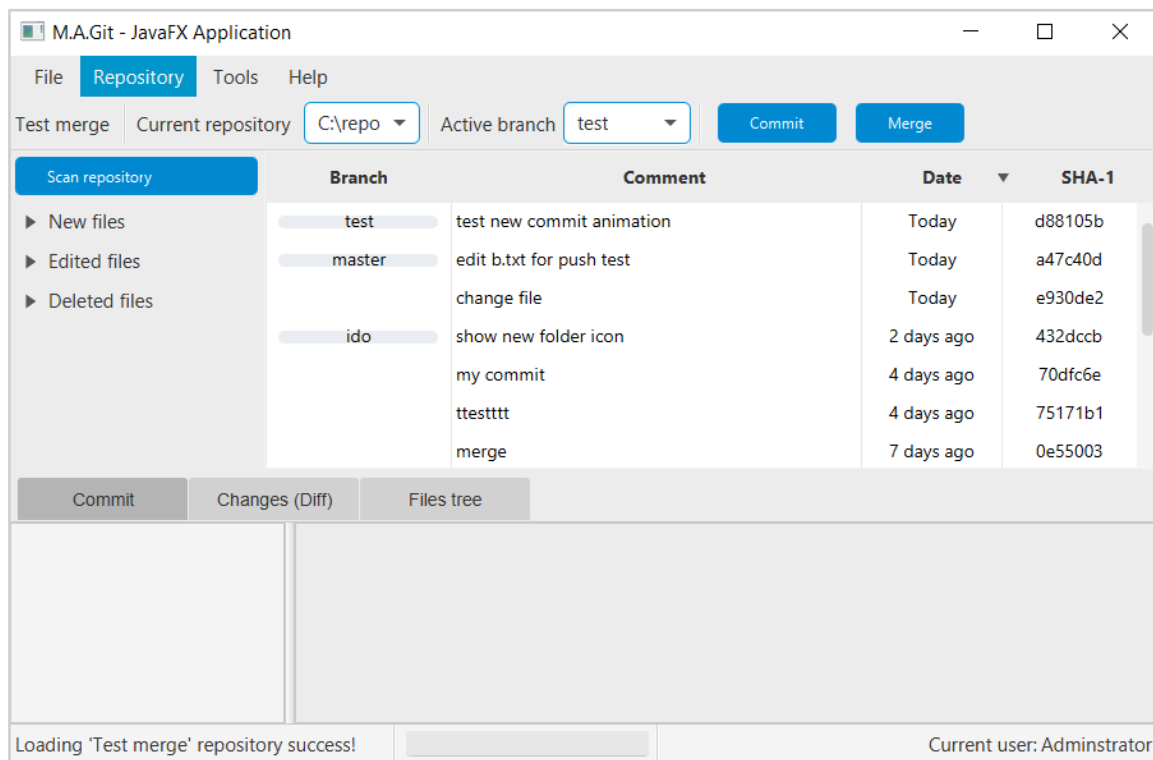
### Intro window

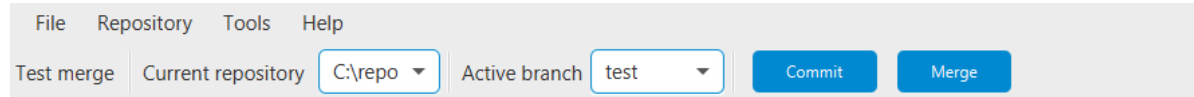
When each button click will open a folder/file choose,  
if the command ended successfully user will be move to the main window.



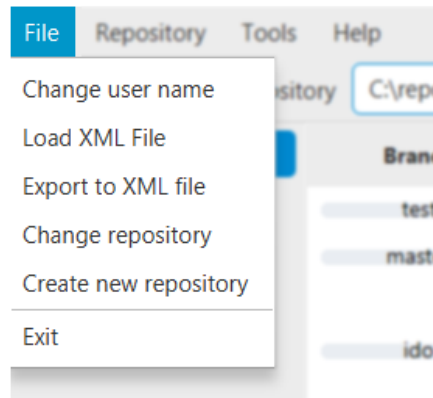
- 1 Load old repository – allow to user to load an exists M.A.Git repository.
- 2 Create new repository – allow to user to create new M.A.Git repository.
- 3 Load repository from XML – will allow to user to import (by selecting an XML File from file choose) an XML repository.

# Main window – Know the app



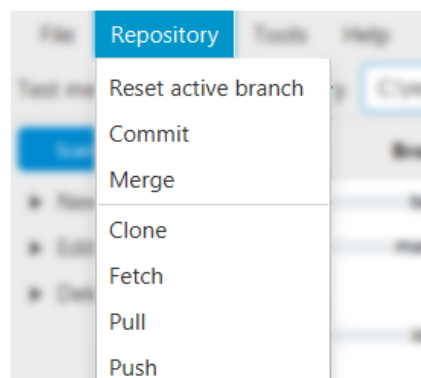


## File



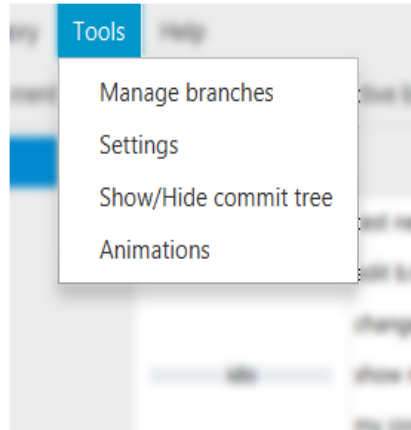
1. **Change username** – allow user to change current username.
2. **Load XML File** – like the intro page, user can load a repository from xml file.
3. **Export to xml file** – user can export the current repository to xml file.
4. **Change repository** – replace current repository.
5. **Create new repository** – create and load a new repository from scratch.

## Repository



1. **Reset active branch** – reset the current pointed commit for the active (head) branch.
2. **Commit** – save the current state of the repository, command will execute only if there are unsaved files.
3. **Merge** – Merge another branch to the current active branch. (more explanation on the process in Merge page)
4. **Clone** – Clone the current repository.
5. **Fetch** – fetch any changes from remote repository (if any).
6. **Pull** – pull changes of remote repository active branch (if any).

## Tools

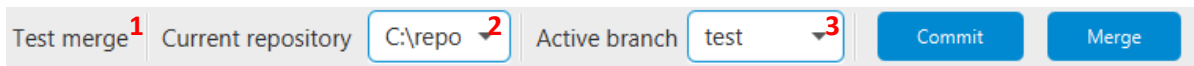


## Help

About the application (credits)

7. **Push** – push changes to the remote repository (if any).

1. **Manage branches** – Open new popup window with all branch's details (more on Manage branches window)
2. **Settings** – Allow user to change application settings (change language and theme)
3. **Show/Hide commit tree** – Open new window with commit's tree.
4. **Animation** – Turn on/off animation (default is off).

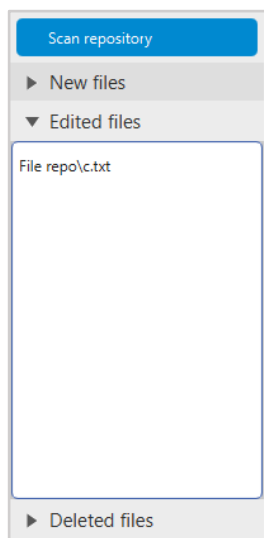


- 1 Current repository **name**
- 2 Current repository **location** (and if is clone user can see the remote repository details)
- 3 Active branch – current active branch, user can switch between branches (if click on branch from this menu the system will do a checkout automatically)

Commit and Merge buttons – as described in menu

(I thought this is common commands so be nicer if there are accessible buttons for them)

## Main window - Left



**Scan repository button** – Like the show-status in exercise 1, will scan the current WC and show if there's any changes from last commit. each tab in accordion will show new, edited or deleted files/folders.

## Main window - Center

Branch	Comment	Date ▼	SHA-1
test	test new commit animation	Today	d88105b
master	edit b.txt for push test	Today	a47c40d
	change file	Today	e930de2
ido	show new folder icon	2 days ago	432dccb
	my commit	4 days ago	70dfc6e
	ttestttt	4 days ago	75171b1
	merge	7 days ago	0e55003
dfasdfasdf	edit a.txt in ido	28/08/2019	40566a3
	edit a.txt	28/08/2019	3232e70
	add b.txt with different conte	28/08/2019	19ddd34
	add b.txt	28/08/2019	5637052
base	base commit	28/08/2019	2abf547

### In center user can watch all commits:

Each commit in the system will be added to the main table on center,  
for each commit, if its pointed commit of any branch user can see the related branch (on branch column).

The table is in descending order by date (the last commits shows first)

Each row includes:

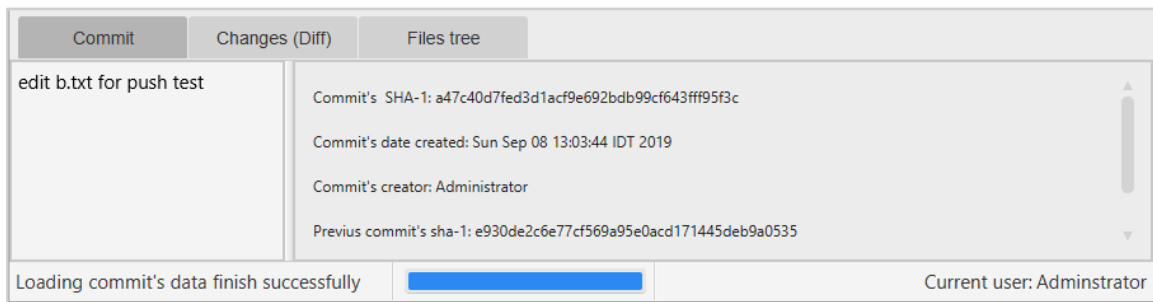
1. Commit's comment
2. Commit's creation date (for last 10 days will show with X days ago)
3. Commit's SHA-1 first 7 digits.

User can click on each row and will gets all information on each commit.

*(full explanation on next section)*



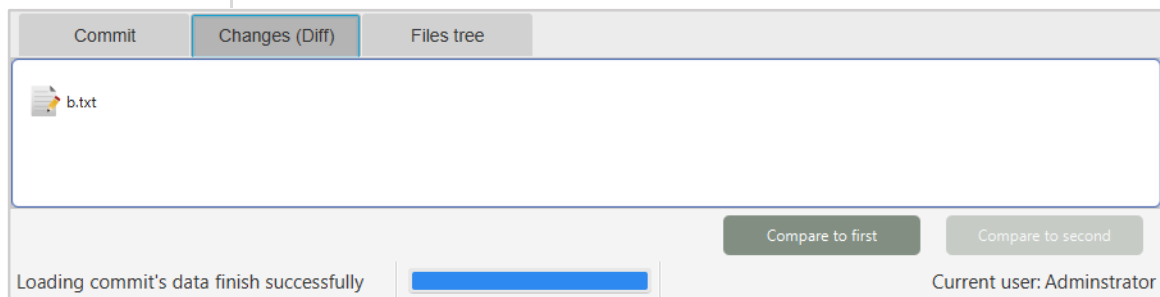
## Main window - Bottom



### Commit tab

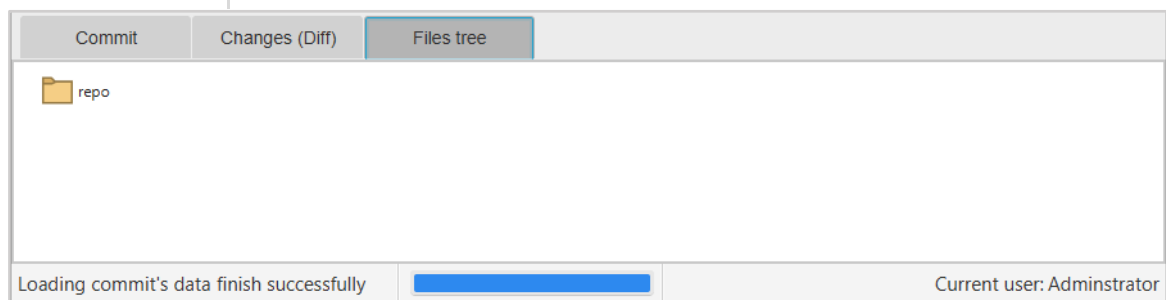
In this tab user can watch all details on the selected commit (from table / commit tree)

Commit's full comment show on the left (with text flow) and in the right is full sha-1 of commit, date creation, creator name and previous sha-1 (if any)



### Changes tab

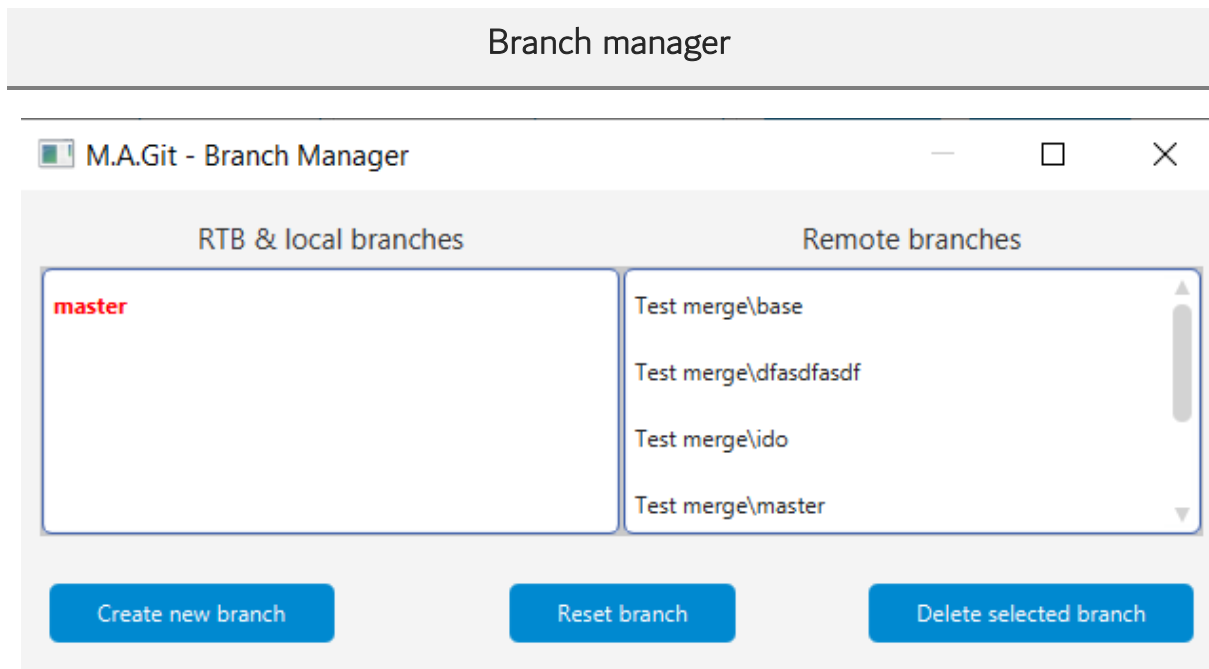
In this tab user can watch all changes from the previous commits (all new, edited and deleted files) and can choose in case of two previous commits which to compare.



### Files tree tab

In this tab user can see all files that related the selected commit. For files only, double-click will open new pop-up with all details about the file and show his content.

**Also,** In the bottom part, user can see the last process results (if succeeded or failed) and the progress bar. Also, the current username (*double-click on this label will allow to user to change the current username*).



If it's clone repository, the branch manager will show all types of branches:

Left – local and remote tracking branches, the head (active) branch will marked in red and bold.

Right – Remote branches, show all remote branches.

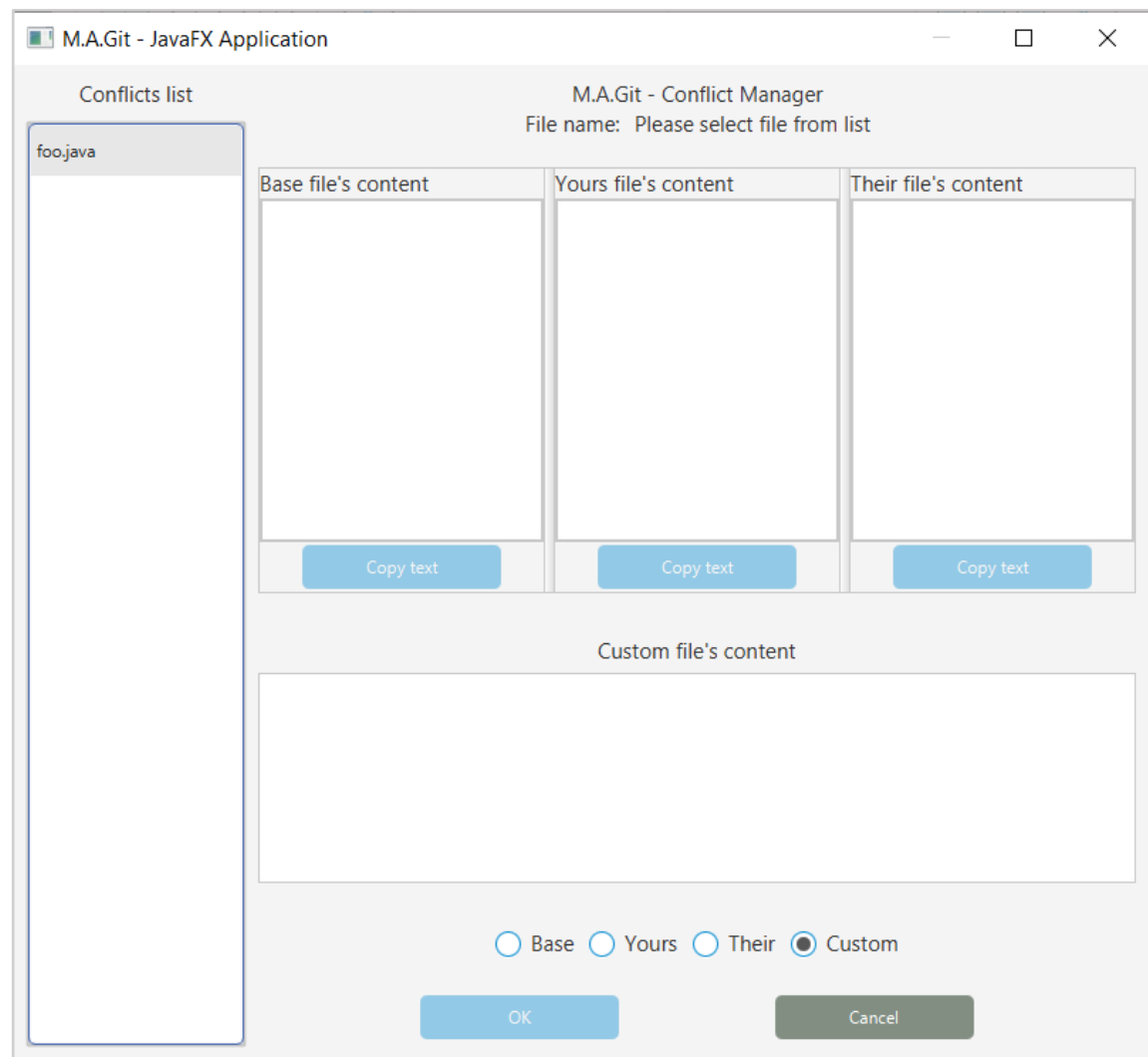
On click on each branch will marks all commits in tree (if the commit's tree window is opened)

If it's not clone repository, the branch manager will show only one list.

For each branch, if it's local branch user can delete and reset pointed commit.

In this window user can also create new branches.

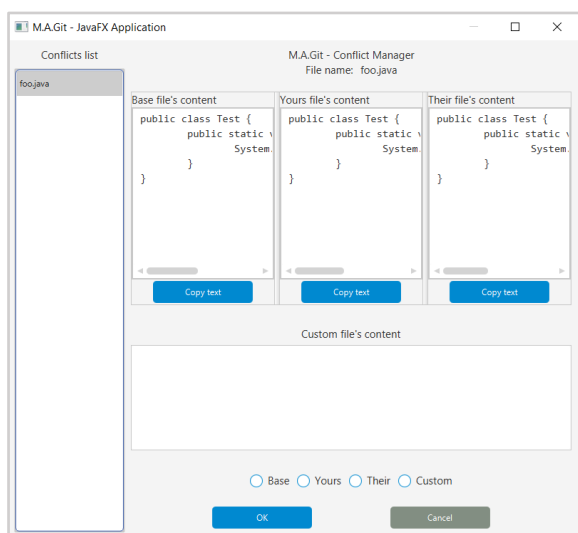
## Merge window



When user using merge command, if any conflicts he will be meet the merge conflict manager window.

For each file in the conflicts list, user will need to decide what to do.

User can choose between take base, active or target file or even choose to write what he wants. When user select file from list all text fields will filled up:



And after solving the conflict the file will be remove from list. After all conflicts are solved the merge command will be execute.