astah* tutorial

[1. Utilizing Mind Map in Software development activities]

ChangeVision

CONTENTS

LET'S START MIND MAPPING!

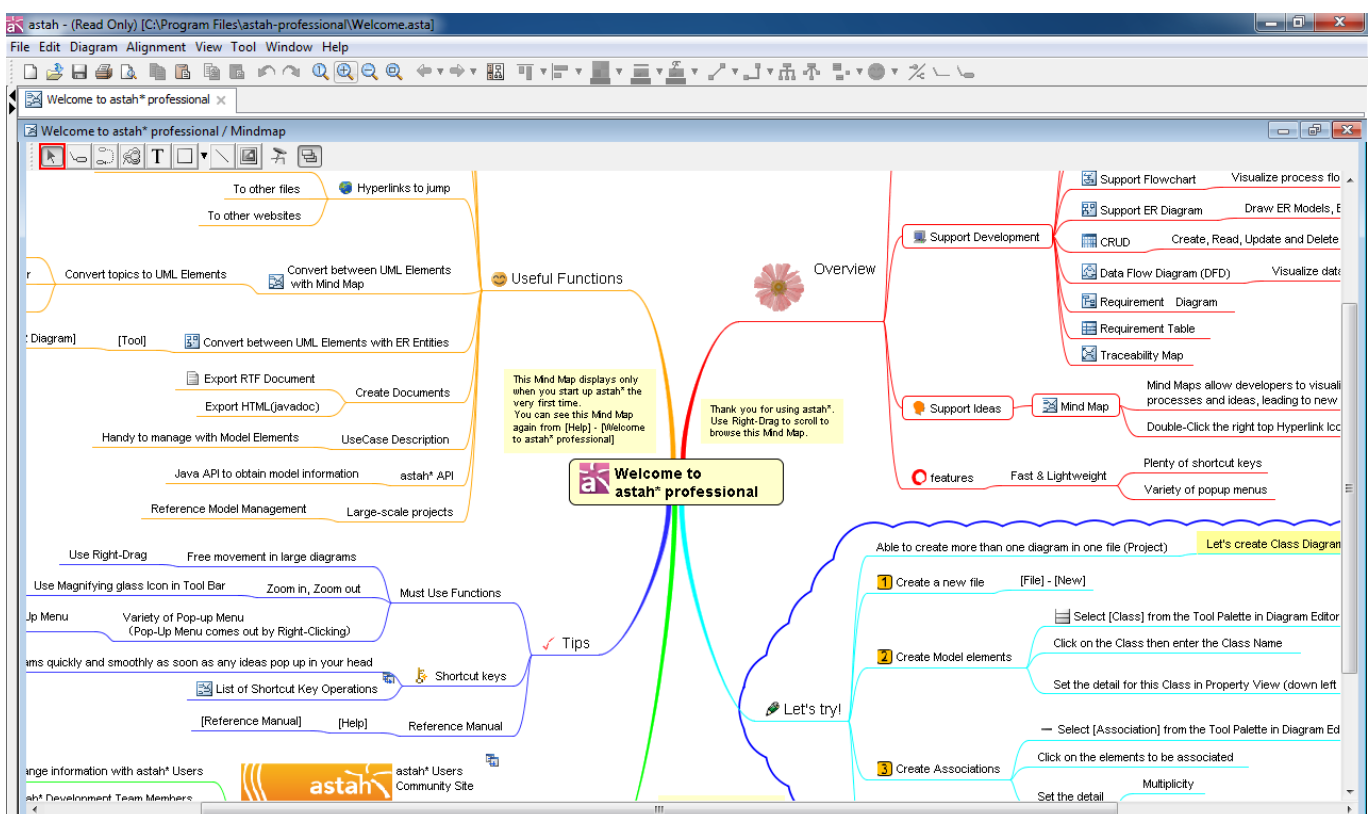Editions for: astah* professional, astah* UML and astah* think!

There are lots of situations where you can utilize Mind Map, it can be used for almost any scenes. This tutorial shows you especially how you can utilize Mind Map effectively in software development activities.

WHAT IS A MIND MAP?

Editions for: astah* professional, astah* UML and astah* think!

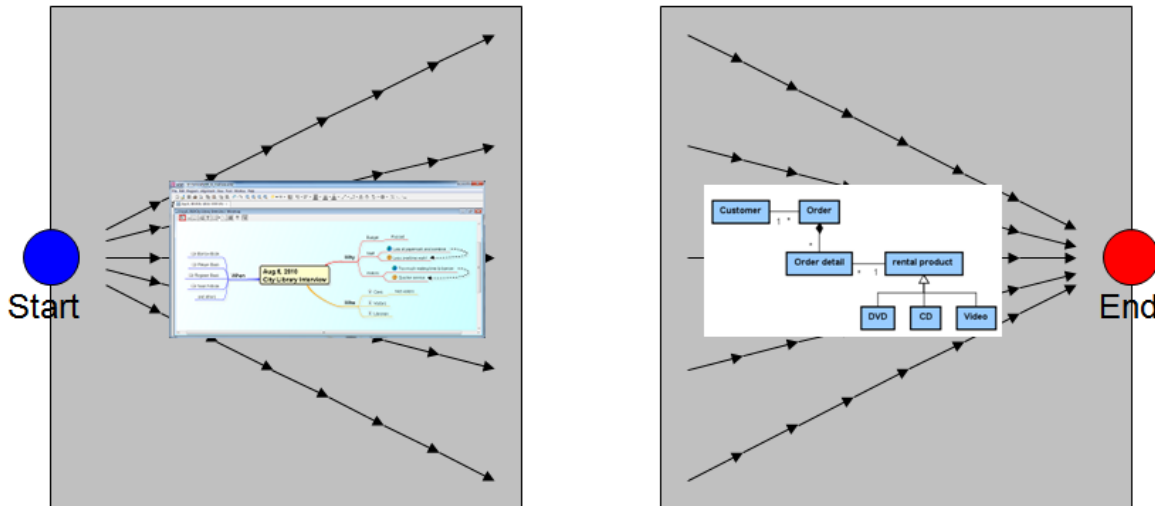astah* Mind Map Clip: http://astah.change-vision.com/en/movie.html#mindmap

A Mind Map is a unique graphical technique of taking notes as well as visualizing thoughts with a radiant structure. As before mentioned, it can be used for any scene such as Minutes/Agenda of meetings, brainstorming, Team Reflection and anything no matter what kind of field you are in. For Software development activities, it can be effectively used for requirements gathering, exploring user wishes, designing test cases and etc. A Mind Map also can promote conversations with customer smoothly capturing all the user wishes, inspiring to produce new ideas and result all in graphical notes at the end. (*Mind Map is a registered trademark of the Buzan Organisation Ltd.)
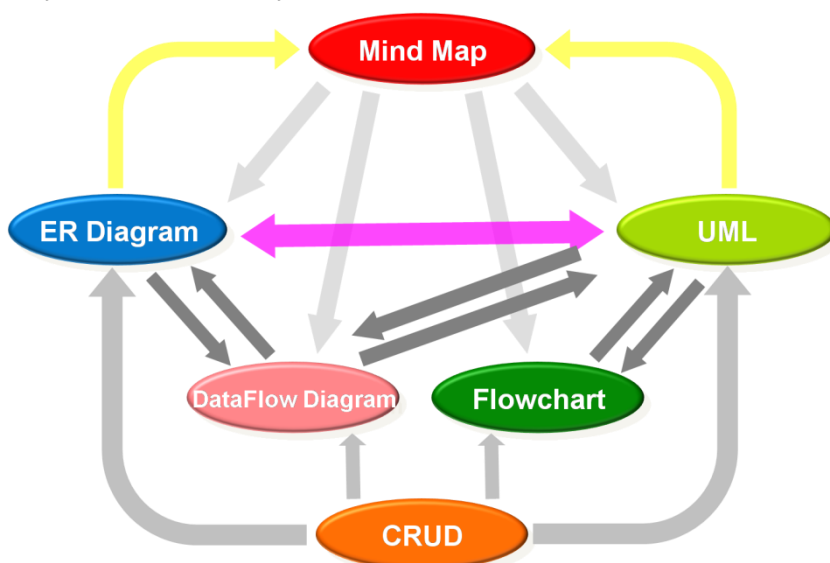
REQUIREMENTS ANALYSIS WITH MIND MAP

Editions for : astah* professional, astah* UML

How do you transform user requirements into implementation model? There are many methods to do so, and this tutorial will show how you can get it done with astah*.

MIND MAPPING AND MODELING ALL IN ONE TOOL

astah* is a tool that you can model Mind Map, UML, ER Diagram, CRUD, Flowchart and Data Flow Diagram all in one. Furthermore, models are convertible between different diagrams so they can transform their model types according to what phase you are in during the software development activities, as analysis requirements, designing or others. Being able to do them all in one tool makes it very smooth and easy.
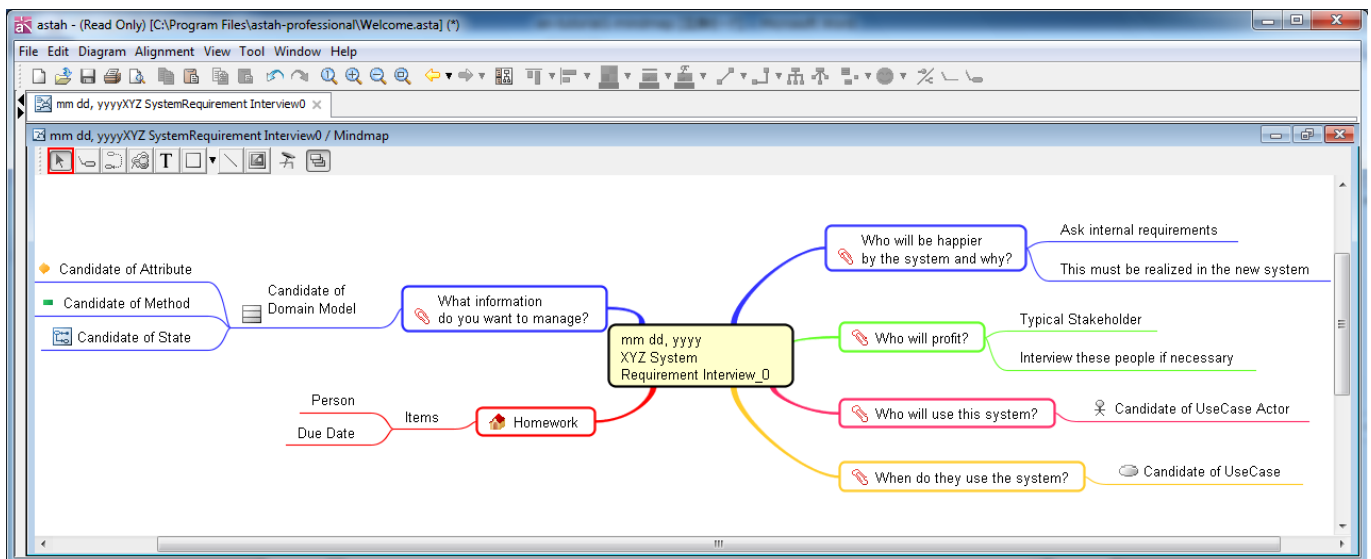

For instance, Mind Map topics can be converted to UML models (Class, UseCase and others) by dragging it from Structure Tree to a UML diagram where you want it to be represented. You can add a

hyperlink to the original Mind Map topic to the converted model, so you will not lose a track of converting models.

LETS GATHER REQUIREMENTS USING MIND MAP

[Gathering]

Mind Map is a very simple formatting but the great canvas for taking notes. Basic ordering ideas (BOIs) grow with key words around a central image, and associative sub-branches grow recursively. astah* has various Mind Map templates that fit any scenes. Let's use "UserRequirement" template (astah* Install folder¥template¥mindmap¥UserRequirement.asta) for meetings with a customer. At this point, there is no need to select what you should put down and what you should not. Just put down anything came up in this meeting into the Mind Map such as vague ideas or small opinions, even things you may not find useful.
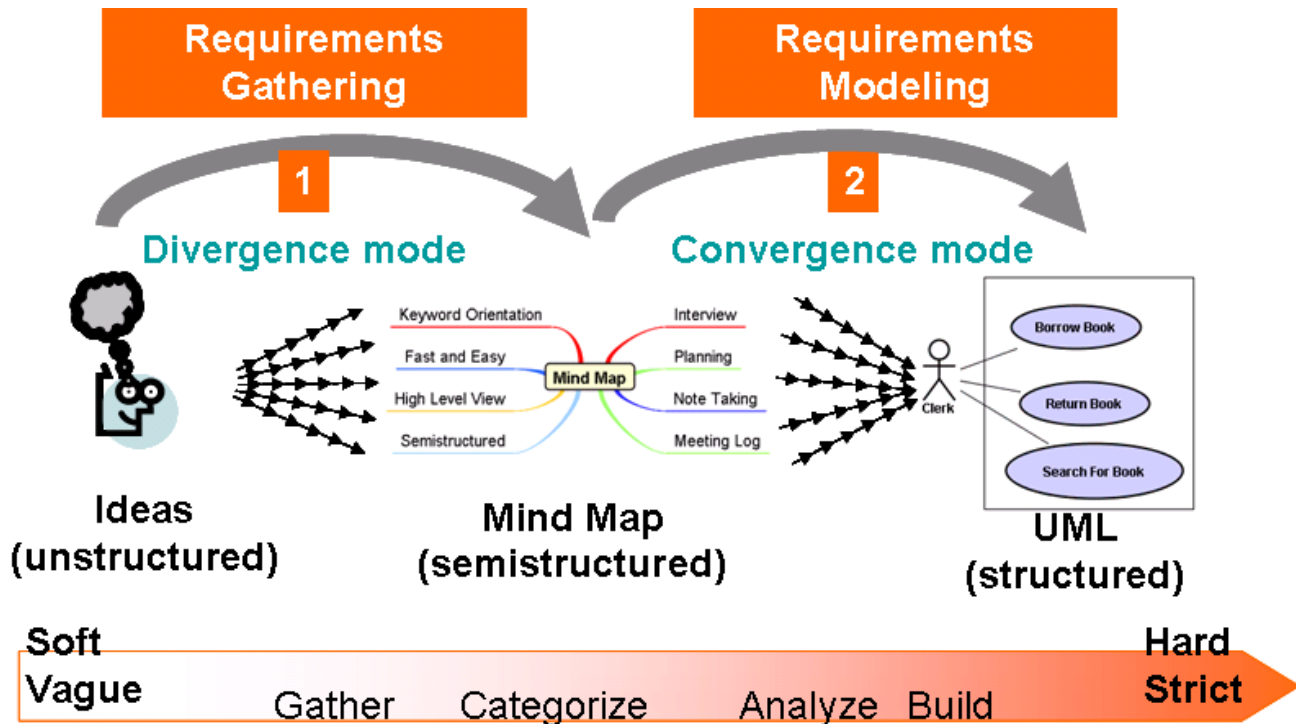

You can also customize these templates to fit your own case.

[Organizing/Analyzing]

Implementation of software has to be accurate and precise. Then how can you transform all the user requirements into the definite designs? Mind Map is a good tool to get it done. By organizing all the Mind Map topics you created with your clients, it will lead you to the bottom of what user requires and make vague points clear. It is very useful to have the Mind Map in the meeting and have it on the projector and discuss within a team. The Mind Map which is a semistructured map of the software designs, will promote the communication efficiently between team members and bring the good result.

[Structuring]

Once the vague points become completely clear, start designing and bring it into the implementation.
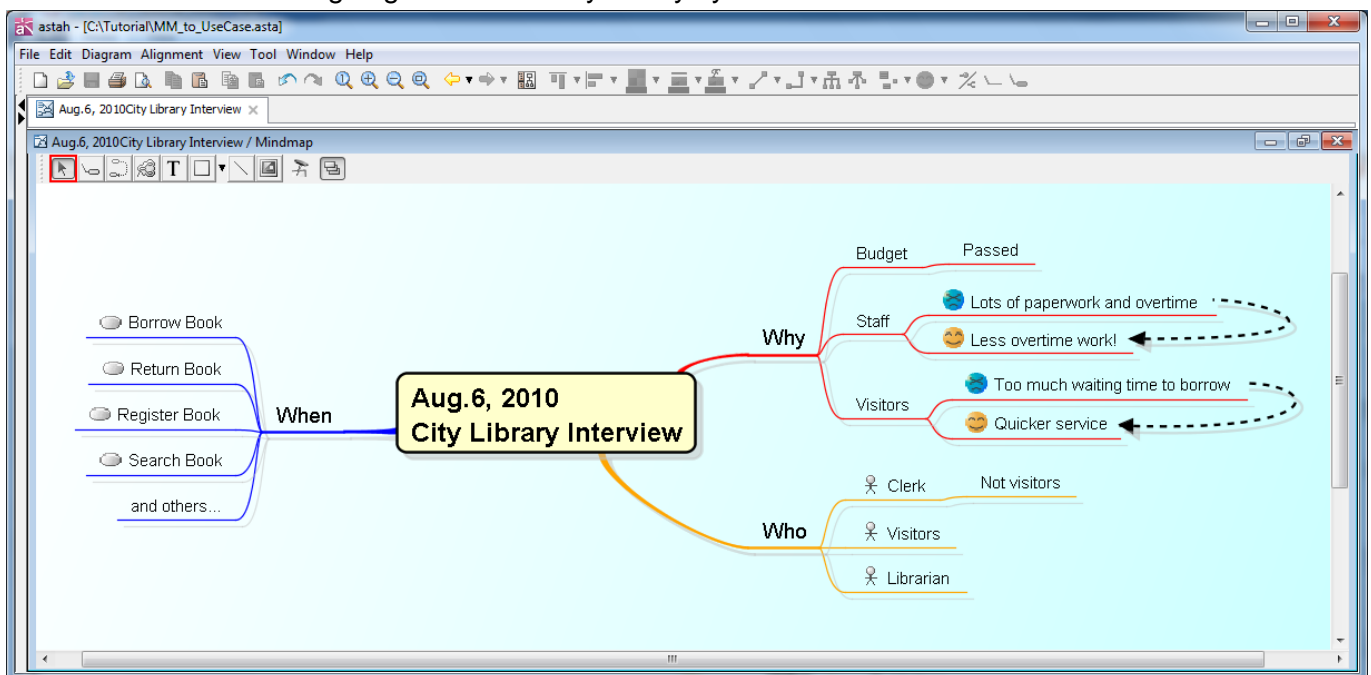
EXAMPLE (CONVERTING MIND MAP TO USECASE DIAGRAM)

Let's take a look at an example of making a Mind Map with user requirements about making a new city library system, and then convert it to UseCase Diagram. You can also see how it works on our demo clip.

http://astah.change-vision.com/en/movie.html#mindmap-to-usecase
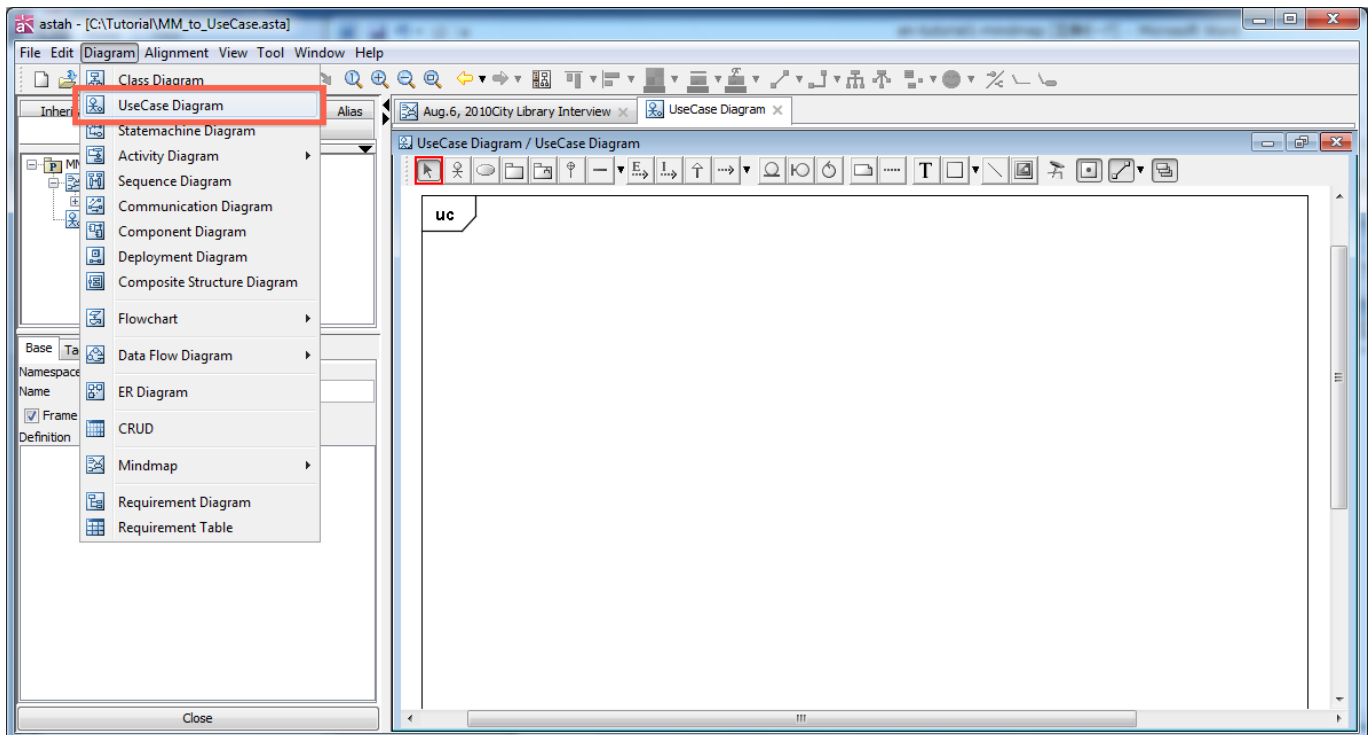
This Mind Map is a planning for a new city library system. It has Why, Who and When branches which are the basic core of the designing of this new city library system.
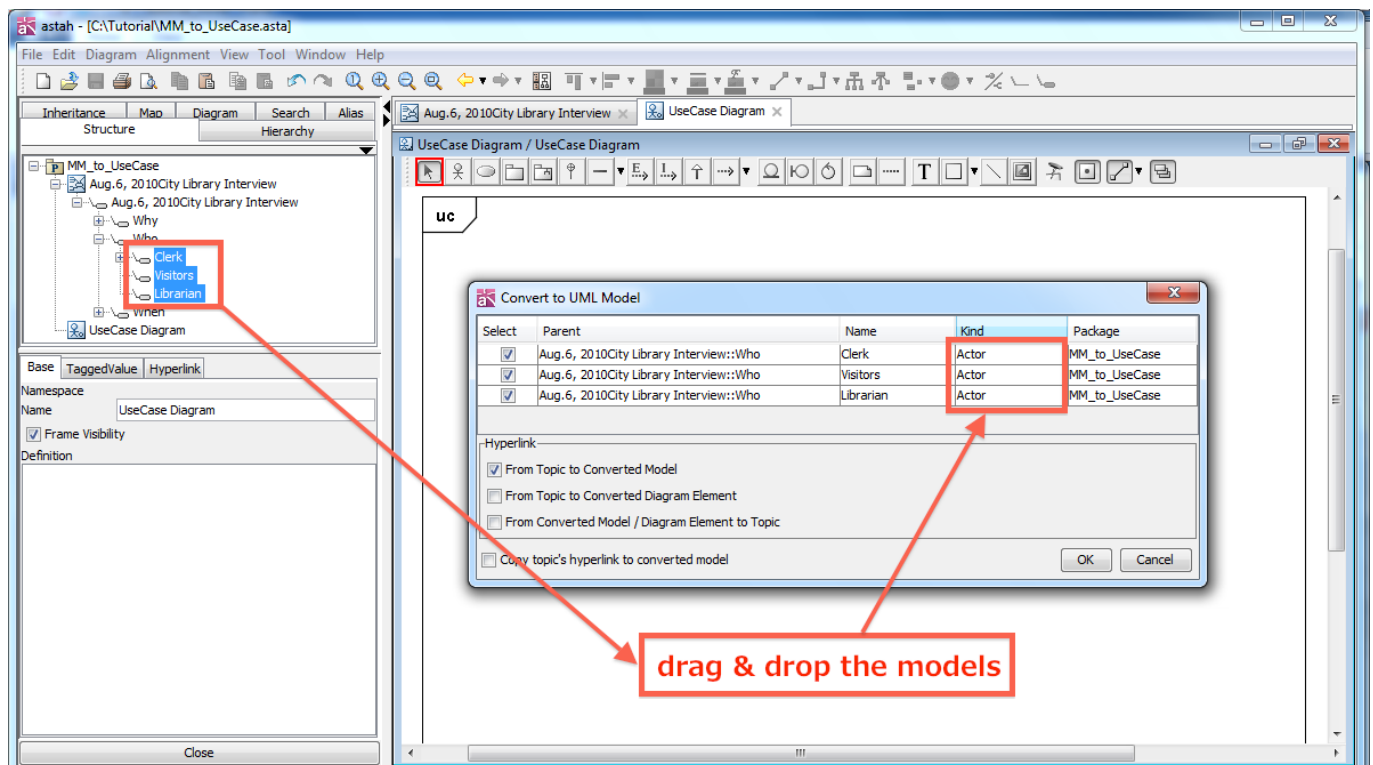

With astah* you are able to add icons of UML models on each Mind Map topic branch. So in this Mind Map, give Actor icons to Who branches and UseCase icons to Whens. Giving them UML icons have two

merits. One- it helps visually how the Mind Map topics will be represented in UML diagrams. Two – The UML model icons will be the default model that these Mind Map Topics will be converted into. (So by giving Actor icons to Who branches, these branches will be Actors automatically when you convert them. Of course you can make them to be other models other than Actor manually.)
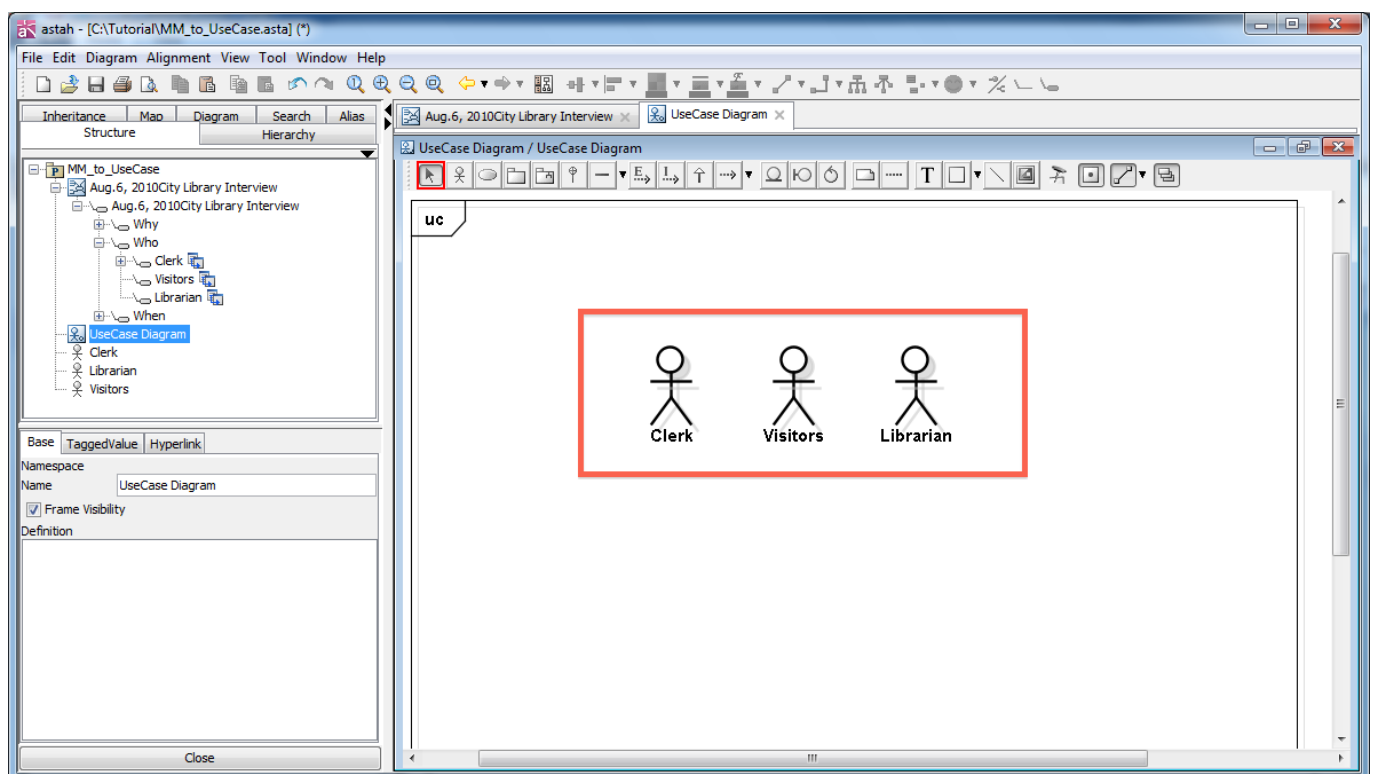
Ok, now let's try it out and convert this Mind Map topics to UseCase Diagram models! First, create a new UseCase Diagram from [Diagram] – [UseCase Diagram] in Main Menu.
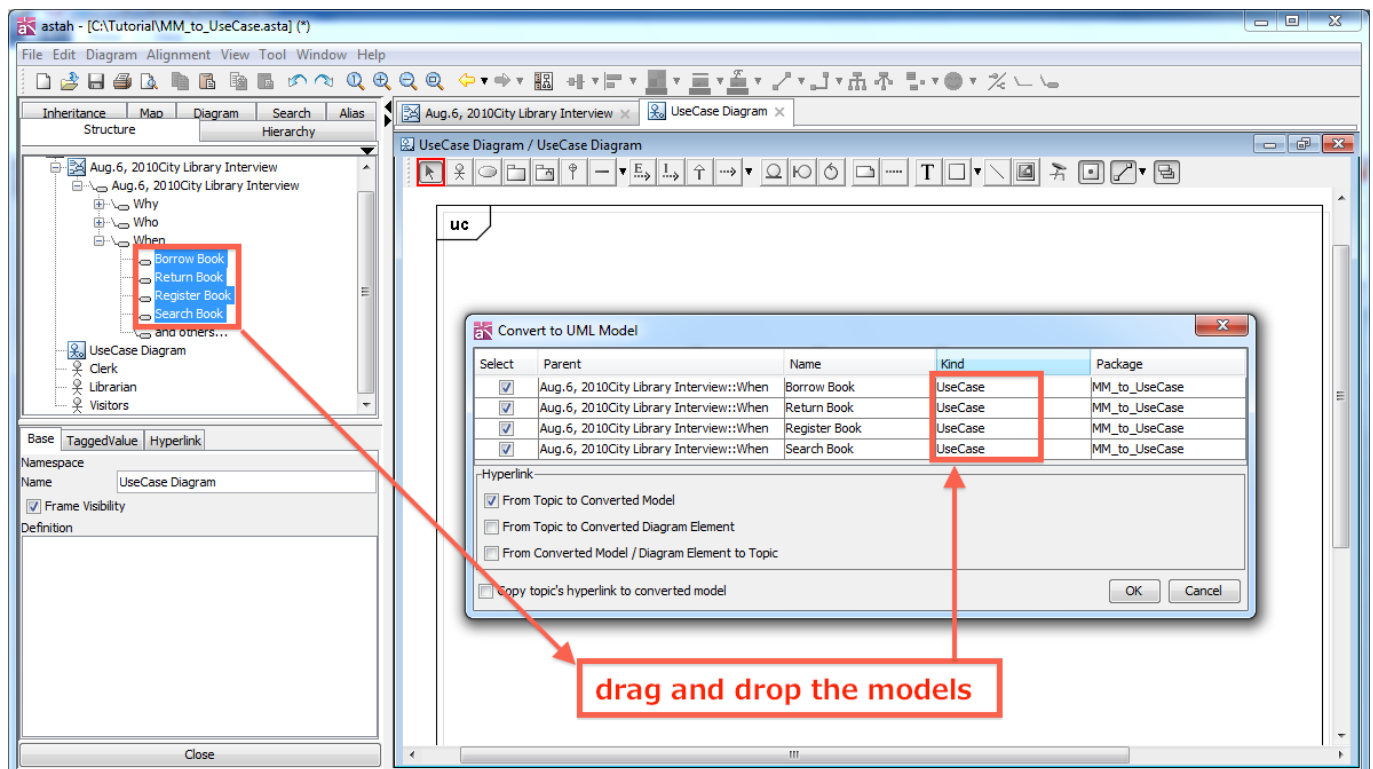

Then let's convert Mind Map topics to Actors. Go to the Structure Tree View and select the Mind Map topics under [Who] and drag and drop them onto UseCase diagram in the Diagram Editor. When you do so, [Convert to UML Model] dialog appears, make sure that they say [Actor] in the [Kind] column, and then click [OK].
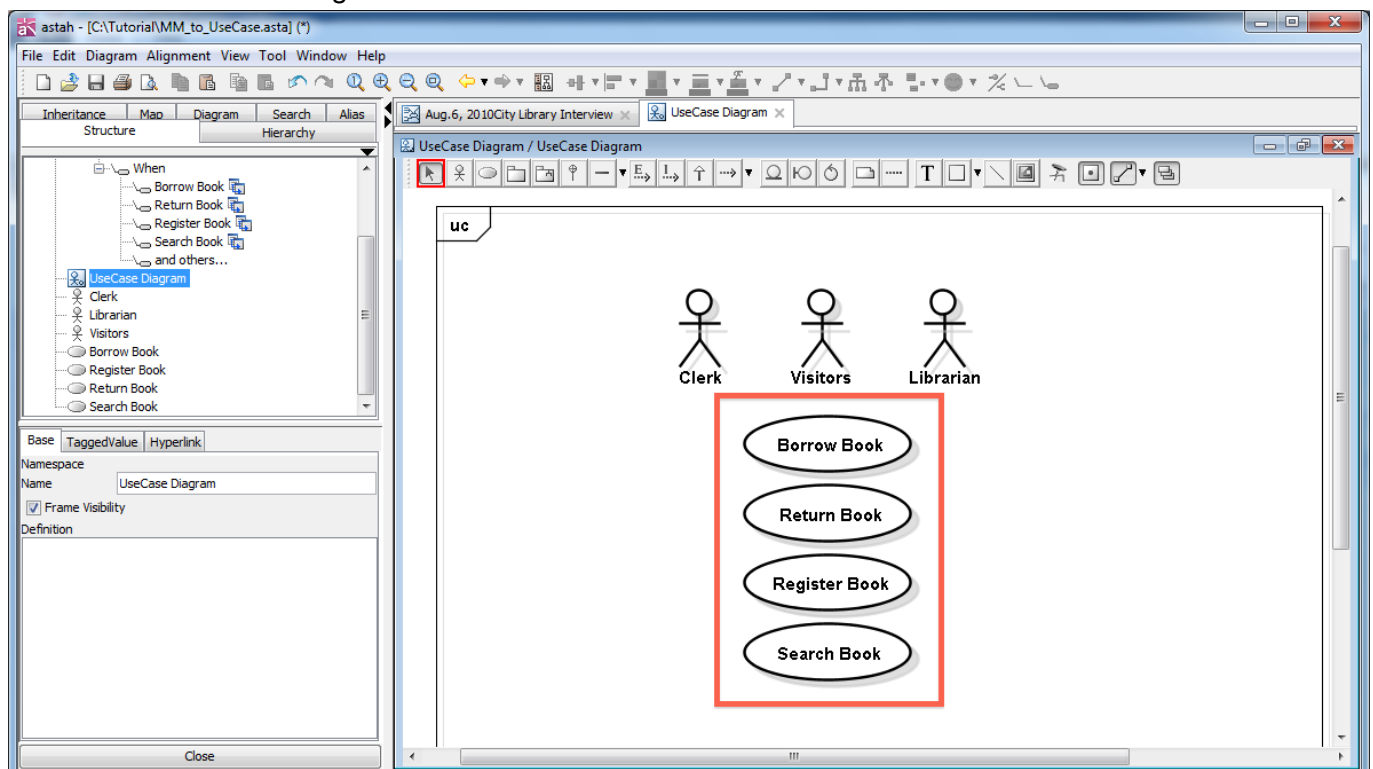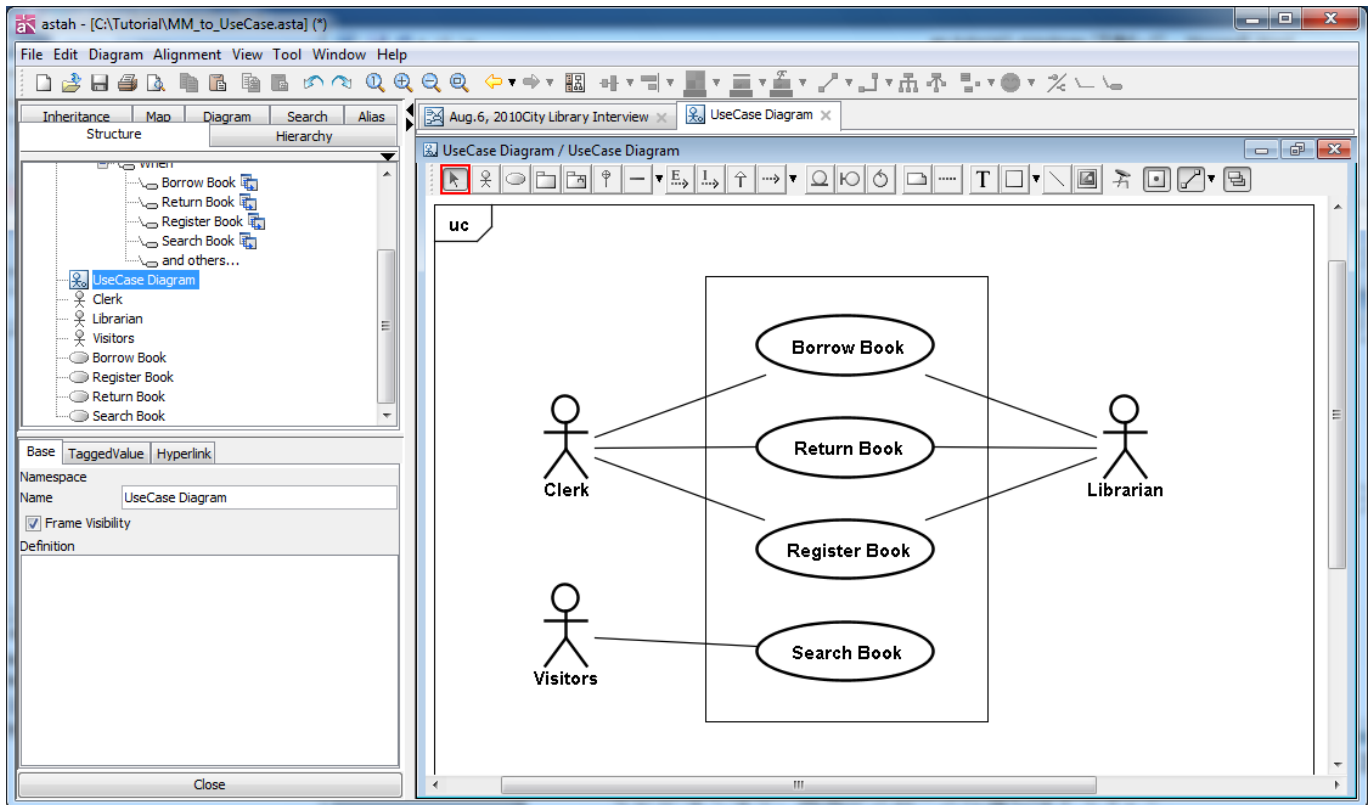
Now Actors are on in the UseCase Diagram.

And now, let's convert Mind Map Topics to UseCases. Once again go to the Structure Tree View and select the Mind Map topics under [When] and drag and drop them onto UseCase diagram in the Diagram Editor. This time make sure all the models are [UseCase] in the [Kind] column, and then click [OK].

UseCases are on the Diagram.

Now you can add more models and complete the UseCase Diagram.

In the software development activities, communication among people is a key. Mind Map promotes the active communication between clients and developers, and captures the essence of requirements right without leaving them vague or missing important points, which leads the development go effective and successfully.

RELATED ARTICLES

- Exploring User Requirements Through MindMapping

http://www.change-vision.com/en/ExploringUserRequirementsThroughMindMapping_Letter.pdf

- Exploring User Stories Through Mind mapping

http://www.slideshare.net/hiranabe/exploring-user-stories-through-mindmapping-546609

- Agile Modeling with Mind Map and UML

http://www.stickyminds.com/s.asp?F=S11861_ART_2

- SPaMCAST Seven! Mind Mapping, Interview with Kenji Hiranabe, Requirements Essay

http://www.spamcast.libsyn.com/index.php?post_id=206650