# Visual ◆ Paradigm

## How to Use Textual Analysis?
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OTV is a company which delivers online TV broadcasting services. It is going to improve its services by re-developing the online broadcasting system. In this tutorial, we will make use of textual analysis to identify main use cases of OTV's online broadcasting services, and form a use case diagram for further studies.

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1. Download the attached document file OTV.txt, which describes the general business operations of OTV in advance.

2. Create a new project by selecting **Project > New** from the application toolbar. In the **New Project** window, enter *OTV* as project name and click **Create Blank Project**.

3. Select **Diagram > New** from the application toolbar.

4. In the **New Diagram** window, select **Textual Analysis** and click **Next**.
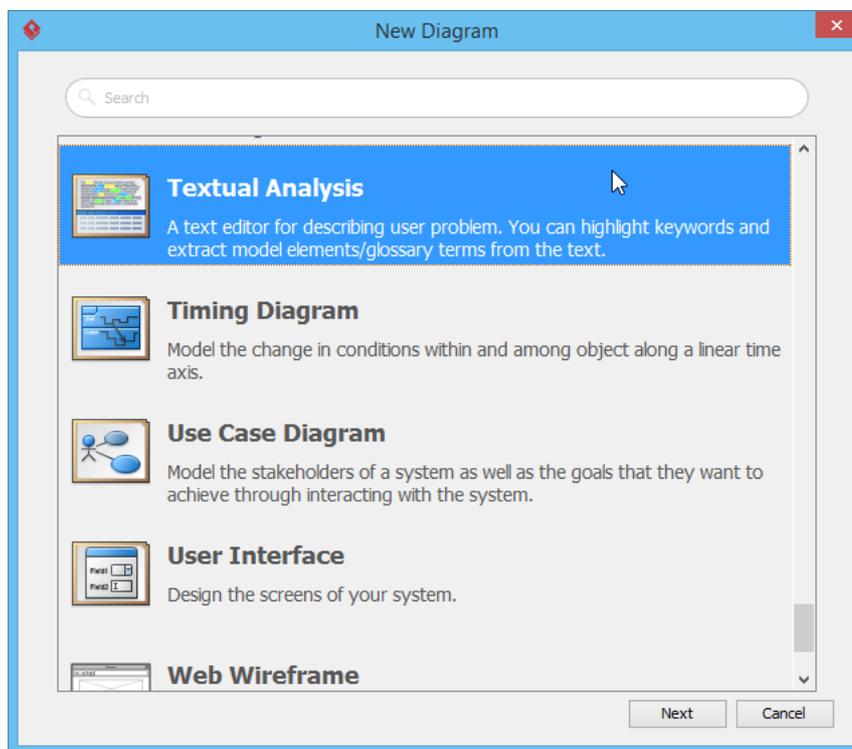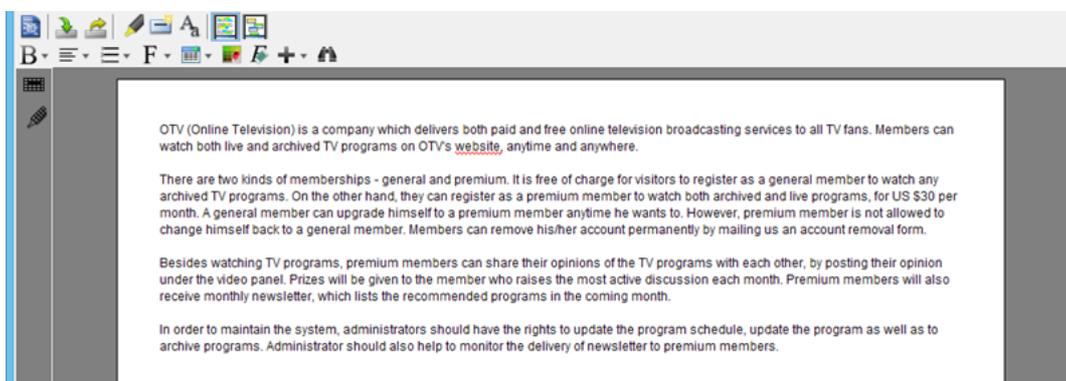

5. Click **OK** again to create a problem statement.

6. You can enter the problem statement in problem statement editor. Choose either type directly there, or import a text file. Let's try to import the downloaded text file. Click on the button **Import File**, select *OTV.txt* and click **Open** button.
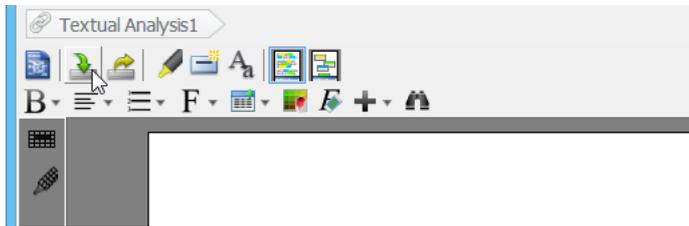
7. The text is imported. Study the problem statement.

8. Now, identify all candidate actors that involve in the system. By reading the problem statement, we find the first candidate actor, *premium member* in the second paragraph. Highlight and then right click on it, and select **Actor** from the pop-up menu.
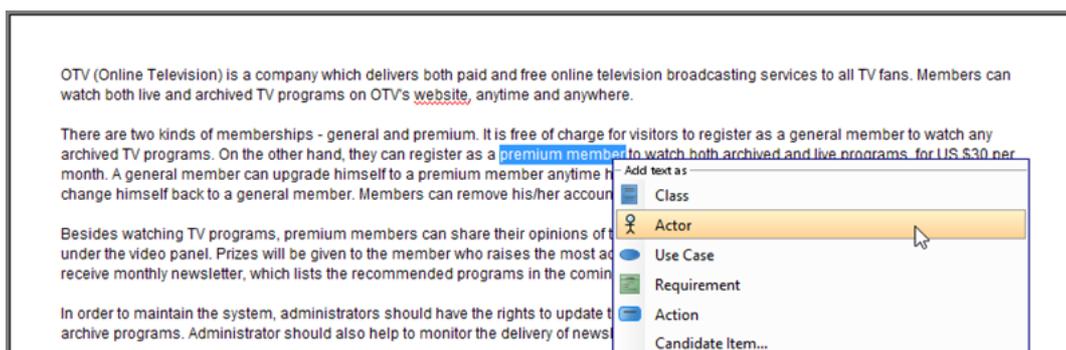
9.   Check out the grid at the bottom. It lists the properties of extracted candidate object: **Candidate Class** (candidate object's name), **Extracted Text** (the word/ phrase it extracted from), **Type** (candidate type), **Description, Occurrence** (the number of times the word/ phrase appears in the problem statement) and **Highlight** (the highlight color of candidate object).

10.   The second candidate actor general member is found. Again, add it as candidate actor.

11.   In the last paragraph, we find the candidate actor *administrator*. Add text *administrators* as actor.

12. Now, identify candidate use cases. Candidate use cases usually name as a verb or verb+noun phrase. For instance, *"watch any archived TV programs"* in the second paragraph. Highlight and right click on *"watch any archived TV programs"*, and select **Use Case** from the pop-up menu.

OTV (Online Television) is a company which delivers both paid and free online television broadcasting services to all TV fans. Members can watch both live and archived TV programs on OTV's website, anytime and anywhere.

There are two kinds of memberships - general and premium. It is free of charge for visitors to register as a general member to watch any archived TV programs. On the other hand, they can register as a premium member to watch both archived and live programs, for US $30 per month. A general me... wever, premium member is not allowed to change himself back ... by mailing us an account removal form.

Add text as
Actor
Class
Use Case
Requirement
Action
Candidate Item...

Besides watching TV ... s with each other, by posting their opinion under the video pane... each month. Premium members will also receive monthly new...

In order to maintain t... hedule, update the program as well as to archive programs. A... m members.

13. Search the text below and identify them as candidate use cases:

Register as a general member
Register as a premium member
Watch both archived and live programs
Upgrade himself to a premium member
Remove his/her account
Posting their opinion
Receive monthly newsletter
Update the program schedule
Update the program
Archive programs
Monitor the delivery of newsletter

14. In order to distinguish the candidate objects in problem statement, we can change their highlight color. Let's select orange as the highlight color for candidate actors. Click **Highlight** cell of premium member and press the inverted triangle. Select orange from the combo box.

No.	Candidate Class	Extracted Text	Type	Description	Occurrence	Highlight
1	premium member	premium member	Actor		1	
2	general member	general member	Actor		2	
3	administrators	administrators	Actor		1	
4	watch any archived	watch any archived T	Use Case		1	
5	register as general r	register as a general r	Use Case		1	
6	register as premium	register as a premium	Use Case		1	
7	watch both archive	watch both archived	Use Case		1	
8	upgrade himself to	upgrade himself to a	Use Case		1	
9	remove his/her acc	remove his/her accou	Use Case		1	
10	posting their opinio	posting their opinion	Use Case		1	
11	receive monthly ne	receive monthly new	Use Case		1	
12	update the progran	update the program	Use Case		1	
13	update the progran	update the program	Use Case		1	
14	archive programs	archive programs	Use Case		1	
15	monitor the deliver	monitor the delivery	Use Case		1	

15. You may notice that some of the candidate actors and use cases can be renamed to make them shorter and more informative. Take candidate actor *premium member* as example, to rename a candidate actor, in the grid at the bottom, double click on *premium member* cell under **Candidate Class** and change it to *Premium Member*.

No.	Candidate Class	Extracted Text	Type
1	Premium Member	premium member	Actor
2	general member	general member	Actor
3	administrators	administrators	Actor
4	watch any archived	watch any archived T	Use Case

16. On the other hand, you can enter description for *Premium Member*. The text you typed in **Description** cell will become the documentation of *Premium Member* actor. For example, enter *"A premium member can watch both archived and live TV programs for US $30 per month."*

No.	Candidate Class	Extracted Text	Type	Description	Occurrence	Highlight
1	Premium Member	premium member	Actor	A premium member can watch both archived and li	1	
2	general member	general member	Actor		2	
3	administrators	administrators	Actor		1	

17. Rename the other candidates and their description as shown below:

Candidate Class	Extracted Text	Description
General Member	general member	A general member can only watch archived TV programs. In order to watch live programs, s/he should upgrade his/her membership to be premium member.
Administrator	administrators	Administrator has the rights to update the TV program schedule, update and archive TV programs. S/He is responsible for mentoring

		the deliver of newsletter to premium members.
Watch Archived Program	watch any archived TV programs	Members can watch the scheduled archived TV programs anytime.
Register as General Member	register as a general member	It is free of charge to register as a general member.
Register as Premium Member	register as a premium member	No application fee is applied for registering as premium member.
Watch Live Program	watch both archived and live programs	Only premium members are allowed to watch live TV programs.
Upgrade Membership	upgrade himself to a premium member	A general member can upgrade his/her membership to a premium member.
Remove Account	remove his/her account	US$50 of administrative fee is applied when premium members remove their account.
Post Opinion	posting their opinion	Premium members can post their opinion regarding TV programs on OTV's official website.
Receive Newsletter	receive monthly newsletter	Premium members can subscribe monthly newsletter for US$300 per annum.
Update Program Schedule	update the program schedule	Administrator keeps updating TV program schedule fortnightly.
Update Program	update the program	Administrator keeps updating TV programs weekly.
Archive Program	archive programs	Administrator keeps archiving TV programs weekly.
Monitor Delivery of Newsletter	monitor the delivery of newsletter	Administrator is responsible for monitoring the delivery of newsletter.

Up to now, the textual analysis should look like this:

OTV (Online Television) is a company which delivers both paid and free online television broadcasting services to all TV fans. Members can watch both live and archived TV programs on OTV's website, anytime and anywhere.

There are two kinds of memberships - general and premium. It is free of charge for visitors to register as a general member to watch any archived TV programs. On the other hand, they can register as a premium member to watch both archived and live programs, for US $30 per month. A general member can upgrade himself to a premium member anytime he wants to. However, premium member is not allowed to change himself back to a general member. Members can remove his/her account permanently by mailing us an account removal form.

Besides watching TV programs, premium members can share their opinions of the TV programs with each other, by posting their opinion under the video panel. Prizes will be given to the member who raises the most active discussion each month. Premium members will also receive monthly newsletter, which lists the recommended programs in the coming month.

In order to maintain the system, administrators should have the rights to update the program schedule, update the program as well as to archive programs. Administrator should also help to monitor the delivery of newsletter to premium members.

No.	Candidate Class	Extracted Text	Type	Description	Occurrence	Highlight
1	Premium Member	premium member	Actor	A premium member can watch both archived and live TV progr	1	
2	General Member	general member	Actor	A general member can only watch archived TV programs. In or	2	
3	Administrator	administrators	Actor	Administrator has the rights to update the TV program schedu	1	
4	Watch Archived Prog	watch any archived	Use Case	Members can watch the scheduled archived TV programs anyti	1	
5	Register as General M	register as a general	Use Case	It is free of charge to register as a general member.	1	
6	Register as Premium	register as a premiun	Use Case	No application fee is applied for registering as premium member.	1	
7	Watch Live Program	watch both archived	Use Case	Only premium members are allowed to watch live TV programs.	1	
8	Upgrade Membership	upgrade himself to a	Use Case	A general member can upgrade his/her membership to a premi	1	
9	Remove Account	remove his/her acco	Use Case	US$50 of administrative fee is applied when premium members	1	
10	Post Opinion	posting their opinion	Use Case	Premium members can post their opinion regarding TV progran	1	
11	Receive Newsletter	receive monthly new	Use Case	Premium members can subscribe monthly newsletter for US$30	1	
12	Update Program Sch	update the program	Use Case	Administrator keeps updating TV program schedule fortnightly.	1	
13	Update Program	update the program	Use Case	Administrator keeps updating TV programs weekly.	1	
14	Archive Program	archive programs	Use Case	Administrator keeps archiving TV programs weekly.	1	
15	Monitor Delivery of N	monitor the delivery	Use Case	Administrator is responsible for monitoring the delivery of newsl	1	

18. Let's switch to candidate pane by clicking **Candidate Pane View** button. Candidate pane view is where you can visualize candidate objects for easy arrangement.


19. We are going to form a use case diagram with those candidate objects. Create a use case diagram first. Select **Diagram > New** from the application toolbar. In the **New Diagram** window, select **Use Case Diagram** and click **Next**. Then, click **OK** to create the diagram.

20. Open the **Model Explorer**. Select **View > Panes > Model Explorer** from the application toolbar.
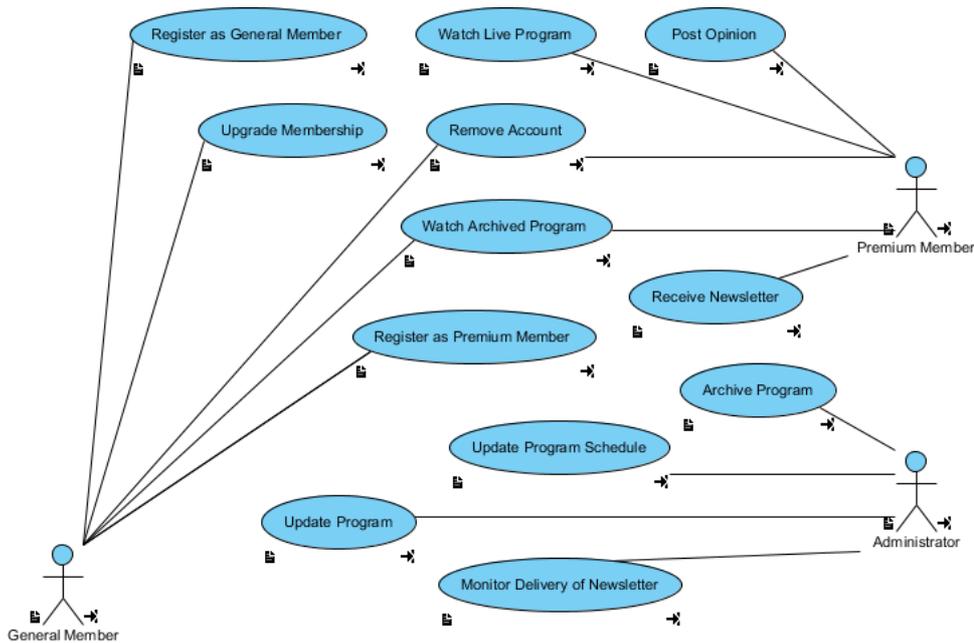
21. Select all the candidate actors and use cases. Then, drag them onto the diagram.
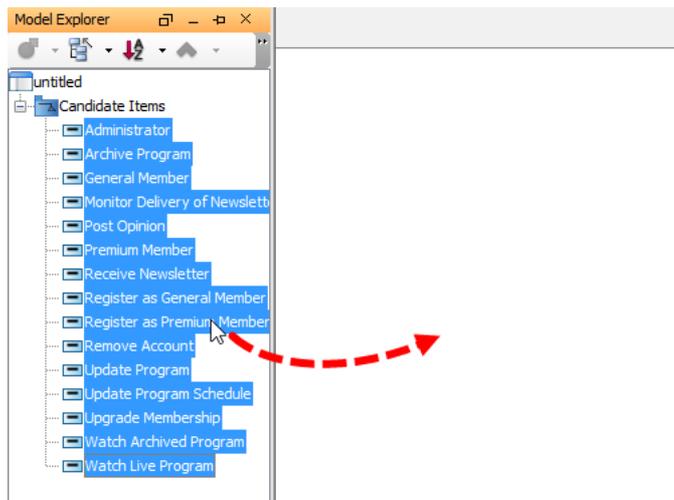
22. Rearrange the shapes to make the diagram alike the below image:
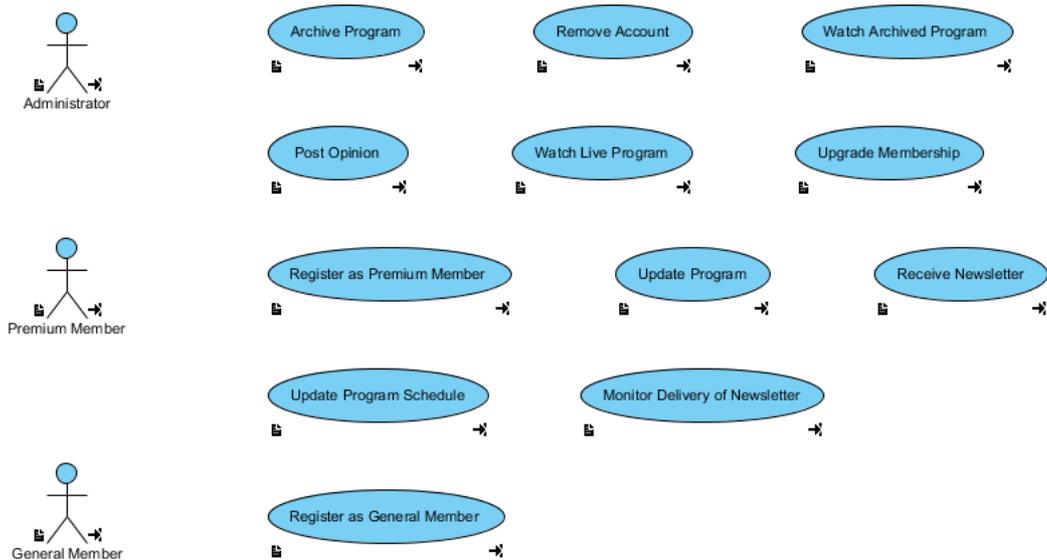
23.   Associate actors with use cases. Finally, the diagram should look like the following:

24.   Save the project. This is the end of the tutorial.

Resources
1.   OTV.txt

Visual Paradigm

Visual Paradigm home page
(https://www.visual-paradigm.com/)

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(https://www.visual-paradigm.com/tutorials/)