

Test Plan for YouDanMu

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Usage:

Severity: 1 – Workaround 2 – Important 3 – Critical

Test Detail: A – Title B – Instruction C – Expected Result

*Test cases with * means white-box testing only.

Functional:

1. As user, I would like to use this plug-in in different system and browser.

ID	Severity	Test Detail
1.1	3	A. Test Google Chrome B. Instruction a) Follow YouDanMu instruction on GitHub or search in extension store to install the extension. b) Click the blue YouDanMu icon on the browser toolbar. c) Verify the options menu shows up. C. Successfully install.
1.2	3	A. Test Google Chrome B. Instruction a) Follow YouDanMu instruction on GitHub or search in extension store to install the extension. b) Click the blue YouDanMu icon on the browser toolbar. c) Verify the options menu shows up. C. Successfully install.

2. As user, I would like to load Danmaku from different kinds of Danmaku sources (our own server, websites like Bilibili, Nico Nico etc.).

ID	Severity	Test Detail
2.1	3	A. Load Danmaku from selected source B. Instruction <ul style="list-style-type: none"> a) Load video on YouTube website b) Click load Danmaku button below the video c) Select a recommended Danmaku source or enter a URL d) Examine if Danmaku is loaded from the selected source C. Danmaku loaded from selected source cleanly
2.2	1	A. Reload Danmaku from other sources else from current one B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku from a source b) Change the setting to other source of Danmaku c) Examine if the Danmaku has been reloaded from the new source C. The previous Danmaku is clear and the new Danmaku is loaded from the new source

3. As user, I would like to post Danmaku in different size.

ID	Severity	Test Detail
3.1	3	A. Post Danmaku with specific size B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku b) Post Danmaku with specific size c) Examine the database* d) Examine the correct size if being displayed on video C. The database should promptly receive the new Danmaku with the specific size and the Danmaku player should display the Danmaku with the specific font size
3.2	3	A. Post Danmaku without specified size B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku b) Post Danmaku without specifying size c) Examine the database* d) Examine the correct Danmaku is being displayed on video C. The database should promptly receive the new Danmaku with the default size and the Danmaku player should display the Danmaku with the the default font size.

4. As user, I would like to post Danmaku in different color using a color picker.

ID	Severity	Test Detail
4.1	3	A. Post Danmaku with specific color B. Instruction a) Load video and Danmaku b) Choose the color from color picker c) Post Danmaku d) Examine the database* e) Examine the Danmaku displayed on video C. The database should promptly receive the new Danmaku with the specific color and the Danmaku player should display the Danmaku with the specific color
4.2	3	A. Check if choose two or more colors B. Instruction a) Choose two colors from color picker b) Post Danmaku c) Examine the database* d) Examine the Danmaku displayed on the video C. The database should promptly receive the new Danmaku with the latest chosen color and the Danmaku player should display the Danmaku with the latest chosen color
4.3	3	A. Post Danmaku with default color B. Instruction a) Load video and Danmaku b) Post Danmaku c) Examine the database* d) Examine the Danmaku displayed on video C. The database should promptly receive the new Danmaku with the default color and the Danmaku player should display the Danmaku with the default color.

5. As user, I would like to post emoji in Danmaku.

ID	Severity	Test Detail
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5.1	2	<p>A. Post Danmaku with emoji inserted</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Post Danmaku mixed with emoji and text c) Examine the Danmaku is corrected posted to server and in stored in database* d) Examine the newly posted Danmaku is corrected loaded and render into the video <p>C. The database should promptly receive the new Danmaku with the emoji and the Danmaku player should display and render the Danmaku with the emoji.</p>
5.2	2	<p>A. Post Danmaku with only emoji</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Post Danmaku with only emoji c) Examine the server* and Danmaku display <p>C. The database should promptly receive the new Danmaku with the emoji and correctly stored and the Danmaku player should display and render the Danmaku with the emoji correctly.</p>

6. As user, I would like to post my Danmaku at certain part of the screen (Still at top or bottom; Fly through).

ID	Severity	Test Detail
6.1	2	<p>A. Post Danmaku with specified position</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Post Danmaku with specific position c) Examine the database* d) Examine the Danmaku display <p>C. The database should promptly receive the new Danmaku with the specific position and the Danmaku player should display the Danmaku still at the specific position.</p>
6.2	2	<p>A. Post Danmaku with with fly through function</p> <p>B. Instruction</p> <ul style="list-style-type: none"> e) Load video and Danmaku f) Post Danmaku with “fly through” option g) Examine the database*

		h) Examine the video C. The database should promptly receive the new Danmaku with the fly through position attribute and the Danmaku player should display the Danmaku fly through.
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7. As user, I would like to switch Danmaku feature on and off.

ID	Severity	Test Detail
7.1	3	A. Switch off Danmaku at the beginning B. Instruction <ul style="list-style-type: none"> a) Open the menu of YouDanMu b) Choose “close” to switch off Danmaku c) Play the video C. Danmaku should not be shown on the video
7.2	3	A. Switch off Danmaku while playing B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku, play the video. b) Open the menu of YouDanMu c) Choose “close” to switch off Danmaku d) Examine the Danmaku display C. Danmaku should disappear simultaneously
7.3	3	A. Restart Danmaku B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku, play the video. b) Open the menu of YouDanMu c) Choose “close” to switch off Danmaku d) Choose “open” to switch on Danmaku e) Repeat c) and d) several times f) Examine the Danmaku display C. Danmaku should appear or disappear simultaneously.

8. As user, I would like to block some Danmaku with specific word.

ID	Severity	Test Detail
8.1	1	A. Block Danmaku B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku

		<ul style="list-style-type: none"> b) Add key word that would be blocked c) Examine the block word list d) Post Danmaku including the key word e) Examine the Danmaku display <p>C. The key word should be shown in the list and the Danmaku including that word should not be displayed. Other Danmaku should work well as usual.</p>
8.2	1	<p>A. Unblock Danmaku</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Delete key word in the list c) Examine the block word list d) Post Danmaku including the key word e) Examine the Danmaku display <p>C. The key word should be deleted from the list and the Danmaku including that word should be displayed as well.</p>

9. As user, I would like to adjust transparency of all the Danmaku.

ID	Severity	Test Detail
9.1	1	<p>A. Change transparency of all existed Danmaku</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Change transparency c) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the specific transparency simultaneously.</p>
9.2	1	<p>A. Change transparency of new Danmaku</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Change transparency c) Post new Danmaku d) Examine Danmaku displayed on video <p>C. The Danmaku player should display the new Danmaku with the specific transparency.</p>
9.3	3	<p>A. Default transparency</p> <p>B. Instruction</p>

		<ul style="list-style-type: none"> a) Load video and Danmaku, play the video b) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the default transparency.</p>
9.4	1	<p>A. Auto-Saved transparency</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Change transparency c) Open another video and load Danmaku, play d) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the previous transparency that has been changed before.</p>
9.5	2	<p>A. Reset transparency</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Click on “reset” button c) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the default setting.</p>

10. As user, I would like to set the overall font size for all the Danmaku.

ID	Severity	Test Detail
10.1	3	<p>A. Change font size</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Change font size c) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the new font size simultaneously.</p>
10.2	2	<p>A. Adjust font size of new Danmaku</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Change font size c) Post new Danmaku d) Examine Danmaku displayed on video <p>C. The Danmaku player should display the new Danmaku with the adjusted size.</p>

10.3	2	A. Default font size B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku, play the video b) Examine Danmaku displayed on video C. The Danmaku player should display the Danmaku with the default font size.
10.4	1	A. Auto-Saved font size B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku b) Change font size c) Open another video and load Danmaku, play d) Examine Danmaku displayed on video C. The Danmaku player should display the Danmaku with the previous font size that has been changed before.
10.5	2	A. Reset font size B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku b) Click on “reset” button c) Examine Danmaku displayed on video C. The Danmaku player should display the Danmaku with the default setting.

11. As user, I would like to change the overall Danmaku border and shadow rendering styles (solid black border, shadowing etc.).

ID	Severity	Test Detail
11.1	2	A. Change style B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku b) Change render style c) Examine Danmaku displayed on video C. The Danmaku player should display the Danmaku with the new style simultaneously.
11.2	3	A. Adjust style of new Danmaku B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku b) Change style c) Post new Danmaku

		<p>d) Examine Danmaku displayed on video</p> <p>C. The Danmaku player should display the new Danmaku with the adjusted render style.</p>
11.3	2	<p>D. Default style</p> <p>E. Instruction</p> <p>a) Load video and Danmaku, play the video</p> <p>b) Examine Danmaku displayed on video</p> <p>D. The Danmaku player should display the Danmaku with the default render style.</p>
11.4	1	<p>D. Auto-Saved render style</p> <p>E. Instruction</p> <p>a) Load video and Danmaku</p> <p>b) Change render style</p> <p>c) Open another video and load Danmaku, play</p> <p>d) Examine Danmaku displayed on video</p> <p>F. The Danmaku player should display the Danmaku with the previous render style that has been changed before.</p>
11.5	2	<p>D. Reset style</p> <p>E. Instruction</p> <p>a) Load video and Danmaku</p> <p>b) Click on “reset” button</p> <p>c) Examine Danmaku displayed on video</p> <p>F. The Danmaku player should display the Danmaku with the default setting.</p>

12. As user, I would like to change the overall Danmaku font family.

ID	Severity	Test Detail
12.1	2	<p>A. Change font family</p> <p>B. Instruction</p> <p>a) Load video and Danmaku</p> <p>b) Change font family</p> <p>c) Examine Danmaku displayed on video</p> <p>C. The Danmaku player should display the Danmaku with the new font family simultaneously.</p>
12.2	2	<p>A. Change font family of new Danmaku</p> <p>B. Instruction</p> <p>a) Load video and Danmaku</p> <p>b) Change font family</p>

		<ul style="list-style-type: none"> c) Post new Danmaku d) Examine Danmaku displayed on video <p>C. The Danmaku player should display the new Danmaku with the specific font family.</p>
12.3	3	<p>A. Default font family</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku, play the video b) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the default font family.</p>
12.4	1	<p>A. Auto-Saved font family</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Change font family c) Open another video and load Danmaku, play d) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the previous font family that has been chosen before.</p>
12.5	2	<p>A. Reset font family</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Click on “reset” button c) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the default setting.</p>

13. As user, I would like to report some insulting Danmaku

ID	Severity	Test Detail
13.1	2	<p>A. Report Danmaku on player</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Find one of the Danmaku and report with reason c) Examine the Danmaku report on server <p>C. The report show up on server with the correct Danmaku ID</p>
13.2	3	<p>A. Report Danmaku on player with potential SQL injection character</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Find one of the Danmaku and report with attack character

		c) Examine the Danmaku report on server C. The report show up on server with the correct Danmaku ID and the SQL injection should not be successful
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14. As user, I would like to see the whole list of all the Danmaku on the video.

ID	Severity	Test Detail
14.1	3	A. UI Test B. Instruction a) Scroll down and up b) Click on any of Danmaku in the list to choose it C. UI and the click function works well
14.2	2	A. Refresh Danmaku B. Instruction a) Load video and Danmaku list b) Refresh Danmaku c) Examine if the new list of Danmaku is loaded C. The list of Danmaku is refreshed and any change to the list should appear
14.3	3	A. Load empty and oversized Danmaku list B. Instruction a) Load video and Danmaku list with empty and oversized Danmaku b) Examine if the new list of Danmaku is loaded C. For empty list, the plugin should not crash. For oversized list, the plugin should be able to drop the loading to prevent potential attack

15. As user, I would like to change the fly through speed of all the Danmaku.

ID	Severity	Test Detail
15.1	2	A. Change fly through speed B. Instruction a) Load video and Danmaku b) Change fly through speed c) Examine Danmaku displayed on video C. The Danmaku player should display the Danmaku with the new fly through speed simultaneously.

15.2	2	<p>A. Change fly through speed of new Danmaku</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Change fly through speed c) Post new Danmaku d) Examine Danmaku displayed on video <p>C. The Danmaku player should display the new Danmaku with the specific fly through speed.</p>
15.3	3	<p>A. Default fly through speed</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku, play the video b) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the default fly through speed.</p>
15.4	1	<p>A. Auto-Saved fly through speed</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Change fly through speed c) Open another video and load Danmaku, play d) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the previous fly through speed that has been chosen before.</p>
15.5	2	<p>A. Reset fly through speed</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Click on “reset” button c) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the default fly through speed.</p>

16. As user, I would like to pause Danmaku with video.

ID	Severity	Test Detail
16.1	3	<p>A. Pause Danmaku</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Play Danmaku c) Pause Danmaku <p>C. The Danmaku should be paused if the video is paused</p>

16.2	3	<p>A. Replay Danmaku</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Play Danmaku c) Pause Danmaku d) Repeat the process several times <p>C. The Danmaku should be paused if the video is paused and should resume as the video resume. The timestamp of the Danmaku should matched even after several pause/play.</p>
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17. As user, I would like to set maximum overlapping Danmaku density when too much floating comments appears.

ID	Severity	Test Detail
17.1	2	<p>A. Change fly maximum overlapping Danmaku density</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Change maximum overlapping Danmaku density c) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the new maximum overlapping Danmaku density simultaneously.</p>
17.2	2	<p>A. Change maximum overlapping Danmaku density of new Danmaku</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Change maximum overlapping Danmaku density c) Post new Danmaku d) Examine Danmaku displayed on video <p>C. The Danmaku player should display the new Danmaku with the specific maximum overlapping Danmaku density.</p>
17.3	3	<p>A. Default maximum overlapping Danmaku density</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku, play the video b) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the default maximum overlapping Danmaku density.</p>

17.4	1	<p>A. Auto-Saved maximum overlapping Danmaku density</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Change maximum overlapping Danmaku density c) Open another video and load Danmaku, play d) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the previous maximum overlapping Danmaku density that has been chosen before.</p>
17.5	2	<p>A. Reset maximum overlapping Danmaku density</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Click on “reset” button c) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the default maximum overlapping Danmaku density.</p>

18. As user, I would like to set synchronization offset for specific Danmaku source in case their timing is out of sync.

ID	Severity	Test Detail
18.1	2	<p>A. Change synchronization offset</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Change synchronization offset c) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the new synchronization offset simultaneously.</p>
18.2	3	<p>A. Default synchronization offset</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku, play the video b) Examine Danmaku displayed on video <p>C. The Danmaku player should display the Danmaku with the default synchronization offset.</p>

18.3	2	A. Reset synchronization offset B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku b) Click on “reset” button c) Examine Danmaku displayed on video C. The Danmaku player should display the Danmaku with the default synchronization offset.
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19. As user, I would like to automatically save my Danmaku settings for future visits.

ID	Severity	Test Detail
19.1	3	A. Change Setting in YouDanMu B. Instruction <ul style="list-style-type: none"> a) Install plugin b) Change setting and apply setting c) Close browser and clear cache d) Examine if the setting remained at the next time the plugin is launched C. The settings saved as it previously applied
19.2	2	A. Multiuser B. Instruction <ul style="list-style-type: none"> a) Install plugin b) Change setting and apply setting c) Close browser and clear cache and switch to another user in chrome or in other browser d) Examine if the setting set to the other user’s profile as the user switch C. The settings saved as it previously applied for the specific user, if the user does not have a saved profile, the default setting is loaded.

20. As user, I would like to automatically apply the “most popular” Danmaku source for a certain video, “verified” by other users.

ID	Severity	Test Detail
20.1	2	A. Load recommend Danmaku from suggested source automatically B. Instruction

		<ul style="list-style-type: none"> a) Load one of the popular video that has not been previously open before in local client b) The most common choice of Danmaku source is loaded from the server c) Examine the server log* and Danmaku source <p>C. The most popular choice of Danmaku source should be suggested by the server and the the Danmaku should be loaded from the suggested source.</p>
21.2	2	<p>A. Memorize the Danmaku source even if the suggested source is different from the user selection</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load one of the popular video that has been previously open before in local client b) The most common choice of Danmaku source is loaded from the server c) Examine the server log and Danmaku source <p>C. The most popular choice of Danmaku source should be suggested by the server however, since the source is selected already by the user, the suggestion is ignored and the selected source Danmaku is loaded.</p>

21. As user, I would like to report mismatch of the “popular” Danmaku source.

ID	Severity	Test Detail
22.1	2	<p>A. Report Danmaku source mismatch on player</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Load the Danmaku from suggestion and report mismatch c) Examine the Danmaku report on server <p>C. The report show up on server with the Danmaku source URL, the rating of the suggested source should be automatically lower on the server backend.</p>
22.2	3	<p>D. Spam report</p> <p>E. Instruction</p> <ul style="list-style-type: none"> a) Load video and Danmaku b) Find one of the Danmaku and report multiple times c) Examine the Danmaku report on server <p>F. The report shows up on server with the correct Danmaku URL, however each client should only have one chance of reporting. The</p>

		rating of the suggestion should not be lower multiple times.
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22. *As developer, I would like to derive a metrics to automatically evaluate “popular” Danmaku sources for a given YouTube video.

ID	Severity	Test Detail
22.1	3	A. Danmaku earns rating when be chosen B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku b) If there is no auto-loaded Danmaku, choose a source c) Examine database C. The database should promptly add score in the metrics for the chosen source.
22.2	3	A. Other ways for Danmaku source to be verify B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku b) If users do not change source for the whole video c) If the time of Danmaku source video matches the target YouTube video length d) Examine database C. The database should promptly add score in the metrics for the chosen source.
22.3	2	A. Danmaku lower rating when be reported or dropped by the client B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku b) If there is auto-loaded Danmaku c) Report the Danmaku is mismatched d) Examine server log and databse C. The server should promptly lower the rating in the metrics for the chosen source. The databse should update as well.
22.4	3	A. Prevention against malicious attack B. Instruction <ul style="list-style-type: none"> a) Load video and Danmaku in multiple instance b) Report Danmmaku or drop the auto-loaded Danmuku from all of the plugin instance c) Examine server log and databse C. The server should promptly lower the rating in the metrics for the

		chosen source. However, the Danmaku rating will not be lowered multiple times if the request is sent from the same IP address or with same UUID. The database should reflect this.
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23. As developer, I would like to preserve data of the author for each Danmaku comment.

ID	Severity	Test Detail
23.1	3	<p>A. Preserve and gather author information</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Send Danmaku from client b) Examine client log and server log c) Examine Database <p>C. The client log should show that UUID of the user is sent to the server, the server should record the UUID of the Danmaku and generate UUID for the specific Danmaku and store it into the database. The database should have the table updated thereafter.</p>
23.2	3	<p>A. Analyze data sent by client</p> <p>B. Instruction</p> <ul style="list-style-type: none"> a) Send Danmaku from client with modified package b) Examine client log and server log c) Examine Database <p>C. The client log should show that UUID of the user is sent to the server, the server should establish secure connection with client(SSL) and ensure the data is not modified during the process. The submission should be failed if the data package is modified and the database should not be updated.</p>