



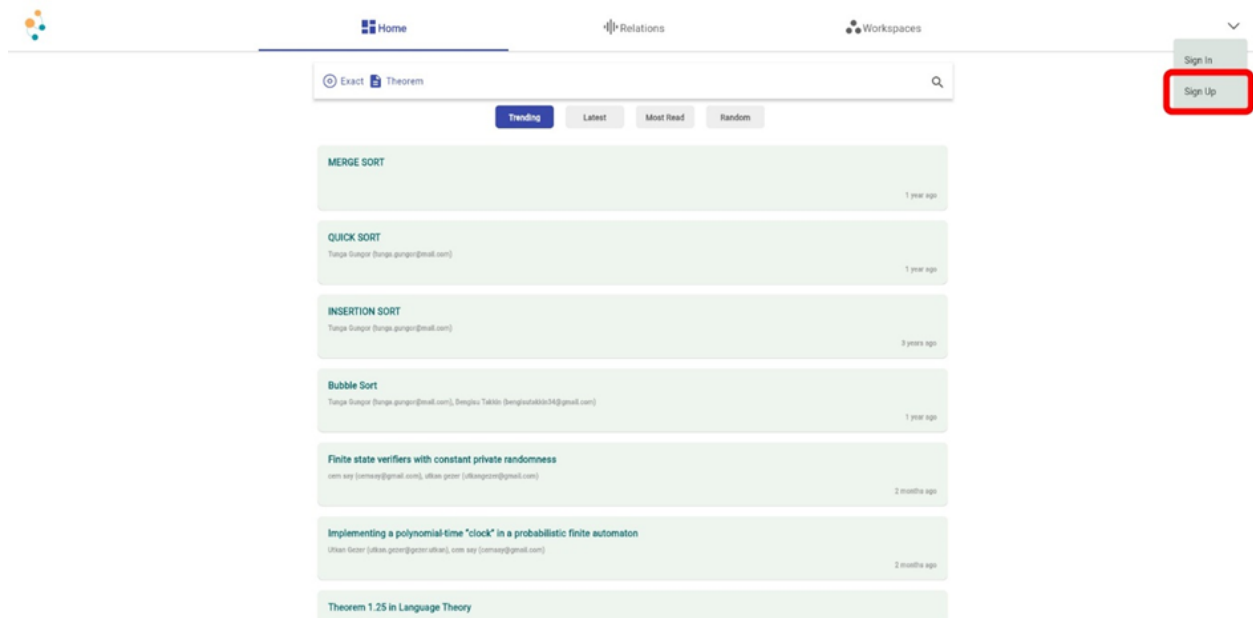
Website User Manual

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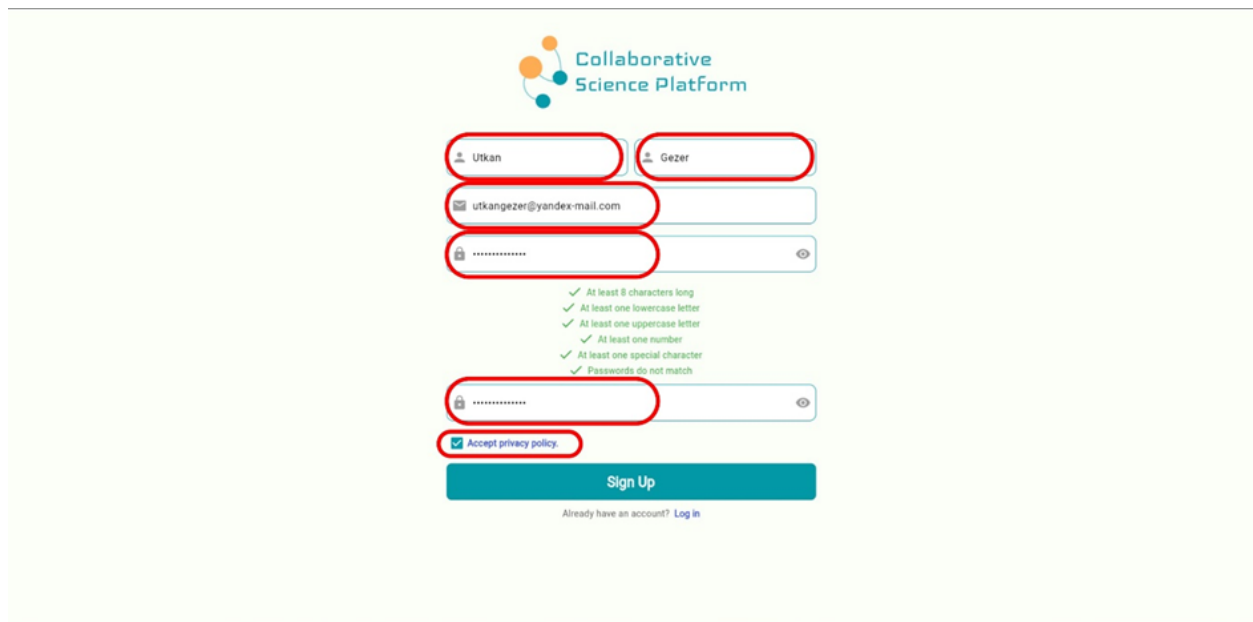
Authentication

Register

1. When you visit our platform as a guest, you will have the ability to explore posts (also known as nodes) and profiles on the homepage. However, accessing the 'Relations' or 'Workspaces' pages requires you to be logged in. If you attempt to access these pages, you will be prompted to log in or sign up. You can navigate to the login or sign-up page either through this prompt or by using the dropdown icon located at the top right corner of the screen.

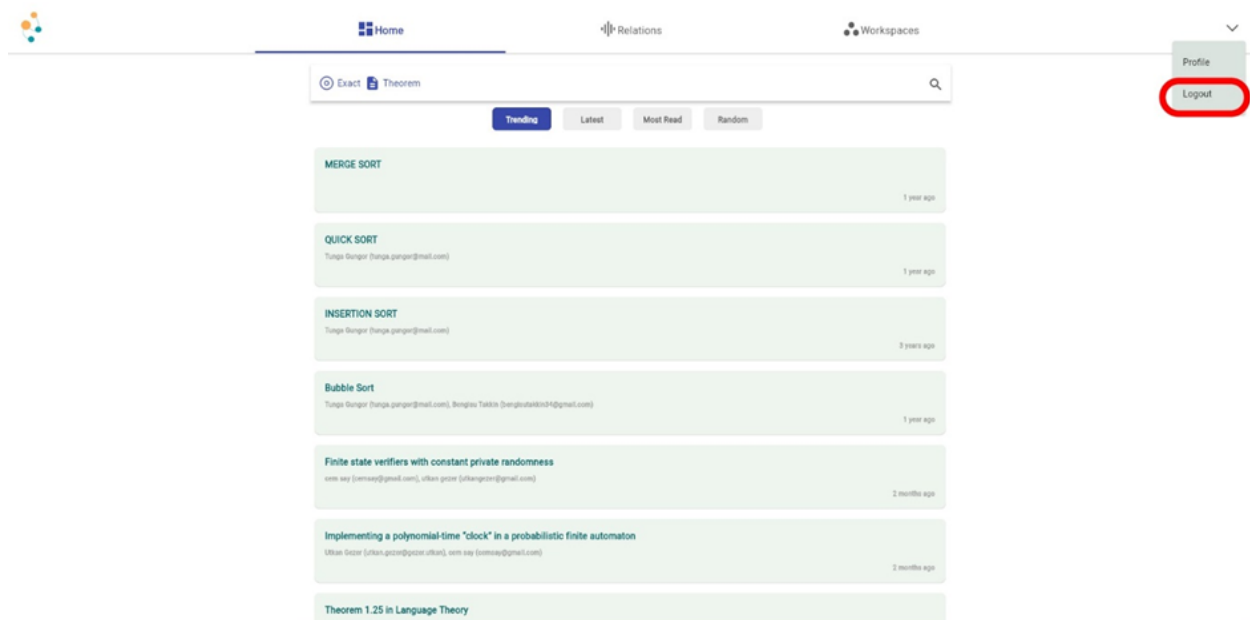


2. To sign up, you must provide a strong password, agree to the privacy policy, and use an email address that has not been registered previously.



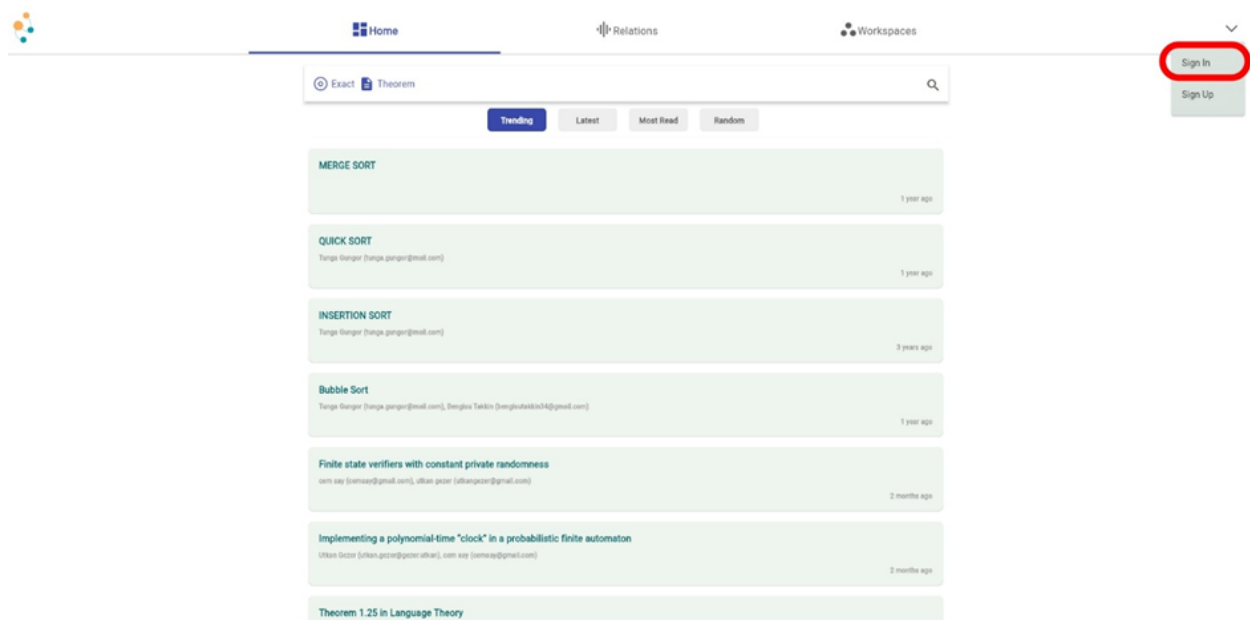
Log Out

To log out, you can use the dropdown icon located at the top right corner of the website. On mobile devices, you can log out by tapping the 'Log Out' button found on your profile page. After clicking it you will be logged out.

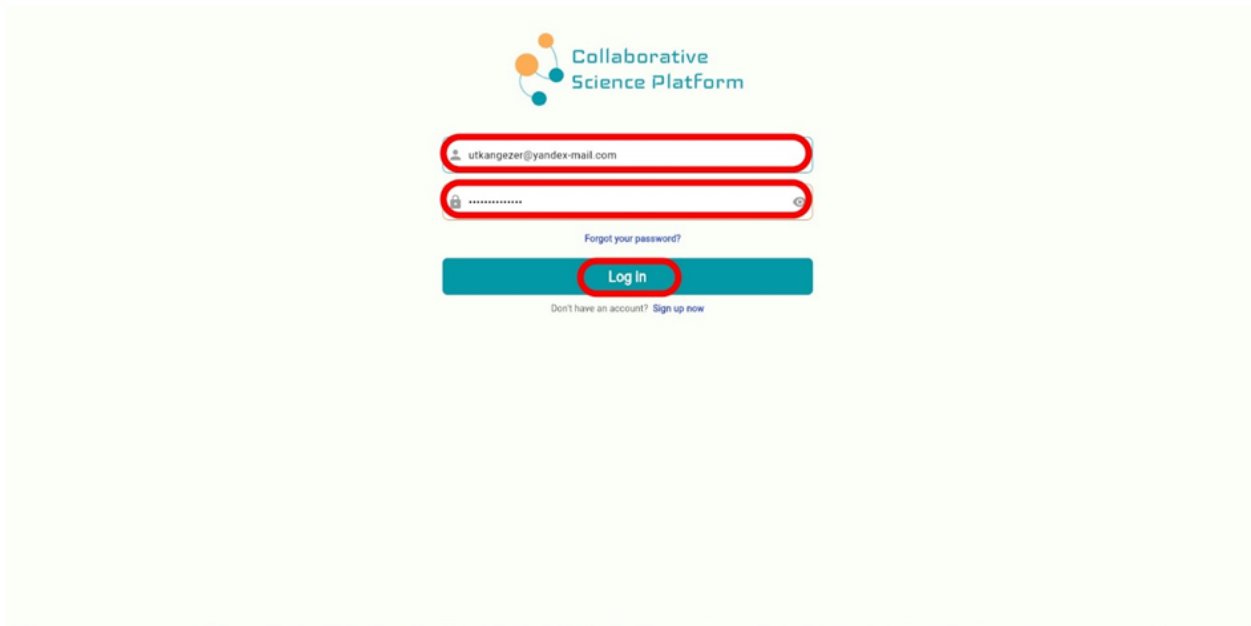


Log in

1. To log in on the website, use the dropdown icon located at the top right corner. On mobile devices, log in by tapping the profile icon on the app bar. This will present options to direct you to either the sign-in or sign-up pages.

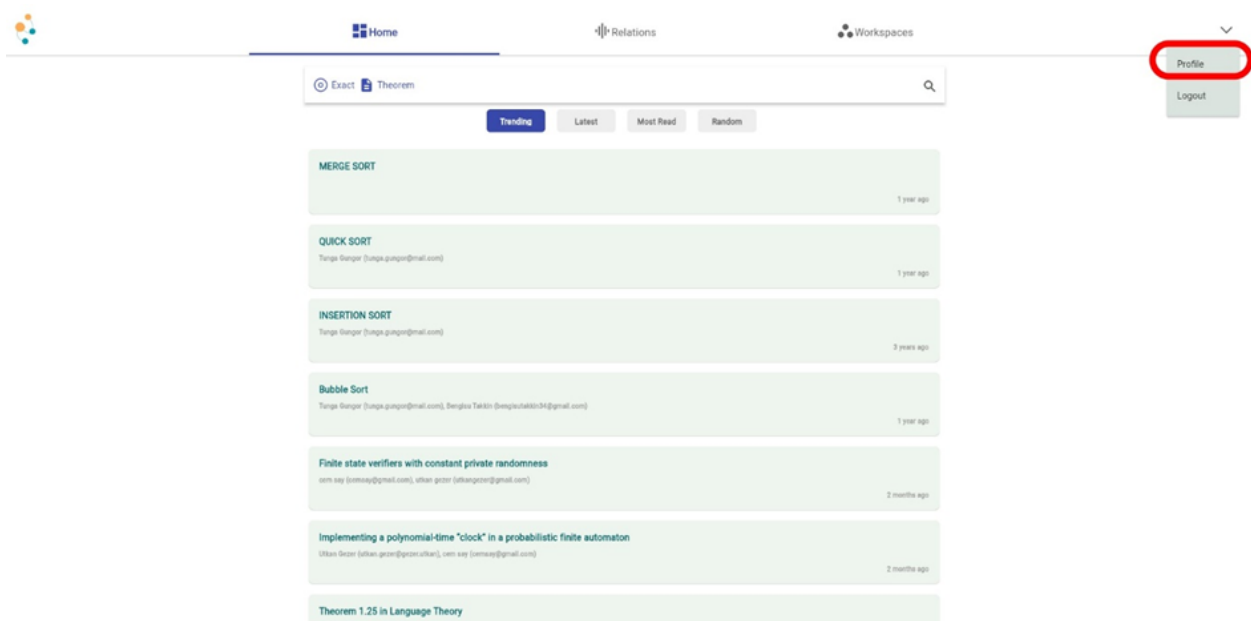


2. Once you're on the login page, please enter your credentials. If you don't remember your password and need assistance, contact the platform administrator at platformadmin@gmail.com. Please note that the 'Forgot Your Password' link is not functional.

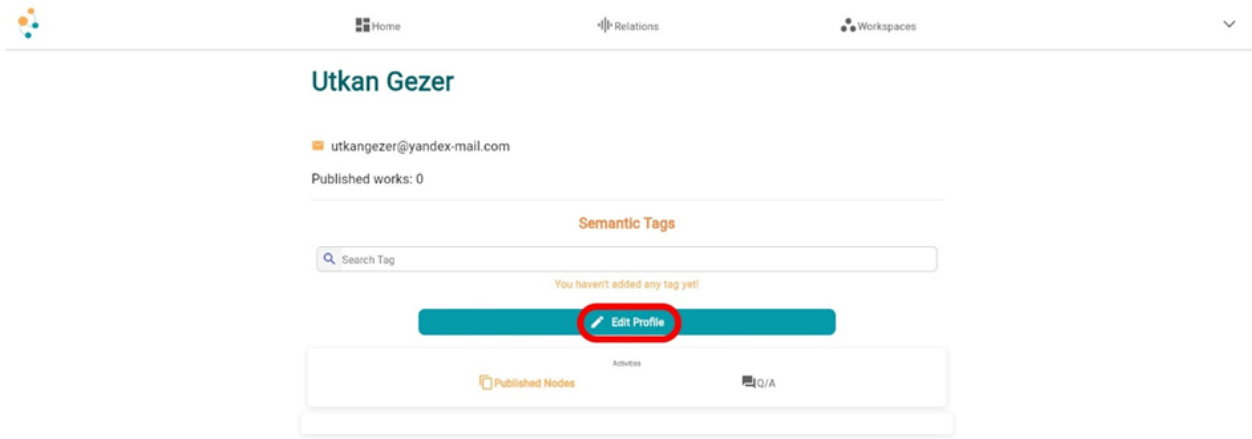


Change Password

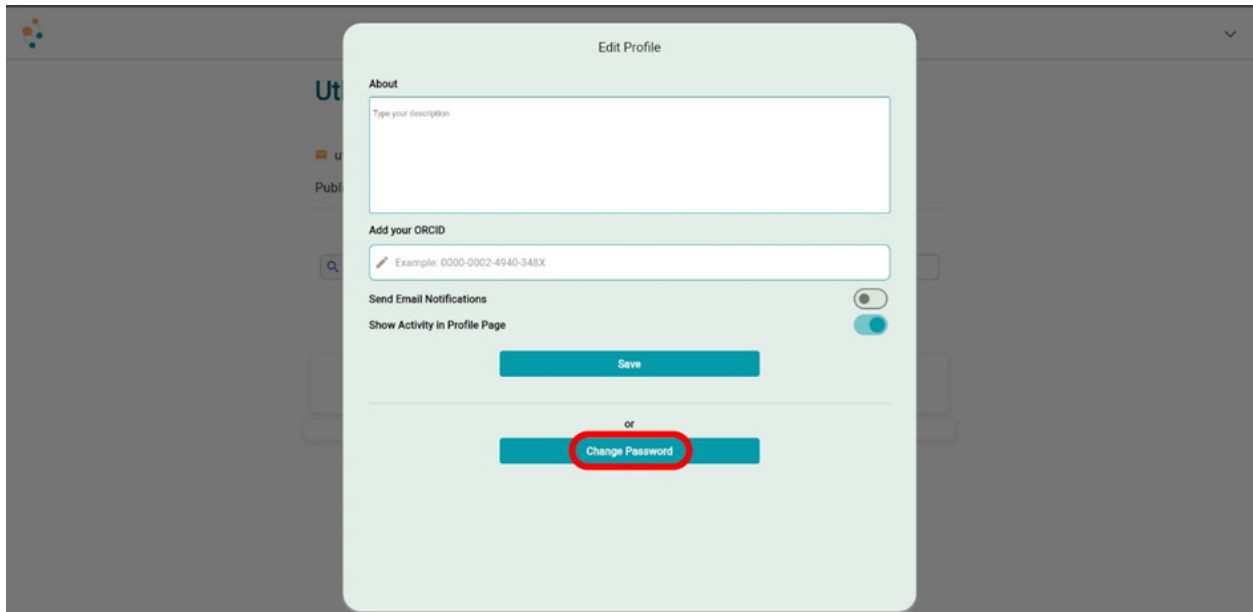
1. To change your password, first navigate to your profile page. On the website, you can access your profile using the dropdown icon located at the top right corner. On mobile devices, use the profile icon on the app bar.



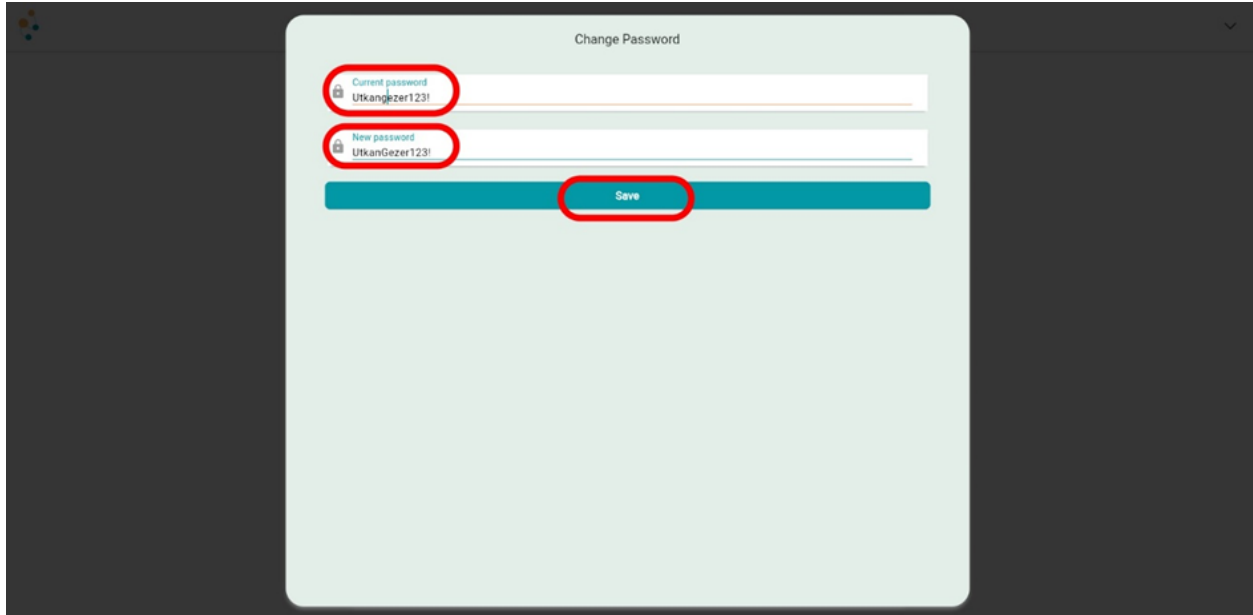
2. Once on your profile page, you will find an 'Edit Profile' button located below the semantic tag. Please click it.



3. Clicking this will open a popup window with various profile options. Please select the 'Change Password' button at the bottom.

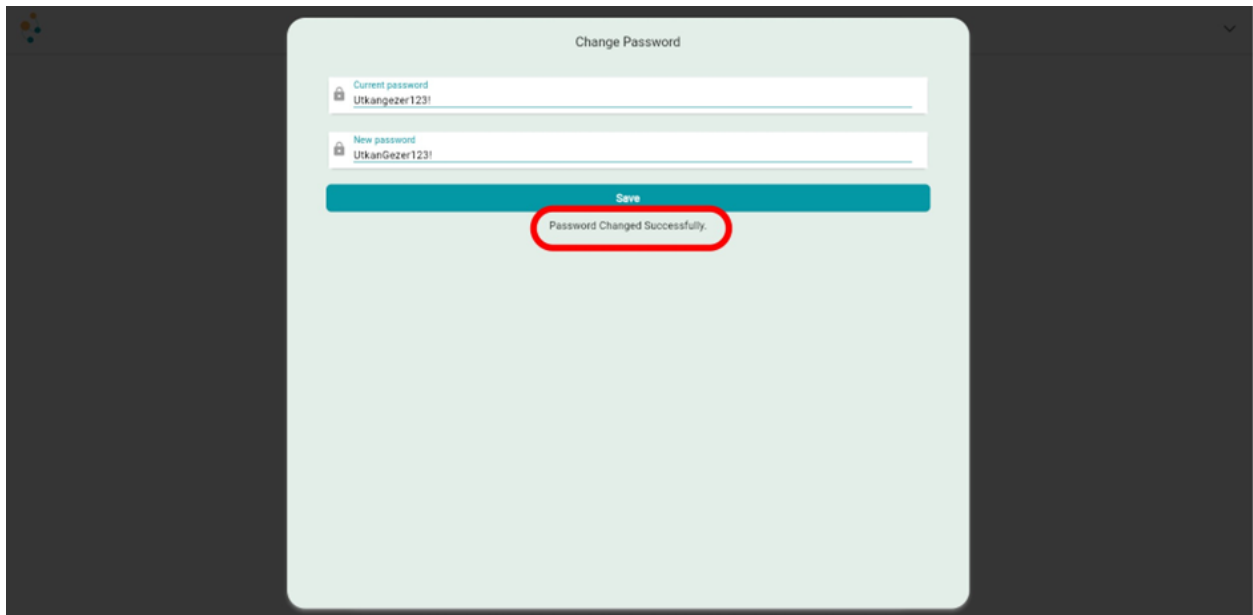


4. You will then be prompted to enter your current password followed by your new password. Click save to update your password as entered.



The screenshot shows a 'Change Password' dialog box with a light green background. It contains two input fields: 'Current password' with the value 'Utkangezer123!' and 'New password' with the value 'UtkanGezer123!'. A teal 'Save' button is located below the fields. Red circles highlight the current password field, the new password field, and the 'Save' button.

5. After saving these changes, your password will be updated.

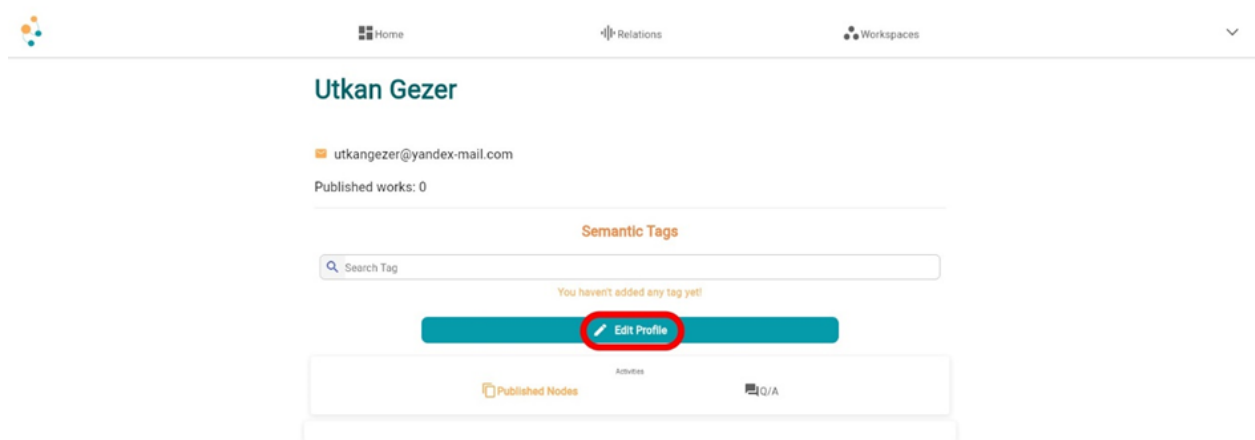


The screenshot shows the same 'Change Password' dialog box. The 'Current password' field now contains 'Utkangezer123!' and the 'New password' field contains 'UtkanGezer123!'. The teal 'Save' button is still present. A red circle highlights a message box that says 'Password Changed Successfully.' below the 'Save' button.

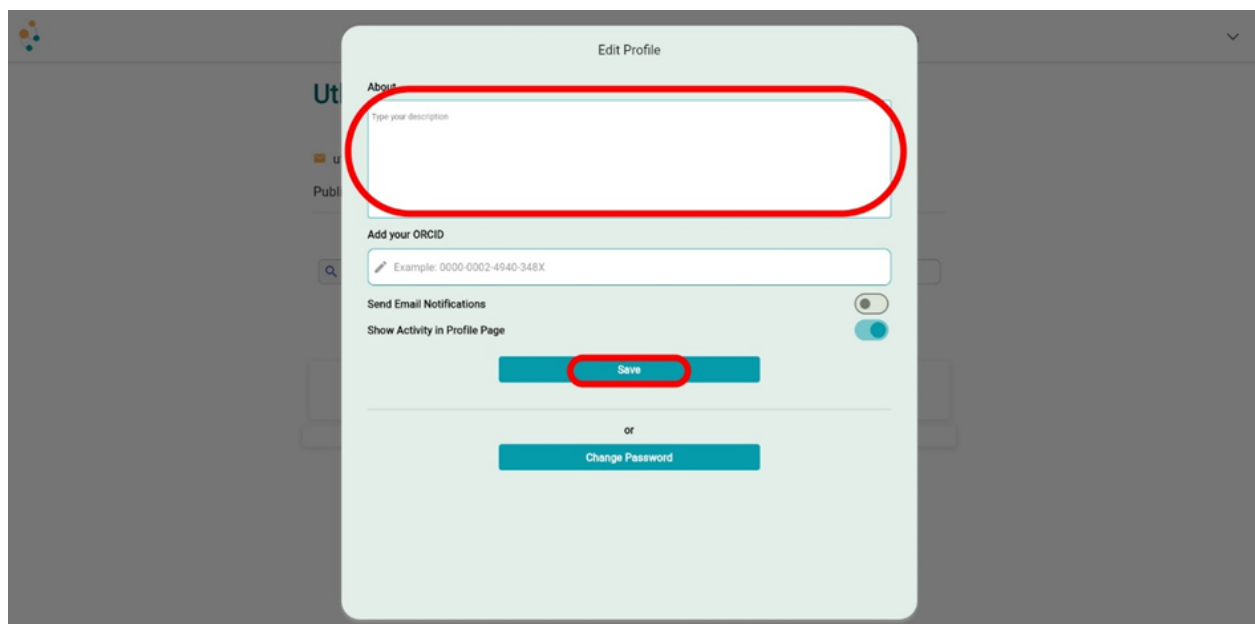
Profile Options

Bio

1. To add or update your bio, begin by navigating to your profile page. Once on your profile page, you will find an 'Edit Profile' button located below the semantic tag, please click it.

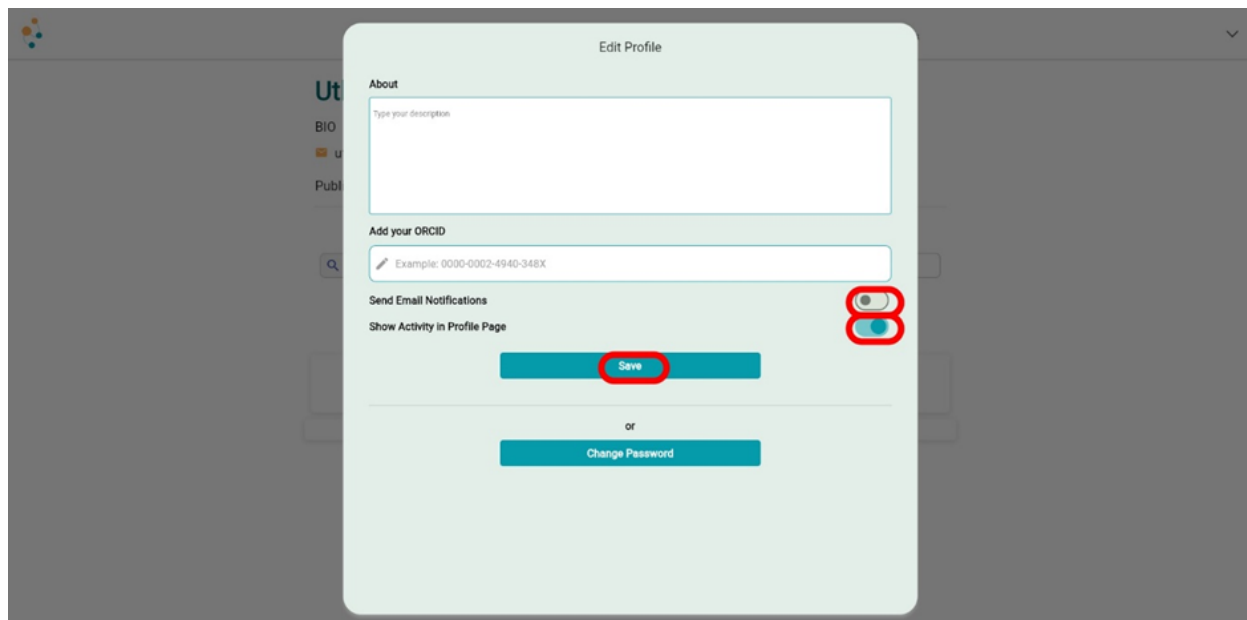


2. To ensure the profile options function correctly without any bugs, it is necessary to fill out the entire form, even if you only wish to change one aspect. To update your bio, enter your desired text in the 'About' section.



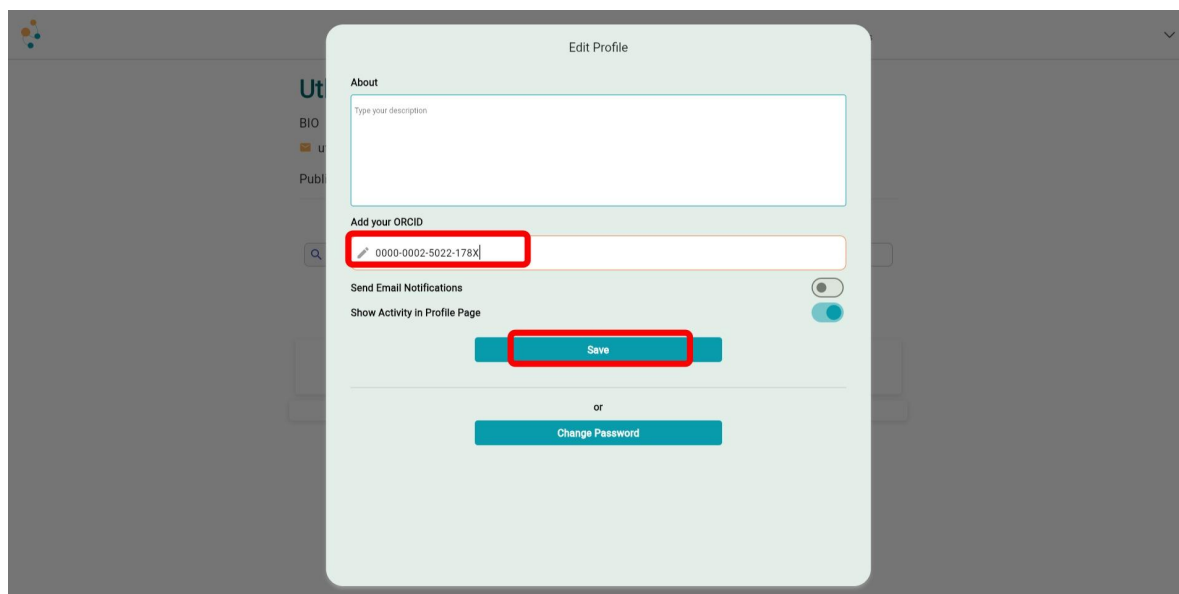
Change Email/Activity Preferences

Within the same popup window, you have the option to modify your email or activity preferences. This includes toggling whether you wish to receive email notifications and choosing whether to display your activity on your profile.



How to add ORCID and become contributor

Within the same popup window where you edit your profile, you also have the option to add your ORCID (Open Researcher and Contributor ID). Adding your ORCID is an important step to become a contributor and collaborate on workspace pages. Please note that after adding your ORCID, you will need to log out and then log in again for these changes to take effect and to gain full access to the workspace functionalities.

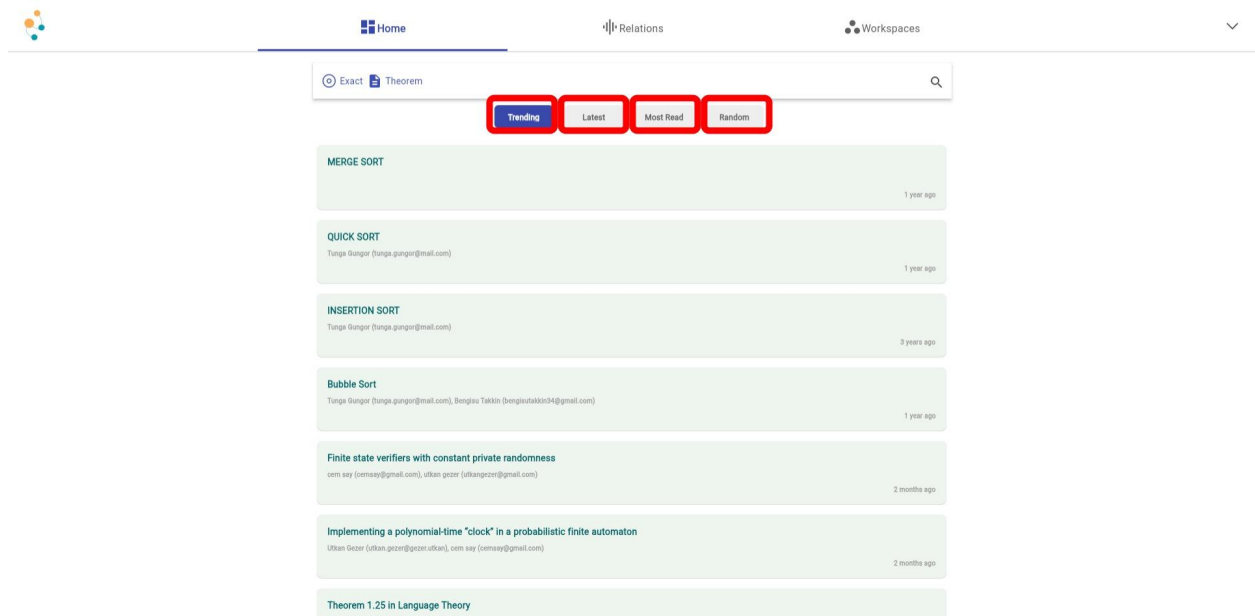


Home Page

Explore

On our platform's homepage, you can explore existing nodes using a variety of sorting mechanisms. These include options like *'Trending'*, *'Latest'*, *'Most Read'*, and *'Random'*.

- **Trending** displays nodes that have received the most clicks recently.
- **Latest** displays nodes sorted by their creation date.
- **Most Read** shows nodes sorted by the number of times they've been read/clicked.
- **Random** presents nodes in a random order, offering a diverse browsing experience.



Search

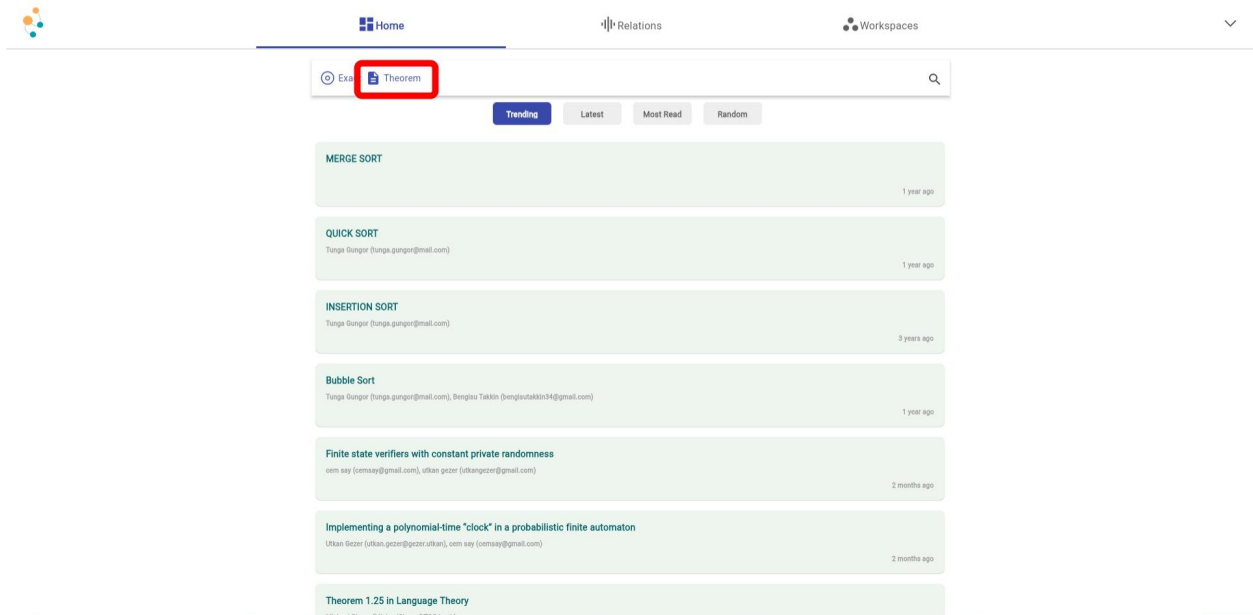
On our platform's homepage, you can search for existing nodes using a variety of filtering mechanisms. This includes two main types of searches: *'Exact'* and *'Semantic'*.

Exact Search Types

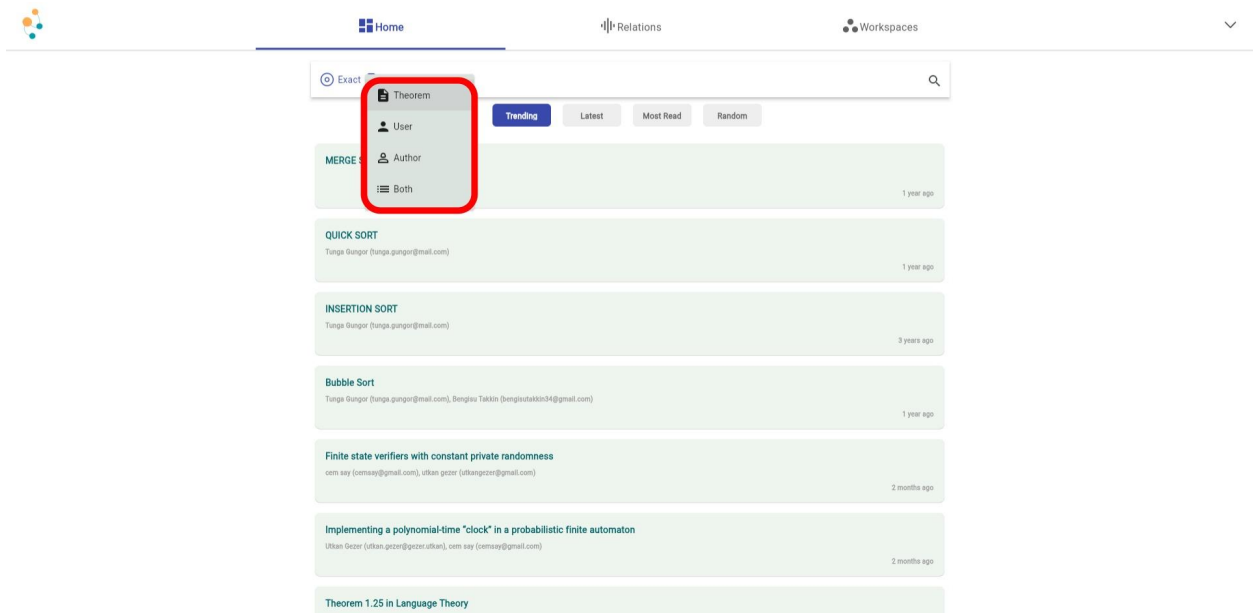
Exact search feature on our platform allows you to perform four distinct types of searches using the following options: *'Theorem'*, *'User'*, *'Author'*, and *'Both'*.

- **Theorem** option: This allows you to search for nodes that contain the specified keyword.
- **User** option: Use this to search for profiles associated with the given keyword.
- **Author** option: This enables you to find nodes written by an author whose name matches the provided keyword.
- **Both** option: This comprehensive search looks for both profiles and nodes authored by individuals matching the given keyword.

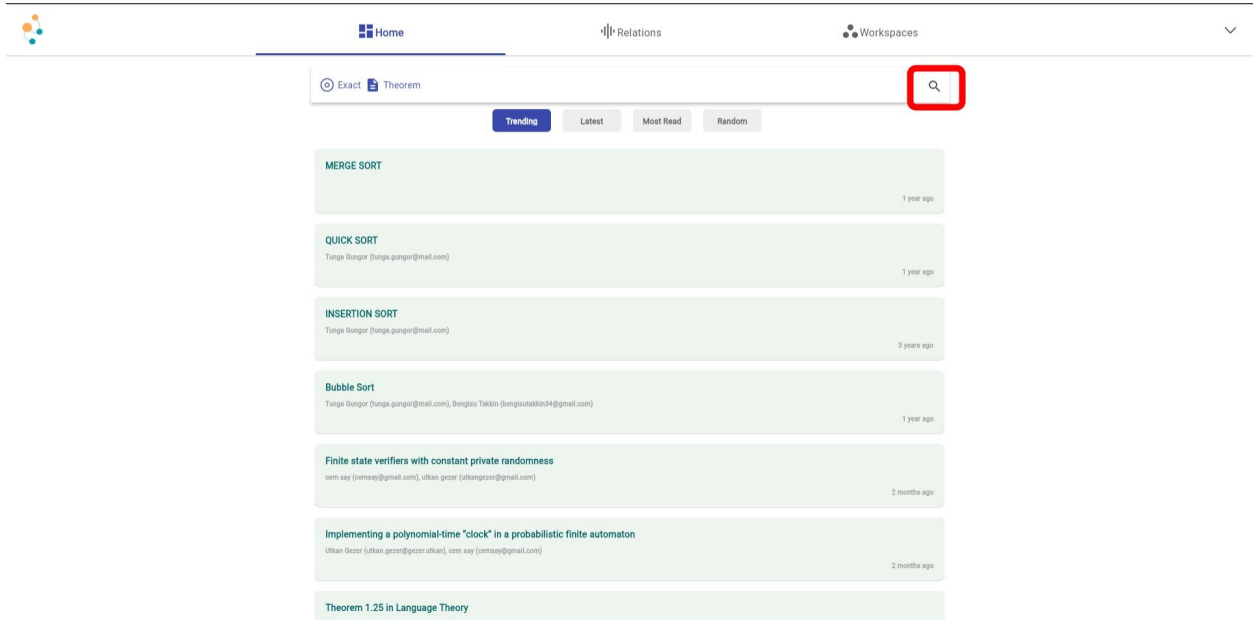
1. While the main search option is set to **Exact**, you can select the secondary search option by clicking next to Exact, Theorem in this case.



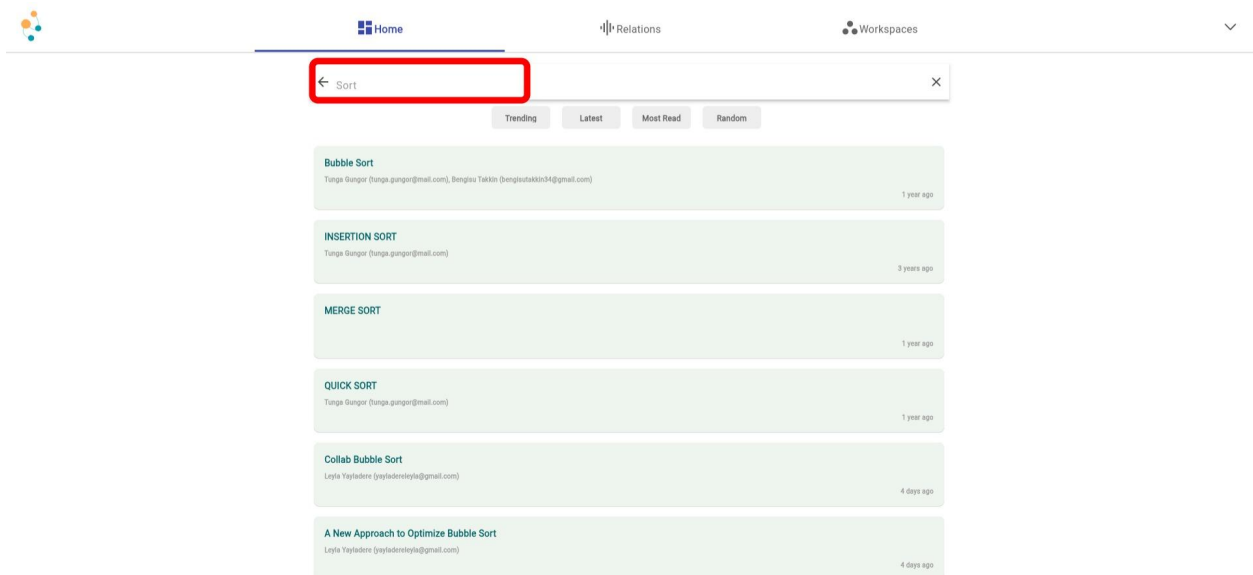
2. Upon clicking, a dropdown menu with four options will appear. From the dropdown menu, select the type of search you wish to conduct.



3. Click on the search icon located at the far right of the search bar.

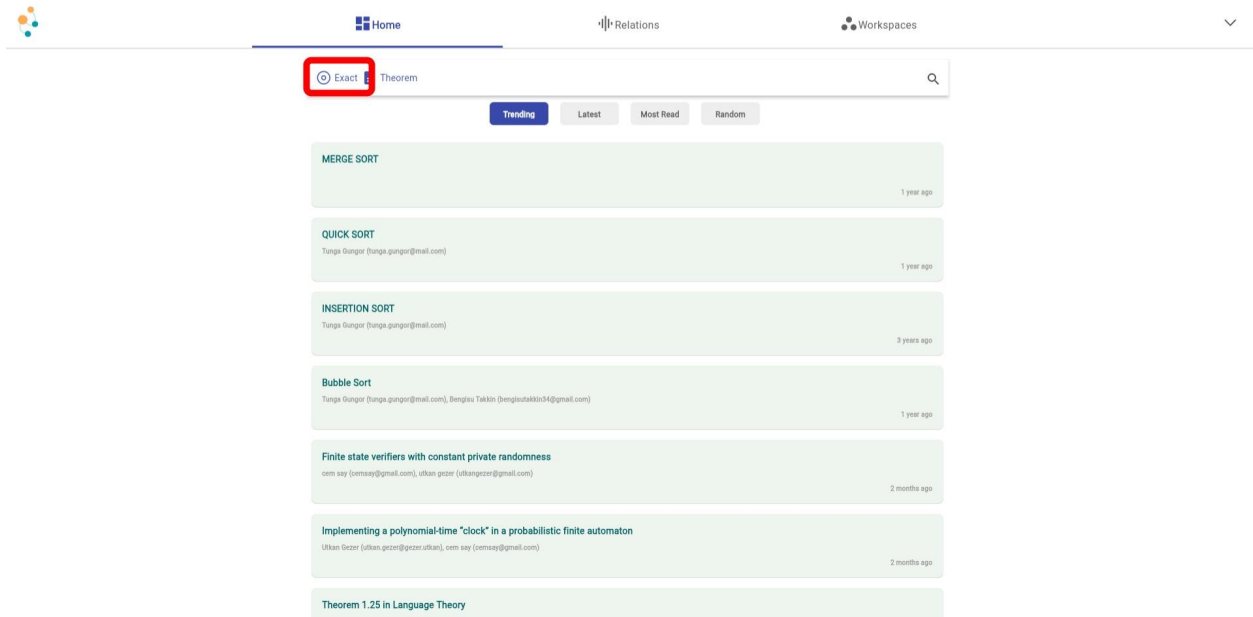


4. This action will open a search bar for entering your keyword. If you need to return to the search options, click the '←' (back) icon. Enter your keyword into the search bar and press 'Enter' to initiate the search. Resulting nodes or profiles will appear on the page just below the search bar.

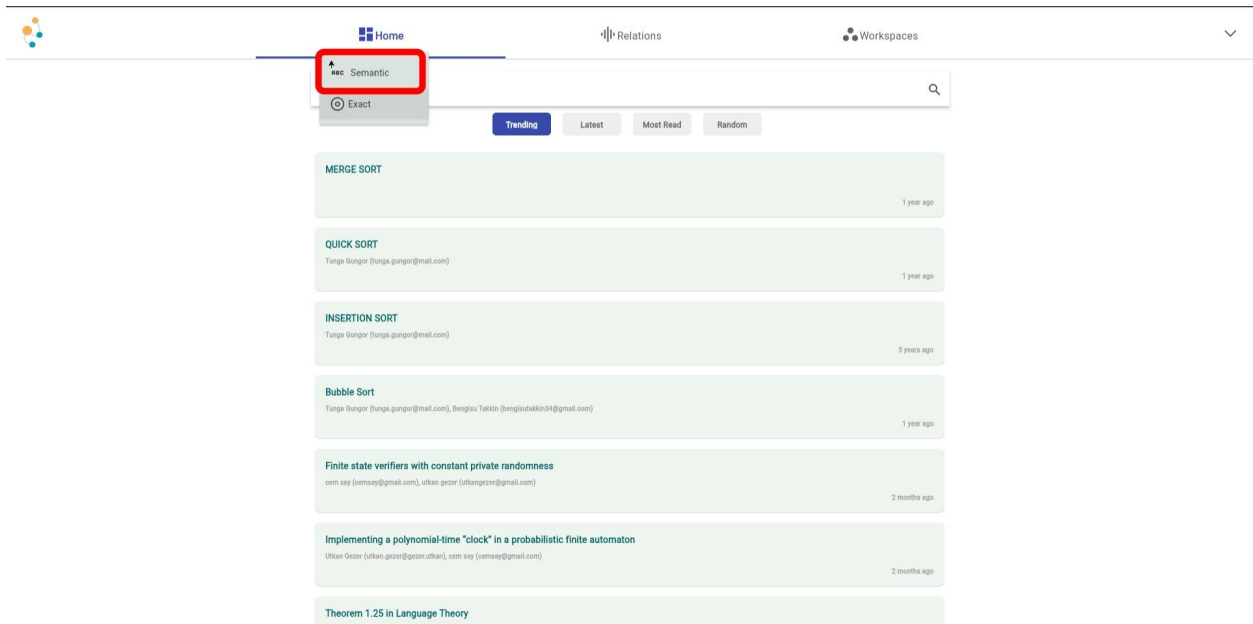


Semantic Search

1. To change the main search option to 'Semantic', click on 'Exact' in the search bar.

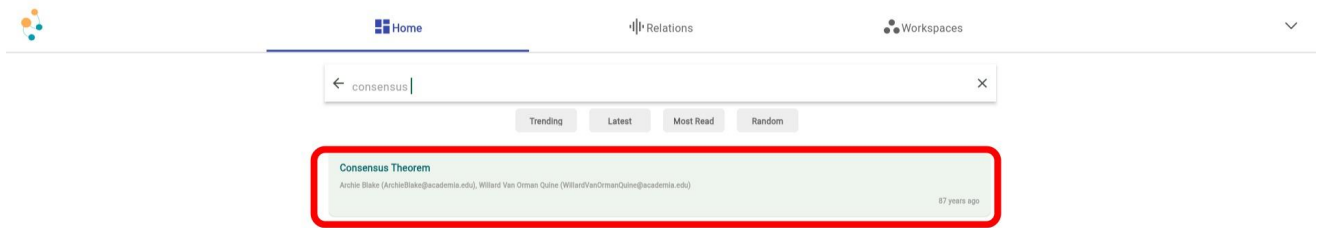


2. This will trigger a dropdown menu with two options: 'Exact' and 'Semantic'. From this dropdown menu, select 'Semantic'. This changes the search mechanism to Semantic mode, which operates similarly to the Exact search but without the need for a secondary search option. Enter your search query in the search bar. As you type, a dropdown will appear below the search bar, displaying semantic tags related to your query. Click on the semantic tag that aligns with what you are searching for. Once selected, nodes related to that semantic tag will be displayed on the page, just below the search bar.

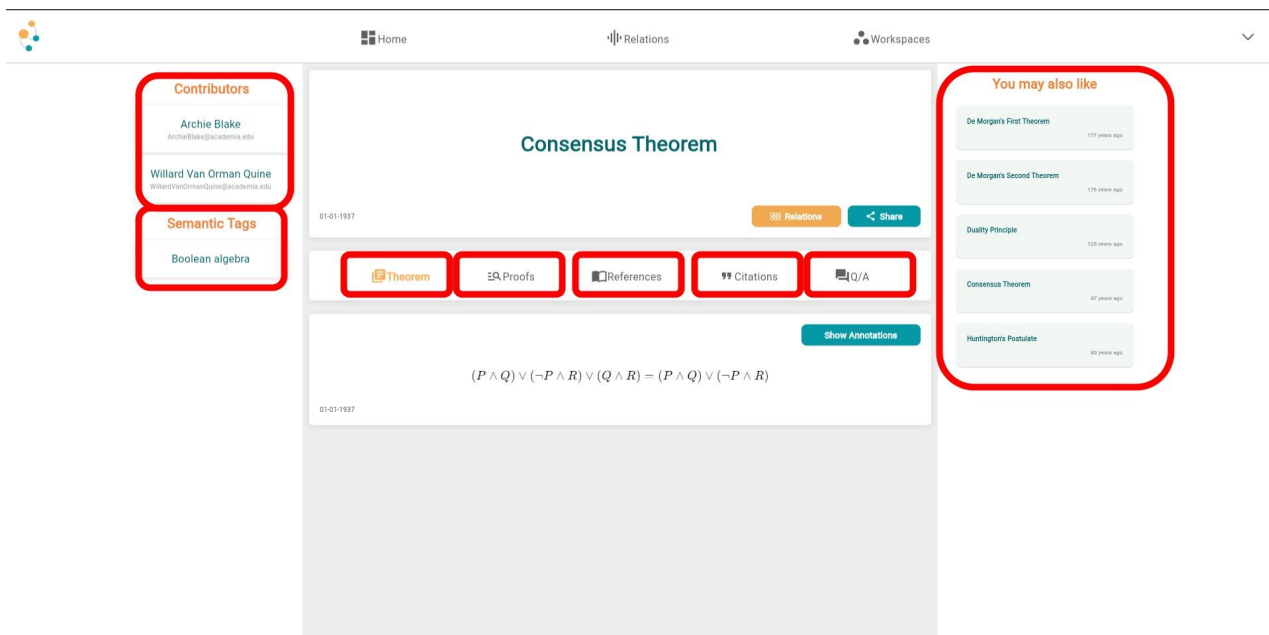


Node Page

1. If you have a specific node in mind, utilize the search feature to find it quickly. If you don't have a particular node in mind, take advantage of the explore feature. To navigate to a specific node page, click on the node's green card displayed on the homepage.

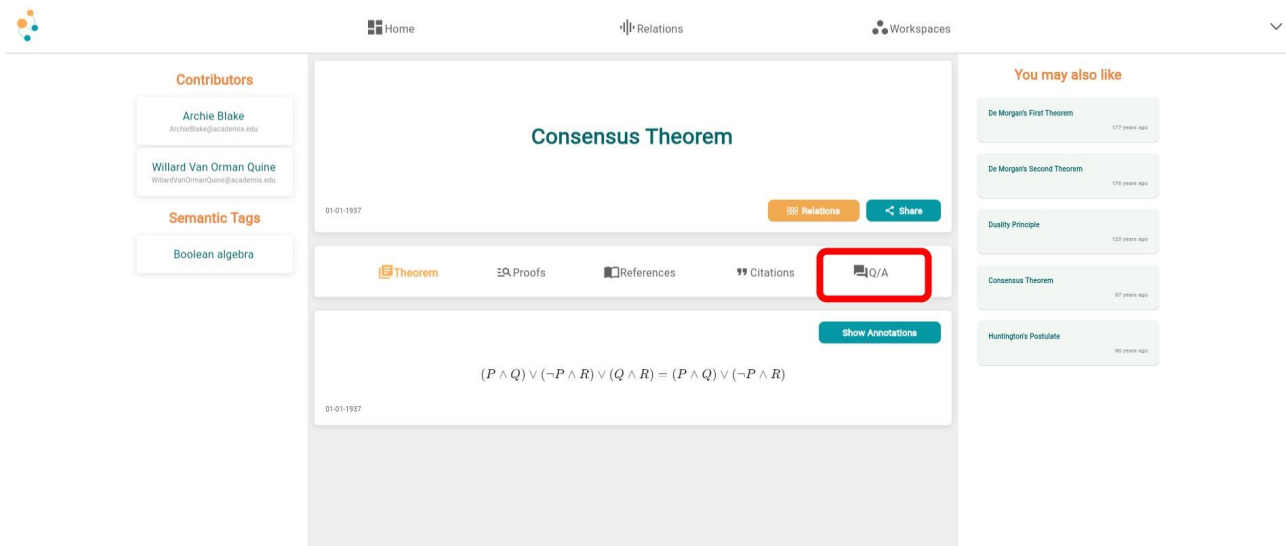


2. On the node page, you will find detailed information about the node, including its **contributors**, **semantic tags**, **theorems**, **proofs**, **references**, **citations**, and a **question&answer** section. To delve deeper into the node's content, navigate through the tabs for theorems, proofs, references, citations, and the question-and-answer section. Clicking on a contributor's card located at top left of the page will take you to their profile page. Additionally, you have the option to **share** the node's link via email on the website, and also through WhatsApp and other social media platforms on mobile devices. **'You May Also Like'** section, located to the right of the page, showcases other nodes related to the current one based on semantic tags. This feature is designed to enhance your transition and exploration within the platform by suggesting relevant content.



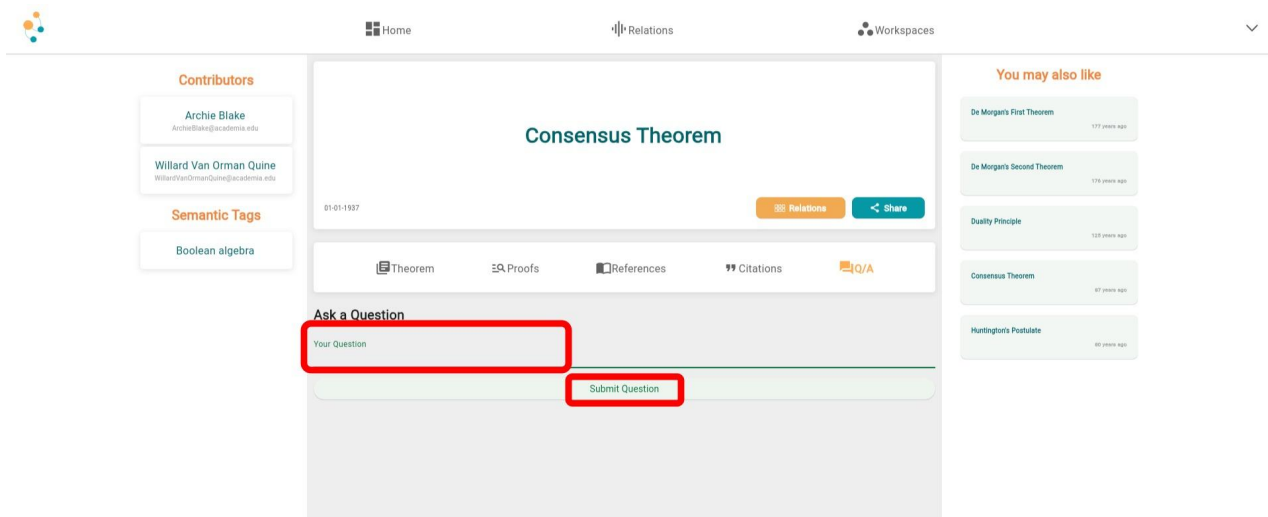
Ask a Question

1. To ask a question regarding a specific node, click on the 'Q/A' tab associated with that node.



The screenshot shows the 'Consensus Theorem' node page. The page has a header with 'Home', 'Relations', and 'Workspaces' tabs. On the left, there are sections for 'Contributors' (Archie Blake, Willard Van Orman Quine) and 'Semantic Tags' (Boolean algebra). The main content area displays the theorem title, a date '01-01-1937', and navigation buttons for 'Theorem', 'Proofs', 'References', 'Citations', and 'Q/A'. The 'Q/A' button is highlighted with a red box. Below the navigation is the mathematical expression $(P \wedge Q) \vee (\neg P \wedge R) \vee (Q \wedge R) = (P \wedge Q) \vee (\neg P \wedge R)$ and a 'Show Annotations' button. On the right, there is a 'You may also like' section with several related theorems.

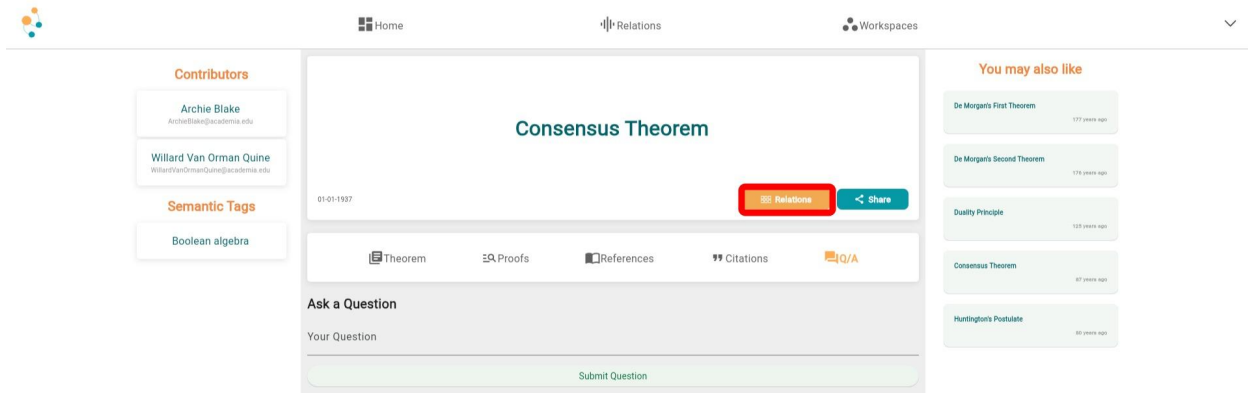
2. To submit a question, type it into the provided box. Once your question is ready, click 'Submit Question' to send it to the contributors of that node. If you have enabled email notifications in your profile settings, you will receive a notification when your question is answered. Please note that your question will not be visible on the node's Q&A section until it has been answered.



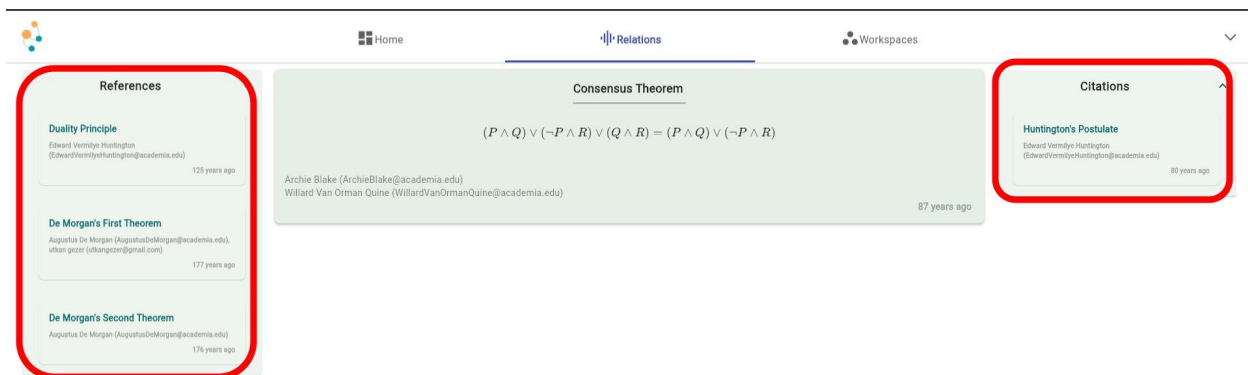
The screenshot shows the 'Consensus Theorem' node page with the 'Q/A' tab selected. The 'Ask a Question' form is highlighted with a red box. The form contains a text input field labeled 'Your Question' and a 'Submit Question' button. The rest of the page layout is identical to the previous screenshot.

Relations Page

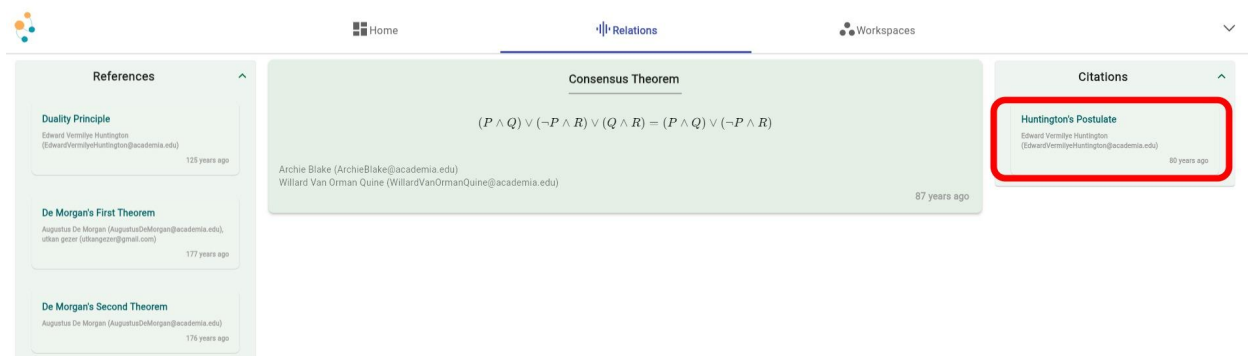
1. You can navigate to the relations page associated with a specific node by clicking the 'Relations' button located on that node's page. Additionally, you can directly access a random relations page by clicking the 'Relations' icon on the app bar.



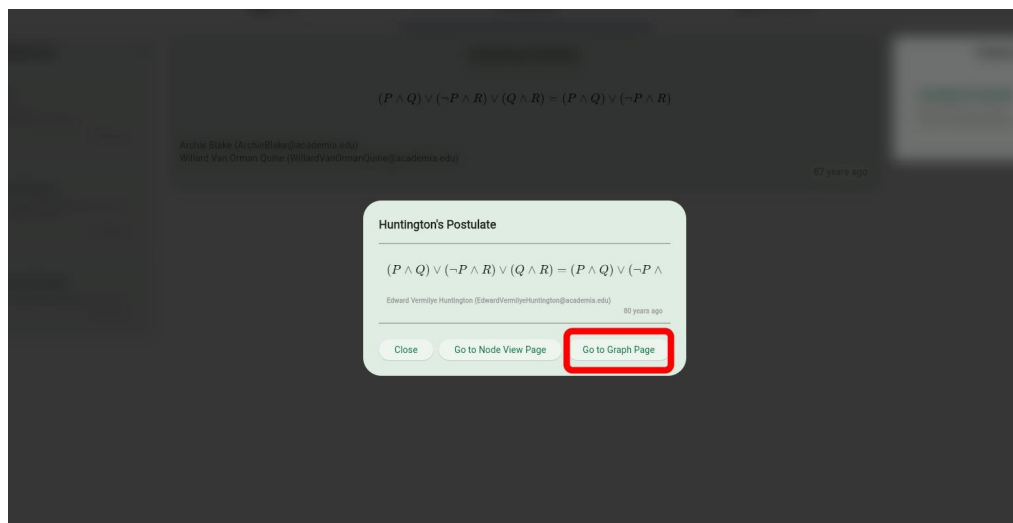
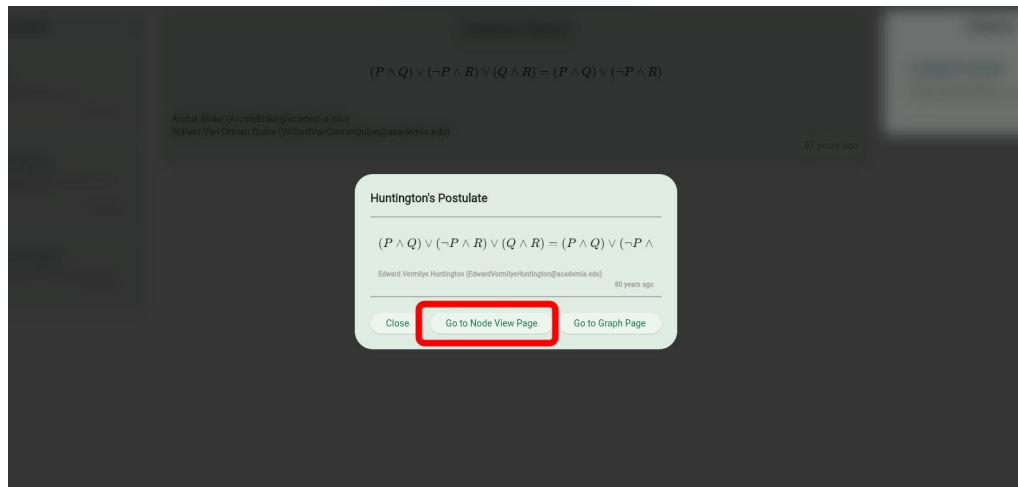
2. The Relations page is designed to make the connections between nodes (theorems) more visible and easier to track from a user's perspective. It offers a clear view of how different nodes (theorems) are interrelated. On this page, you will see the focused node — the main node you are interested in — at the center. Nodes that are cited by the main node will be displayed on the left side of the page. Nodes that cite the main node will be visible on the right.



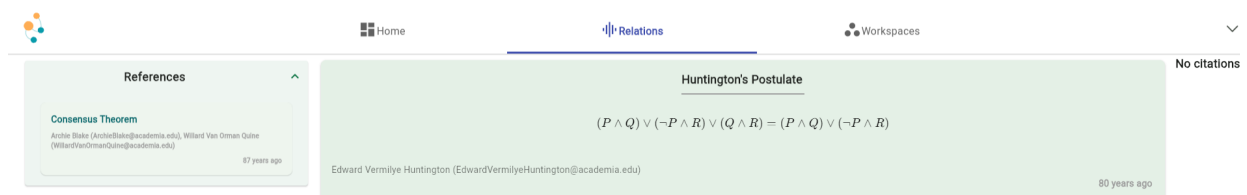
3. By clicking on any of the nodes listed in either the references or citations sections, you can access more details about the clicked node.



4. By clicking this node card, a pop-up window will appear where you can see theorem of that node and allows you to either navigate to its specific node page or to its relations (old name 'graph') page.



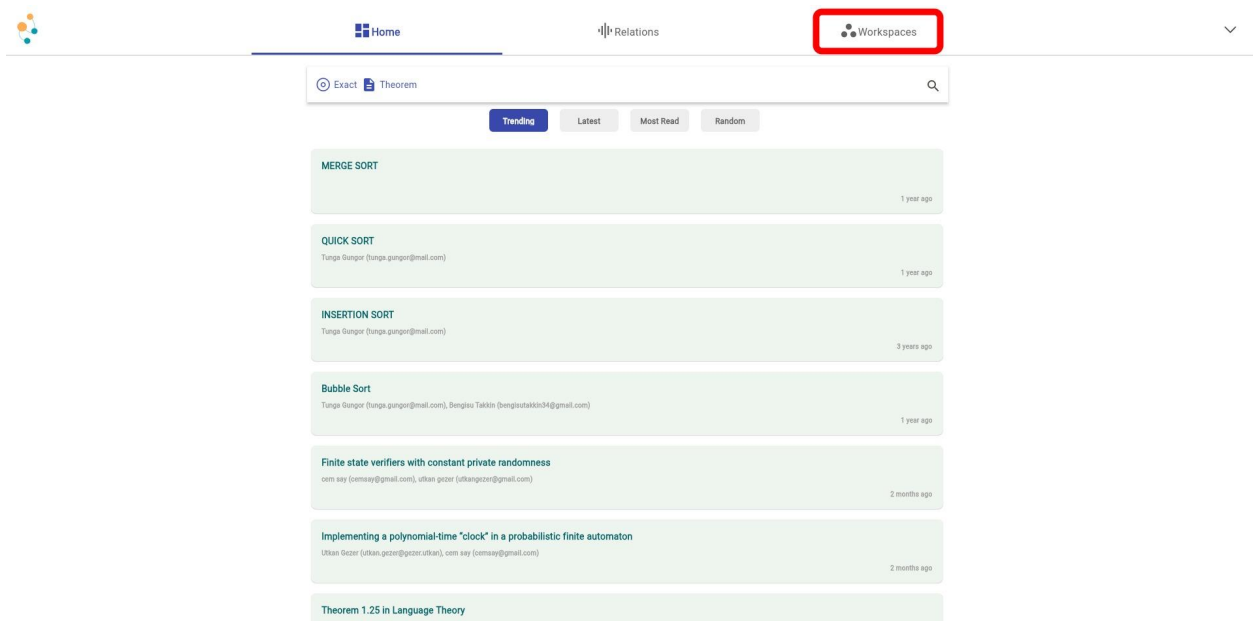
6. When you go to the relations page, the clicked node becomes the new 'focused node', creating a seamless transition experience as you explore the connections between different nodes.



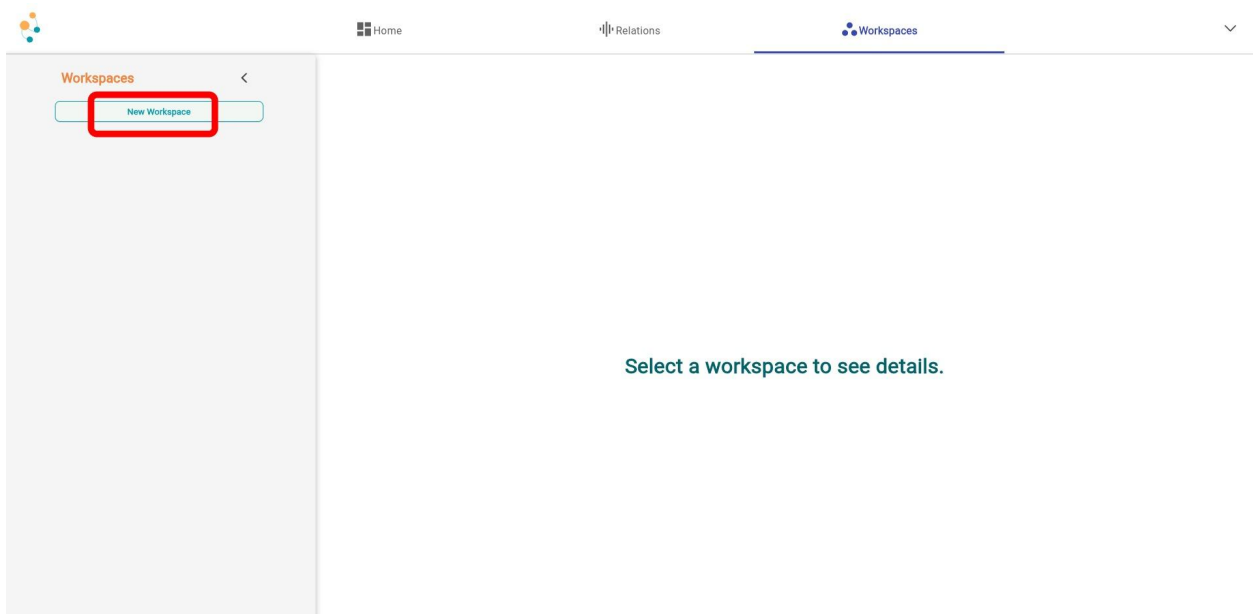
Workspaces Page

Create a Workspace

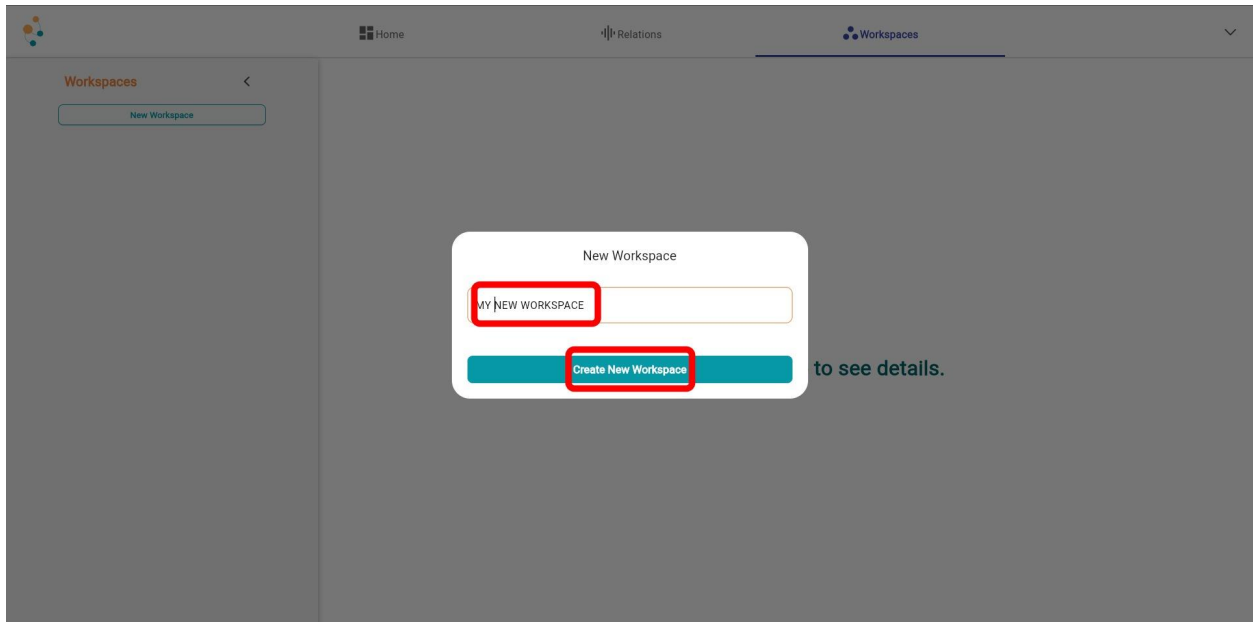
Workspaces are dedicated areas in the platform where contributors can work on nodes, collaborate, organize content, share information and review others. To create a workspace, navigate to the workspace page which is at the right of the top bar.



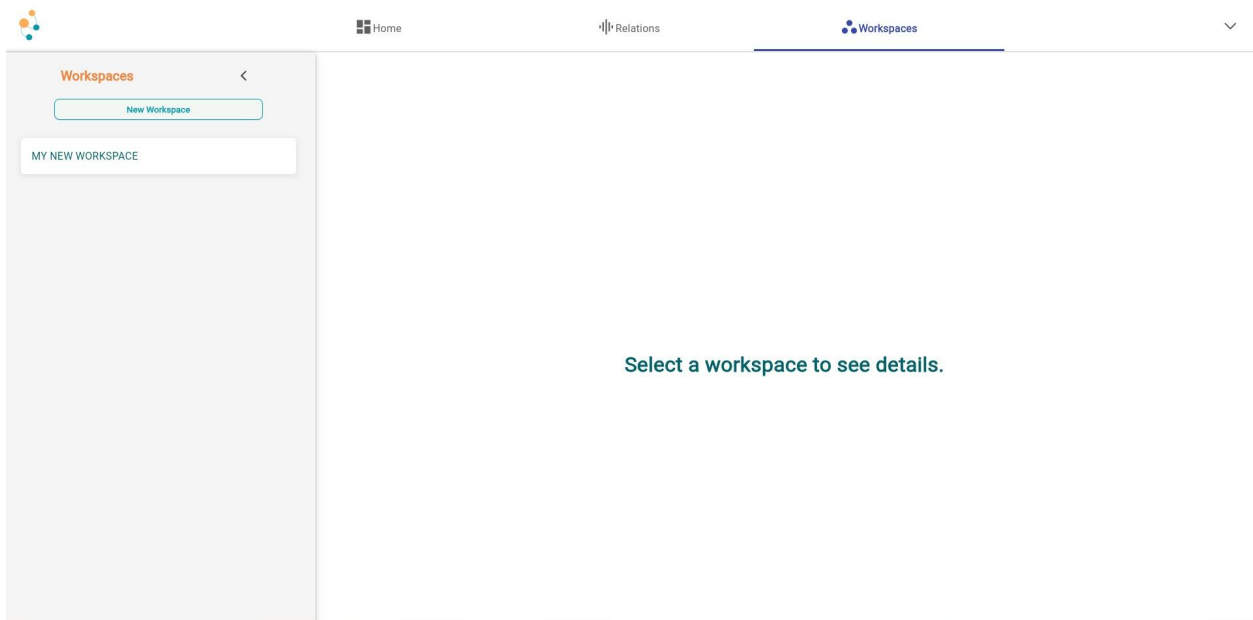
After reaching the workspace page, contributors would see current workspaces and new workspace button. To create a workspace, this button should be clicked.



Then fill in the name field and click to the “Create New Workspace” button.

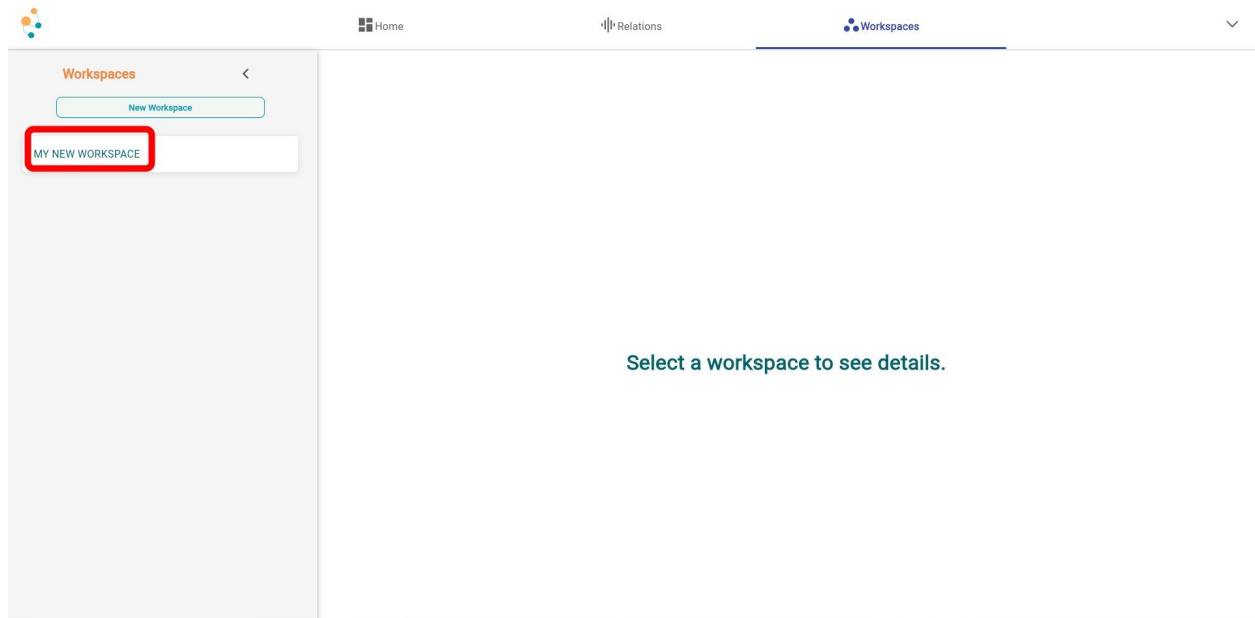


After following these steps new workspace would be available in the workspaces section.

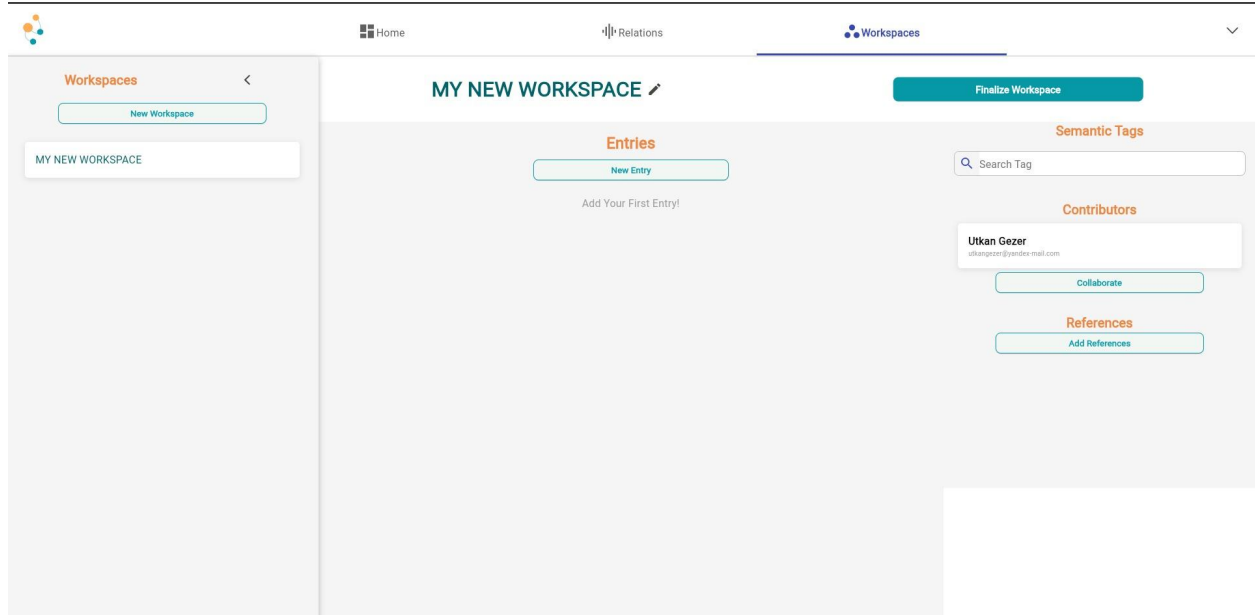


Accessing a Workspace

In order to access a specific workspace, contributors should click to the name of the workspace at the left menu of workspaces page.



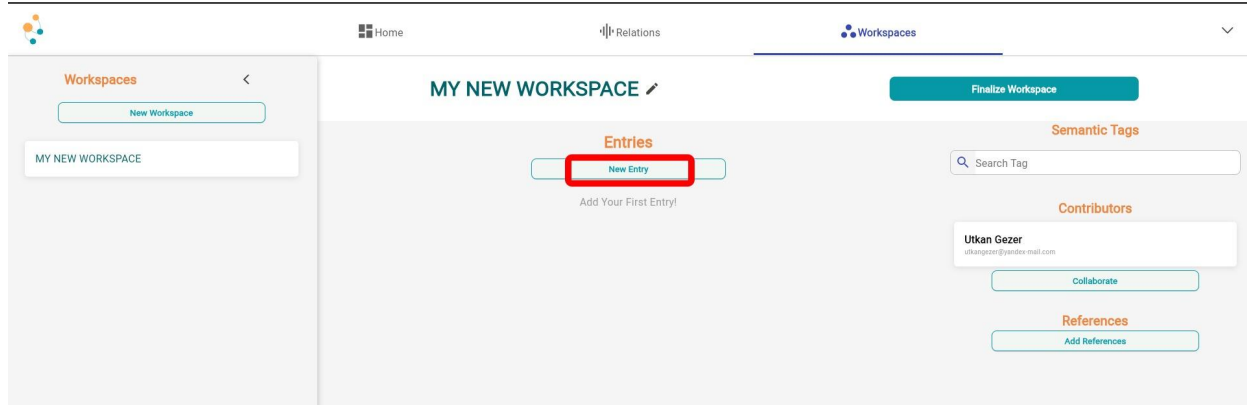
When a contributor clicks to the workspace, a detailed view of the workspace including its semantic tags, contributors, references and entries will be visible. Also there will be buttons like adding references or entries.



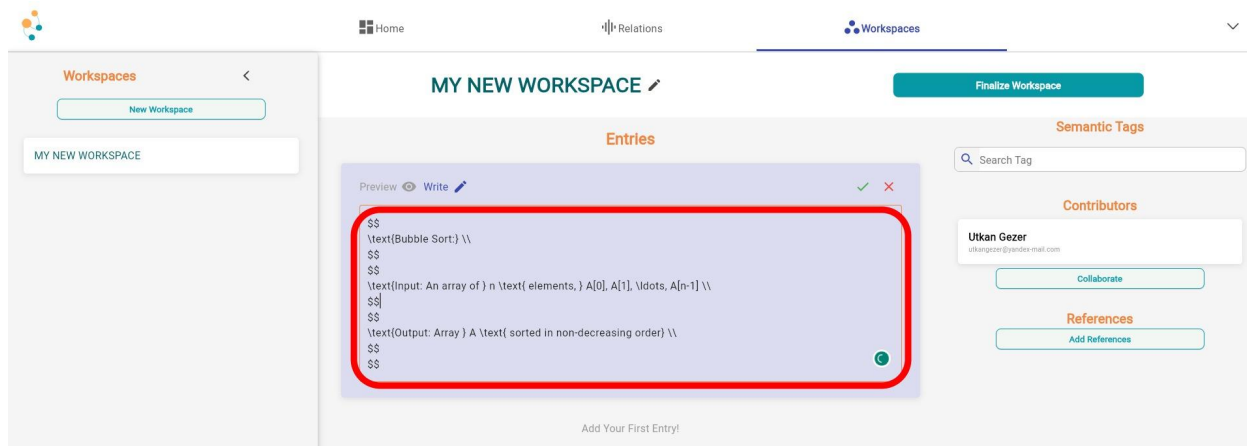
Entries in a Workspace

Adding an Entry

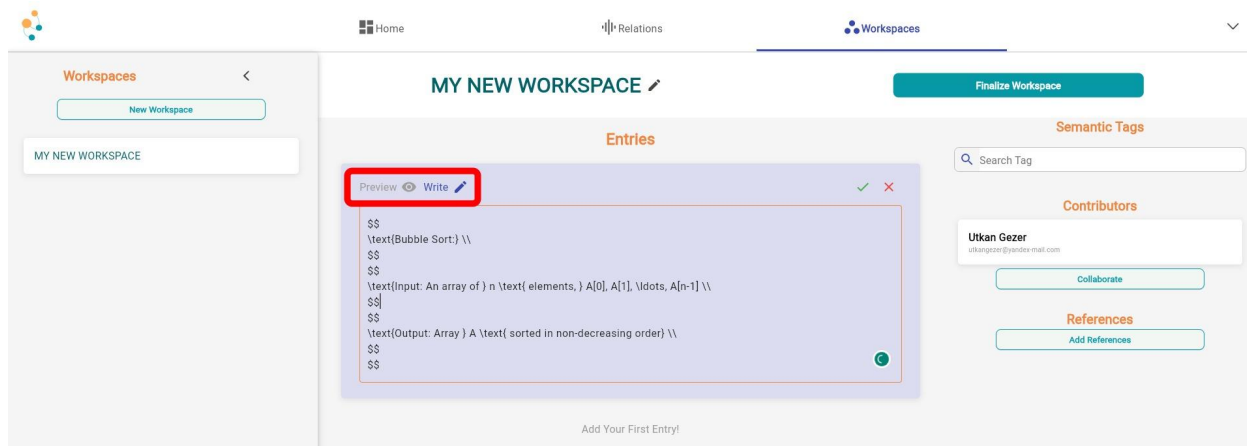
Entry is an editable text presenting a unit of work constructed within a workspace. Click on 'Add New Entry' in your workspace to add an entry in a workspace.

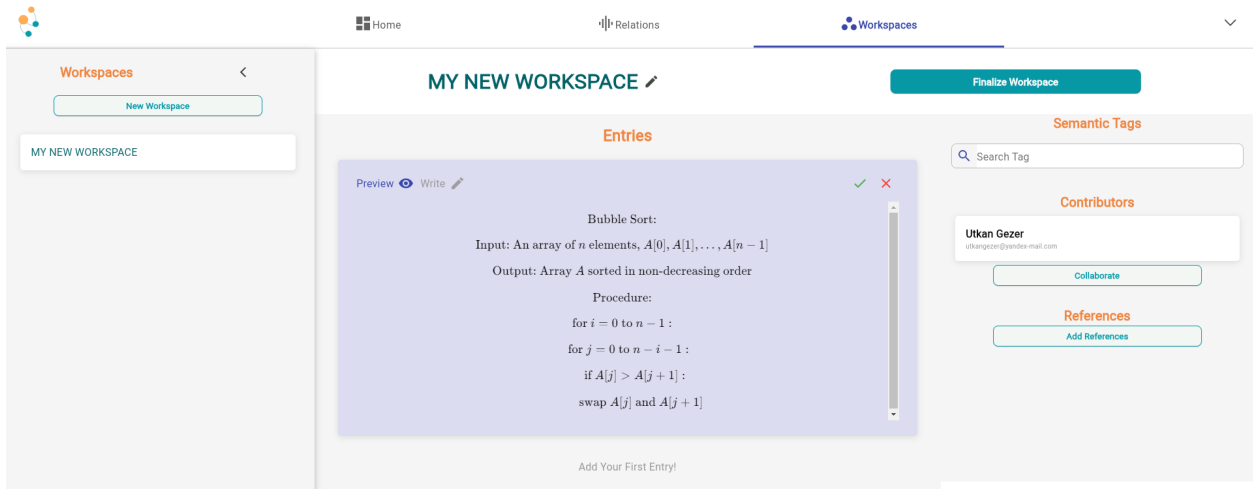


After clicking it, the writing page will be visible to the user. It has the capability of writing with LaTeX format or without it.

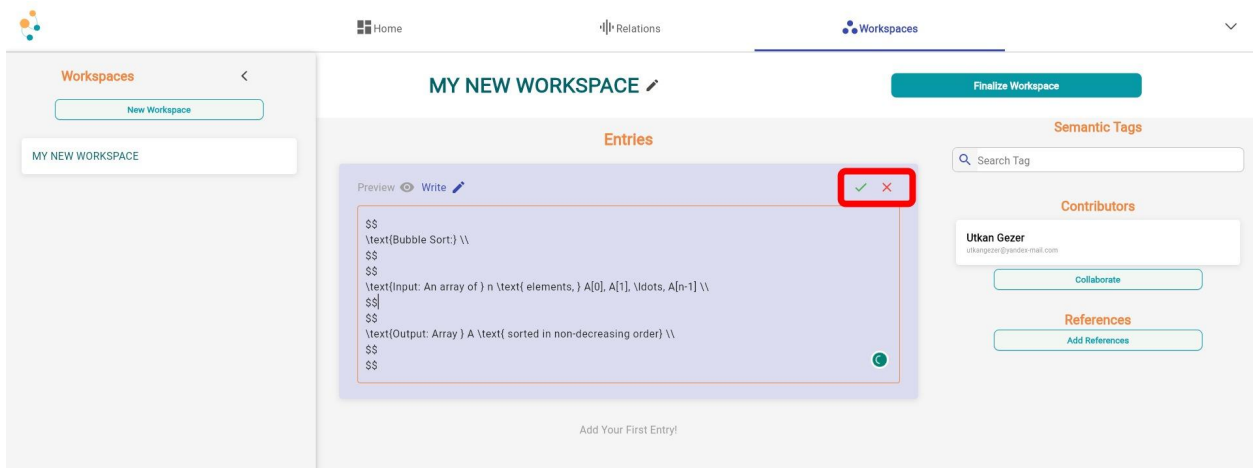


Also users will have a chance to view its work with the help of LaTeXifier at the preview tab.

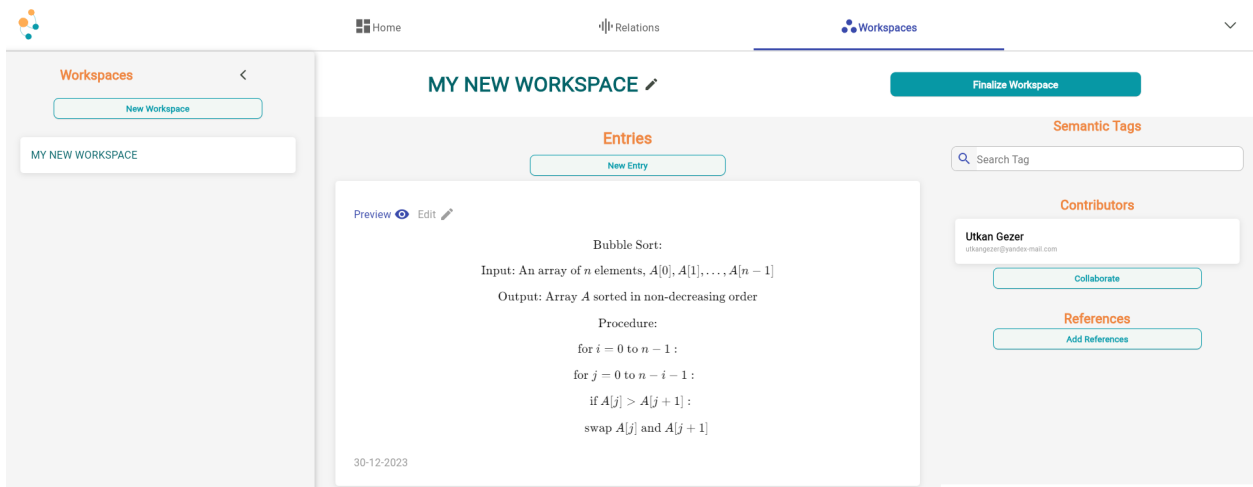




At the top right corner of the entry there are two buttons for publish entry or cancel it to publish.

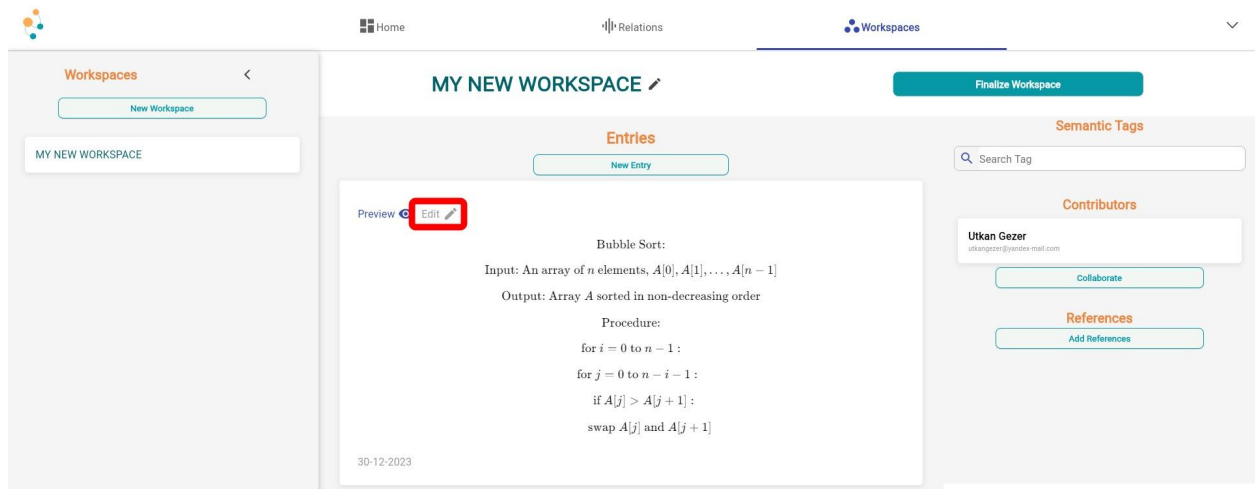


After clicking the approval button entry will be added to the workspace. It will be visible to all contributors of the workspace.

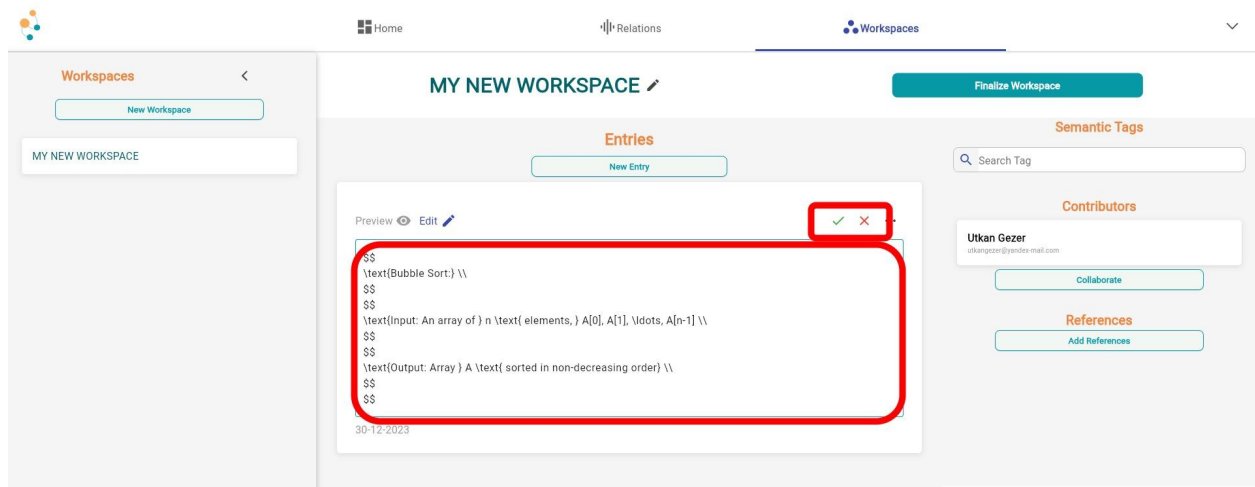


Editing an Entry

Editing an entry has similar steps to adding an entry. Navigate to the entry you wish to edit. Click on 'Edit' and make the necessary changes.

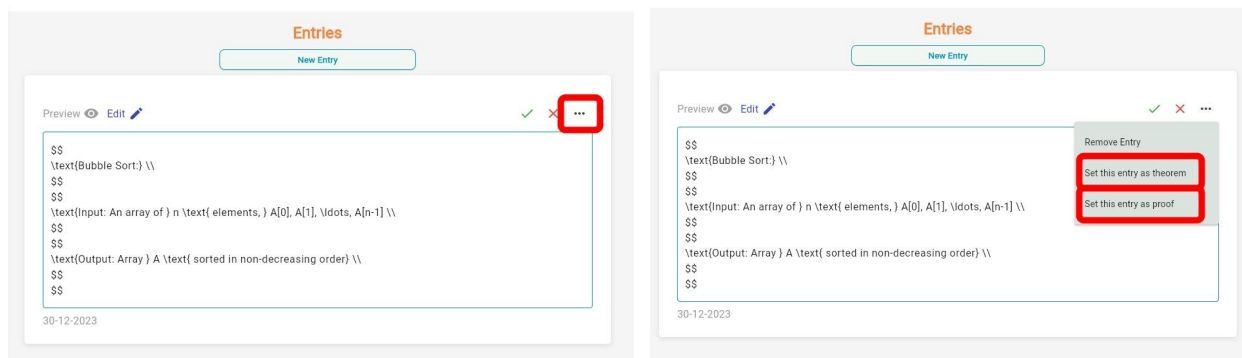


After clicking the approval button, the entry will be edited and visible to all contributors.



Setting an Entry as Theorem/Proof

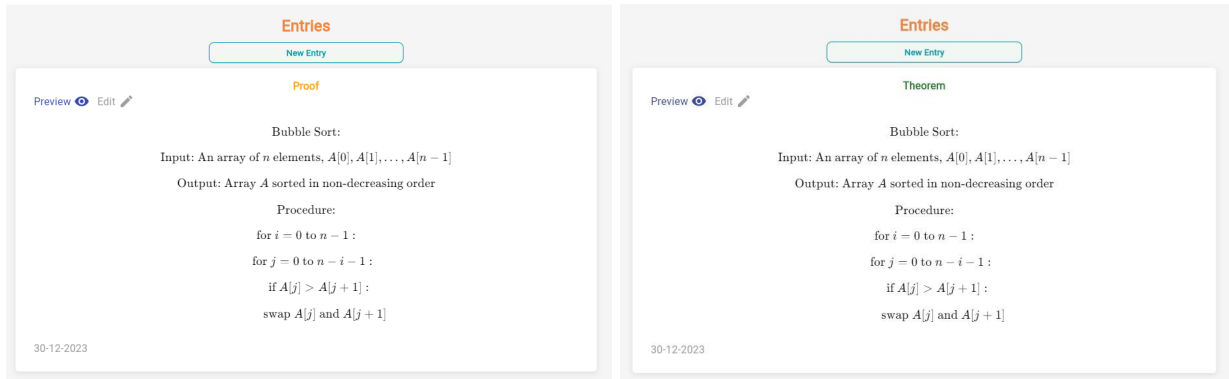
To mark an entry as a theorem or proof, click on the three-dot menu located in the upper right corner of the entry and make the necessary selection.



Once this selection is made, the chosen text becomes prominently displayed on the entry.

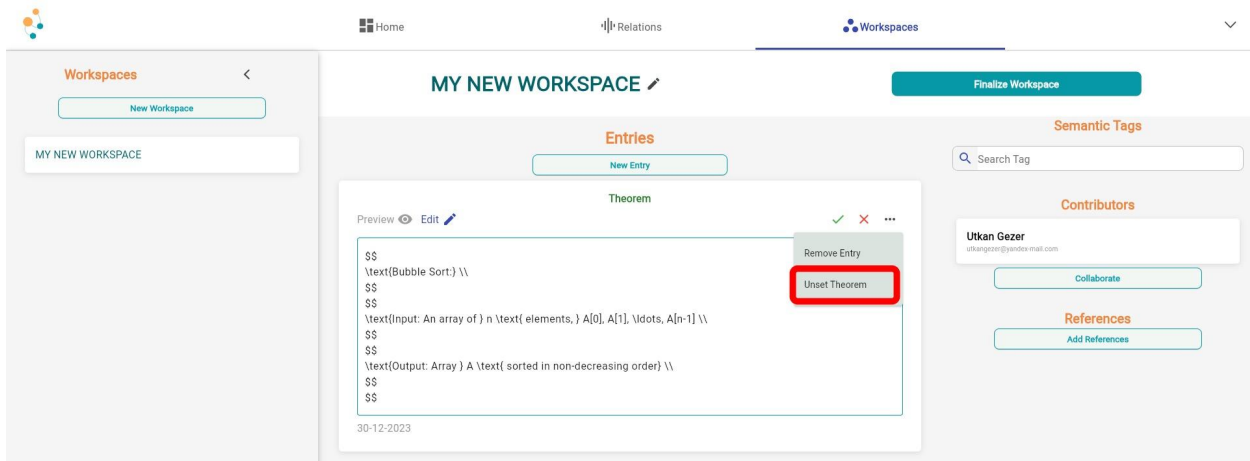
Proof:

Theorem:



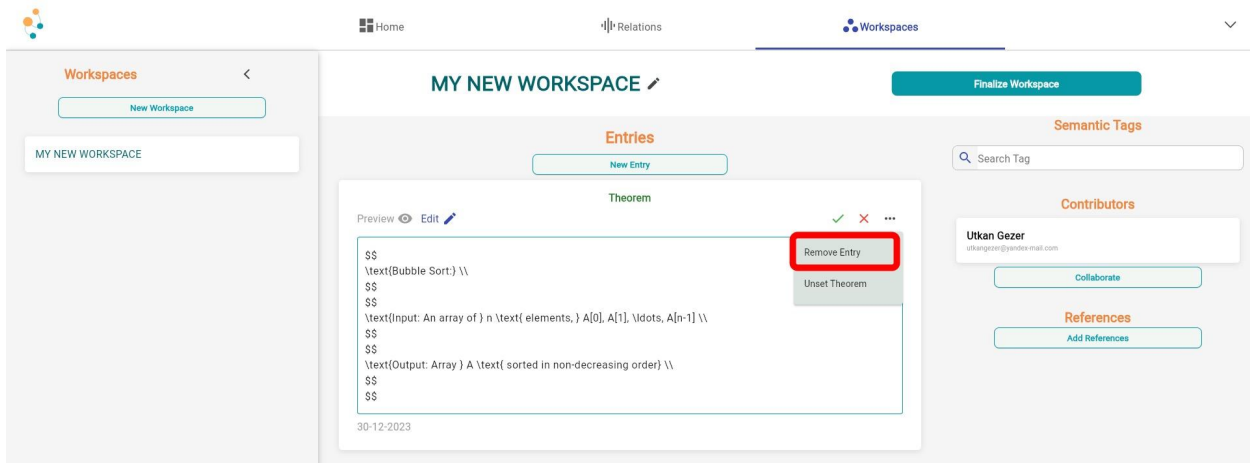
Unsetting a Proof/Theorem

To unset a theorem or proof, you need to go to the same three-dot menu in the upper right corner of the entry and select either "Unset Theorem" or "Unset Proof".



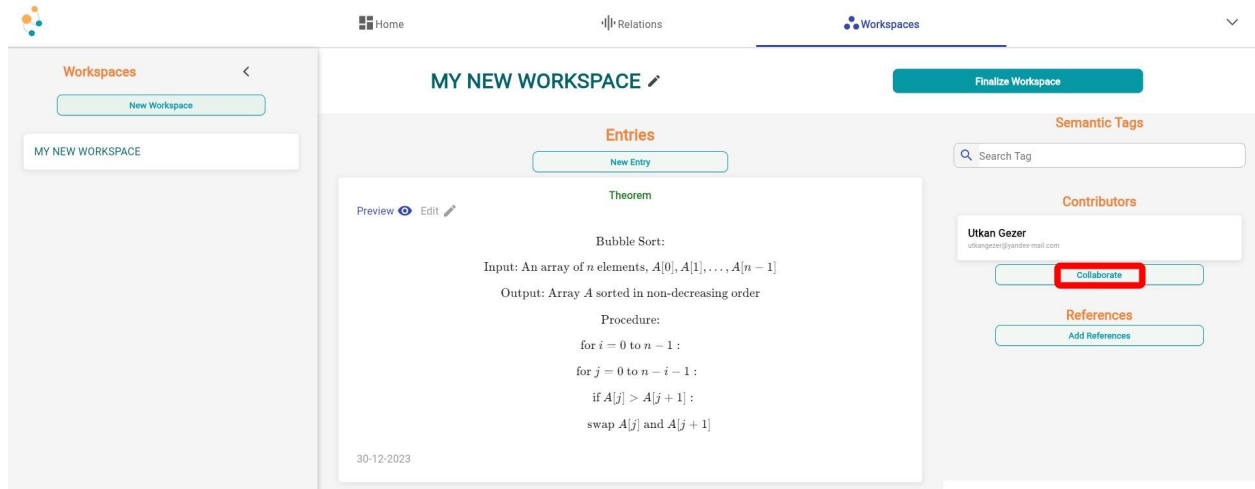
Removing an Entry

To remove an entry, you need to go to the same three-dot menu in the upper right corner of the entry and select "Remove Entry" option.

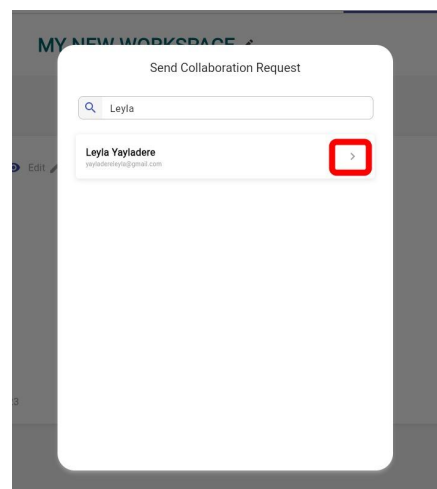
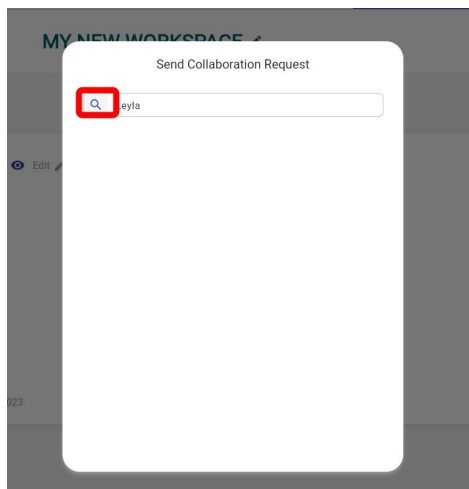
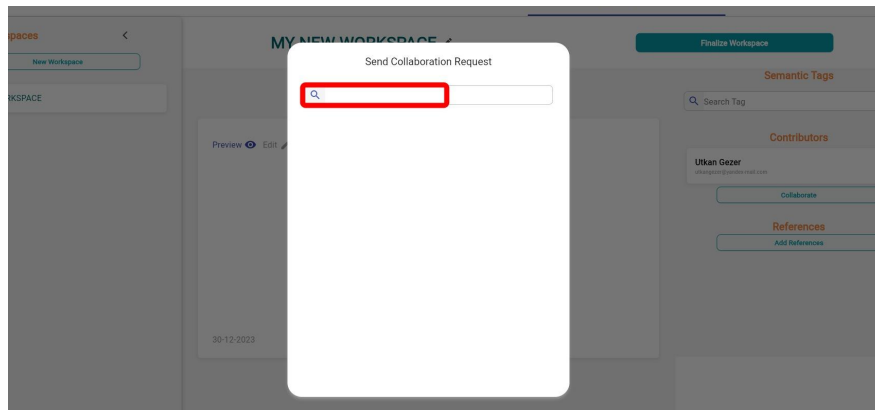


Sending a Collaboration Request

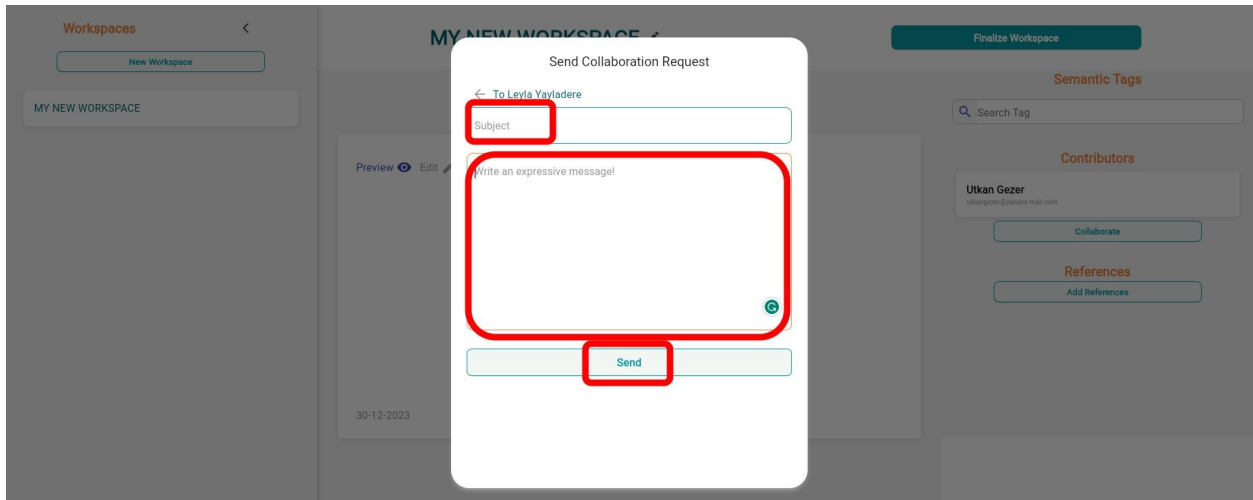
Collaboration request is a request which is sent to other contributors to make contributions to this workspace. To send it, inside the workspace, click the 'Collaborate' button on the sidebar.



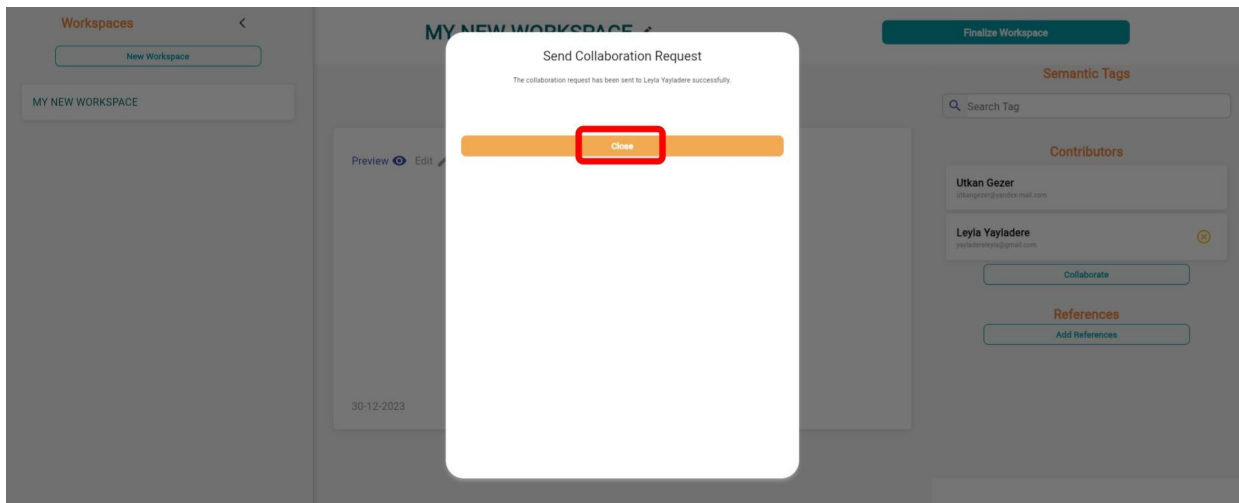
In the first dialog box, you'll need to enter the name of the contributor you want to collaborate with. When you click the search button, a list of potential collaborators will appear. Select the correct person from the list.



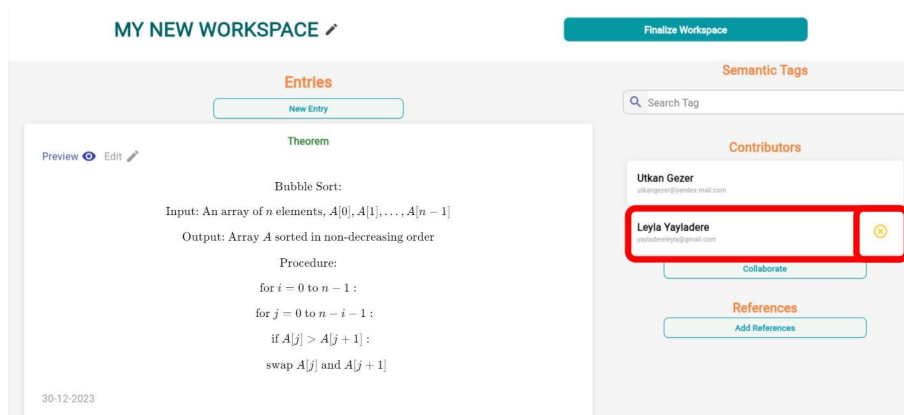
Once a contributor is selected, a new dialog box will appear where you can write a personalized message. Fill in the subject line and the message body with a reason for collaboration. After composing your message, click the 'Send' button to send your collaboration request to the chosen contributor.



Once the request is sent, a confirmation dialog box will appear, indicating that the collaboration request has been successfully sent. You can then close this dialog box.

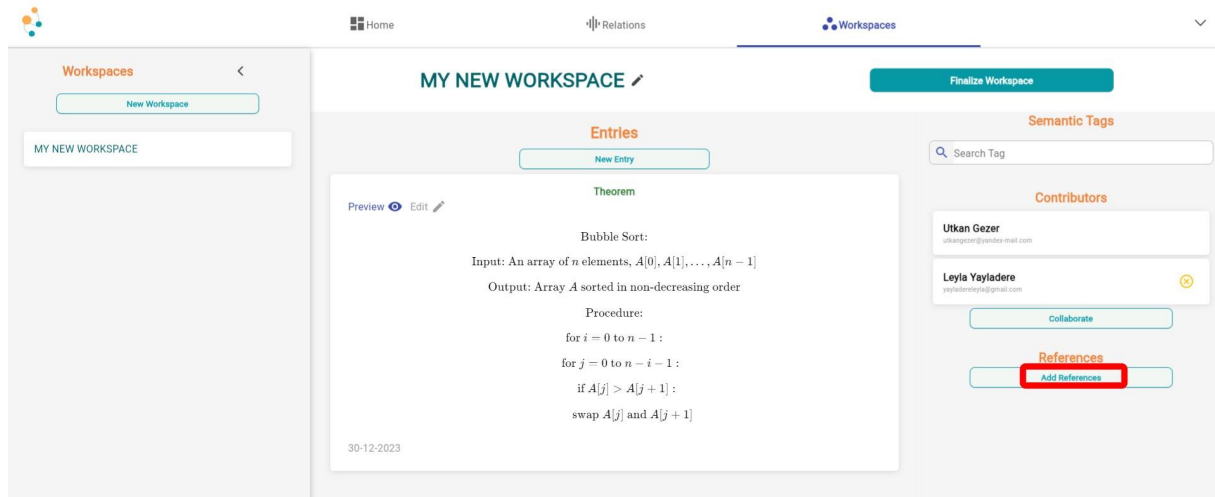


After the confirmation, collaboration requests will be available in the contributors tab as pending.

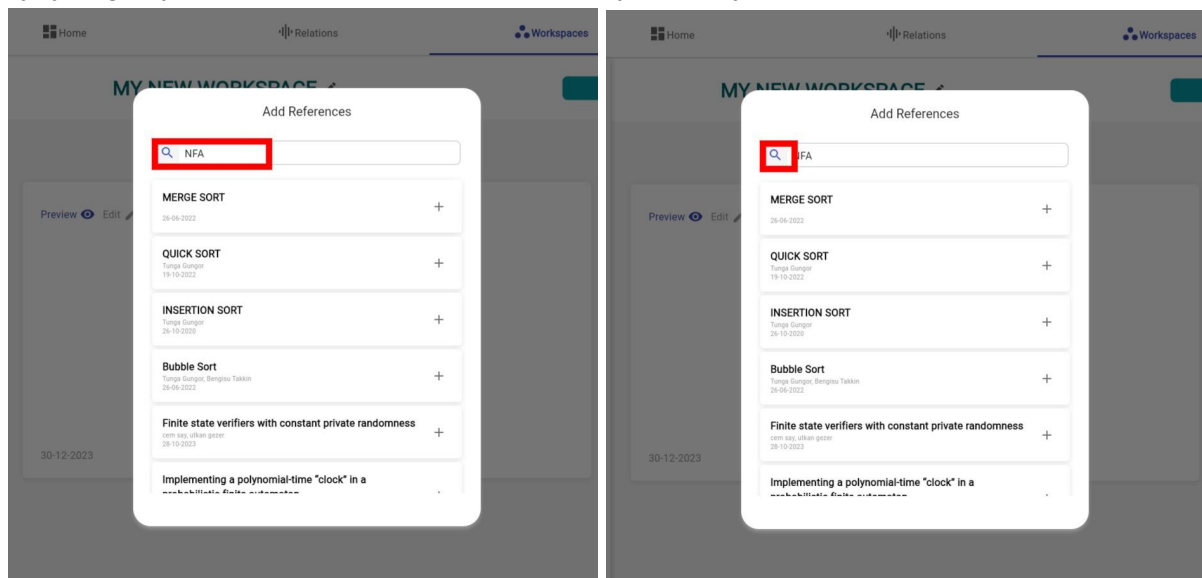


Add References

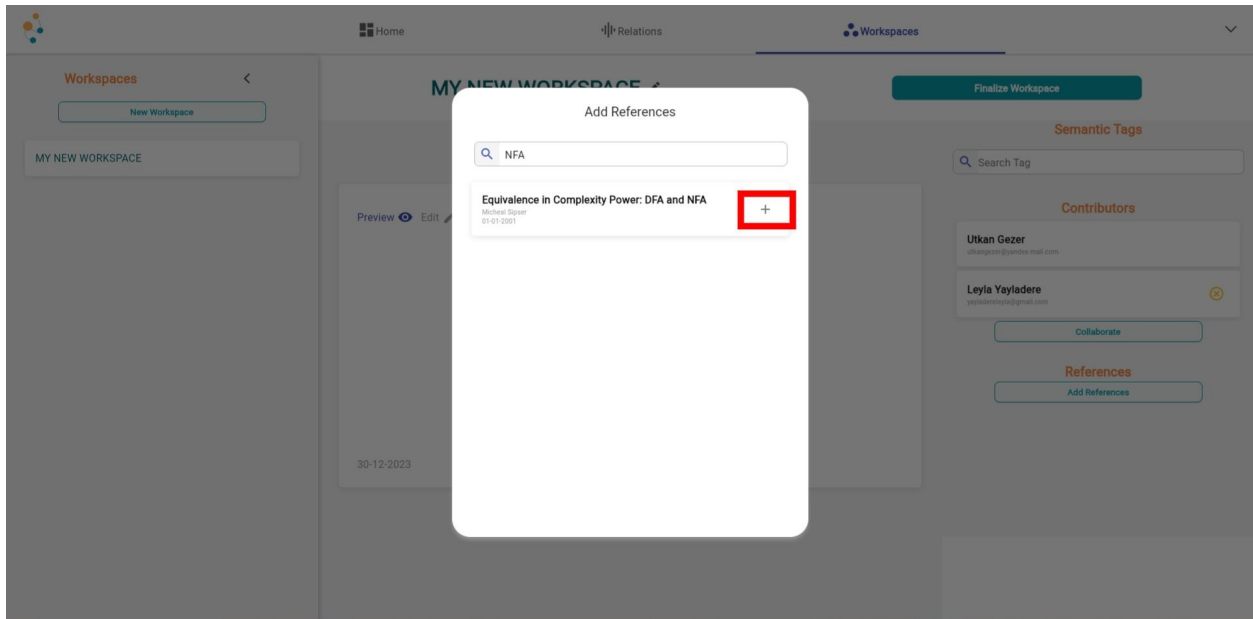
Click on the 'Add References' button found within the workspace interface, located at the bottom of the right panel.



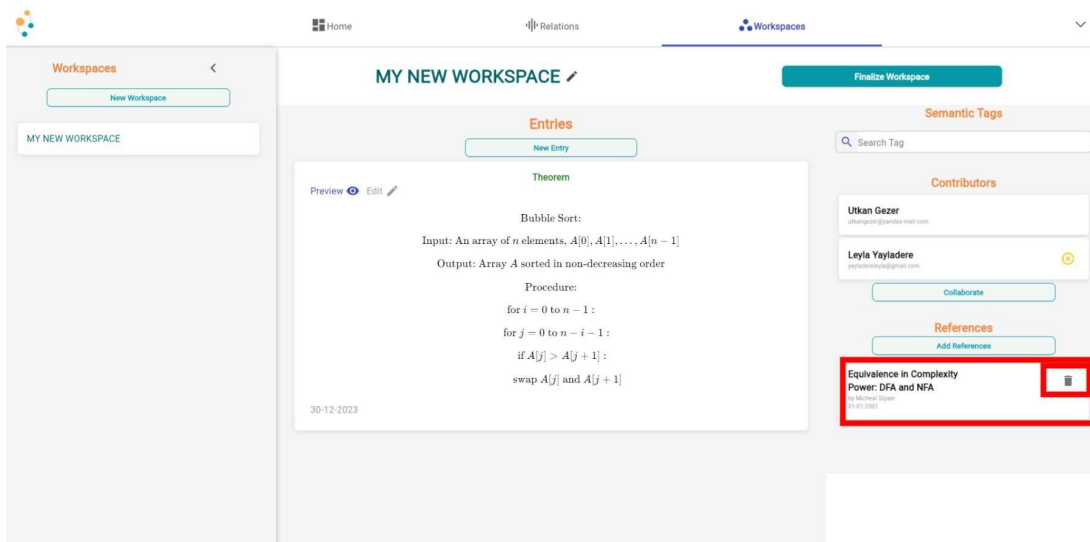
In the 'Add References' dialog box that appears, use the search bar to find relevant references by typing keywords, titles, or authors related to your entry.



From the search results, choose the appropriate references by clicking the plus icon or 'Add' button next to each reference you want to link to your entry.

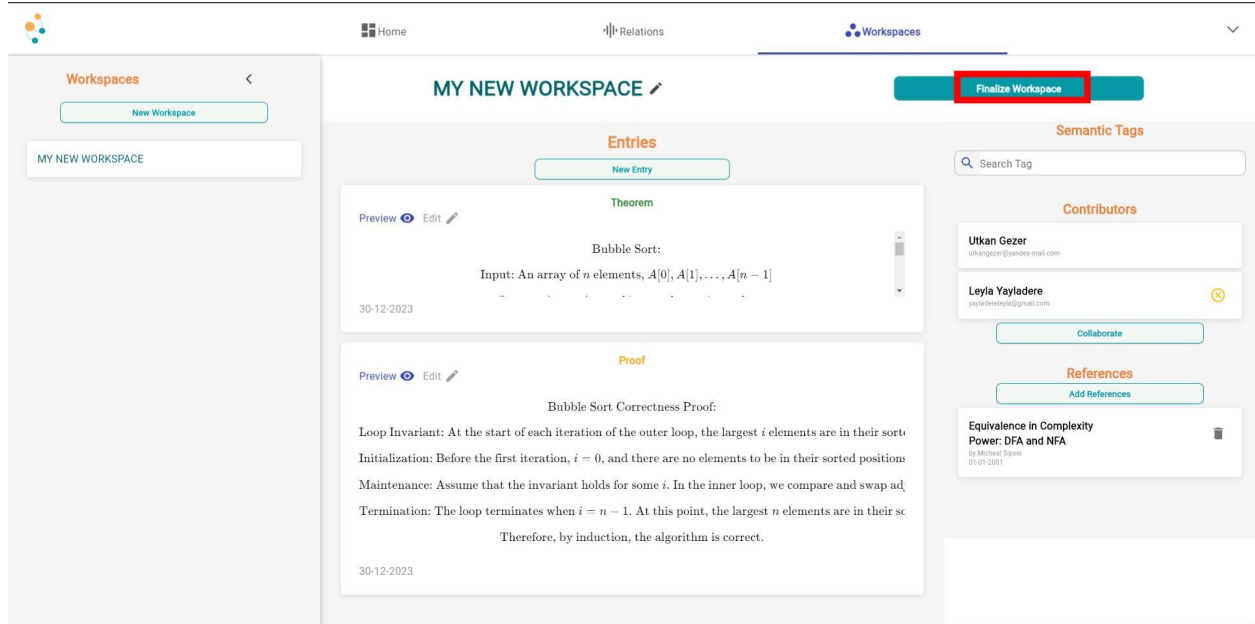


After selecting the references, they will be listed within the workspace. You can review them to ensure accuracy.



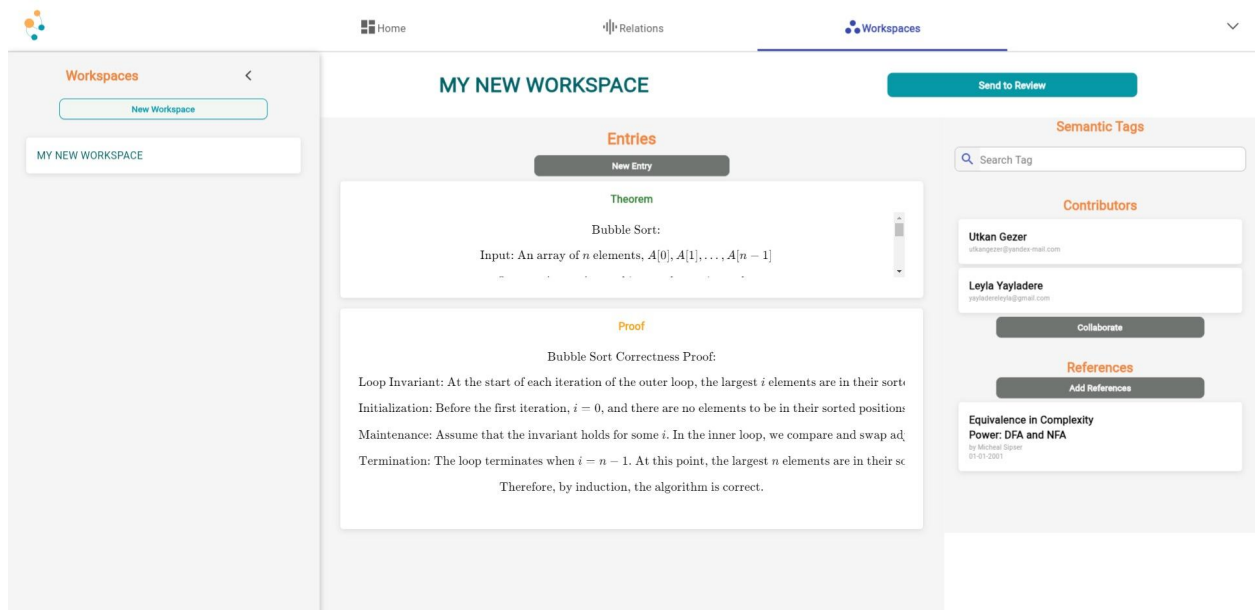
Finalizing Workspace

Available workspaces includes “Finalize Workspace” button to finish work and making it ready for sending it to the review.



The screenshot shows the workspace interface for "MY NEW WORKSPACE". The top navigation bar includes "Home", "Relations", and "Workspaces". The main content area is divided into three sections: "Entries", "Semantic Tags", and "Contributors". The "Entries" section contains two entries: "Theorem" and "Proof". The "Theorem" entry has a "Preview" and "Edit" button. The "Proof" entry also has a "Preview" and "Edit" button. The "Semantic Tags" section has a search bar and a list of tags, including "Equivalence in Complexity Power: DFA and NFA". The "Contributors" section lists "Utkan Gezer" and "Leyla Yayladere". A red box highlights the "Finalize Workspace" button in the top right corner.

After clicking the button, entries will be not editable and any changes will be disabled. New button “Send to Review” will be enabled.



The screenshot shows the workspace interface for "MY NEW WORKSPACE" after clicking the "Finalize Workspace" button. The top navigation bar remains the same. The main content area is divided into three sections: "Entries", "Semantic Tags", and "Contributors". The "Entries" section contains two entries: "Theorem" and "Proof". The "Theorem" entry has a "New Entry" button. The "Proof" entry also has a "New Entry" button. The "Semantic Tags" section has a search bar and a list of tags, including "Equivalence in Complexity Power: DFA and NFA". The "Contributors" section lists "Utkan Gezer" and "Leyla Yayladere". A blue box highlights the "Send to Review" button in the top right corner.

Sending To Review

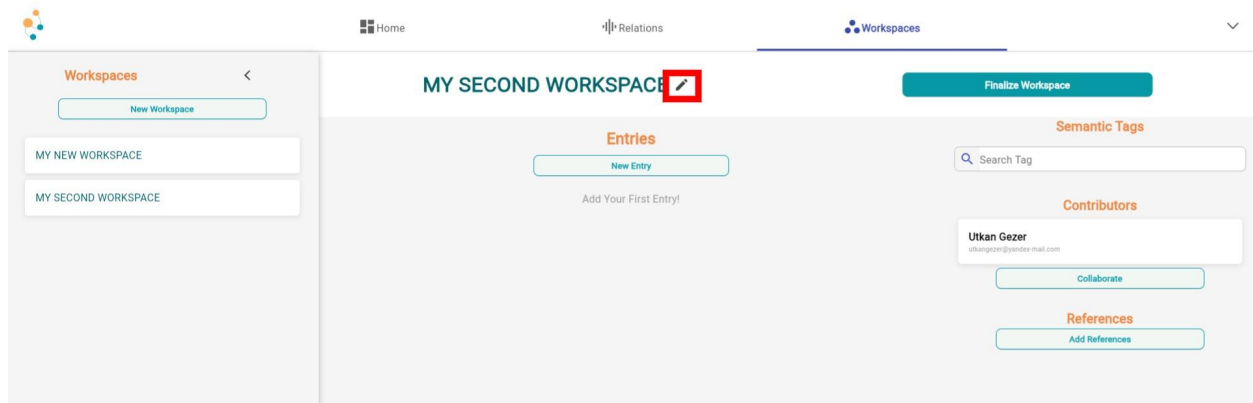
After finalizing the workspace, adding new proofs will be available. Contributors can add proofs before sending work to review. It is possible to send a review without adding a proof.

The screenshot shows the 'MY NEW WORKSPACE' interface. At the top right, a 'Send to Review' button is highlighted with a red rectangle. The main content area is divided into three sections: 'Theorem', 'Proof', and 'Semantic Tags'. The 'Theorem' section contains the text 'Bubble Sort: Input: An array of n elements, $A[0], A[1], \dots, A[n-1]$ '. The 'Proof' section contains the text 'Bubble Sort Correctness Proof: Loop Invariant: At the start of each iteration of the outer loop, the largest i elements are in their sorted positions. Initialization: Before the first iteration, $i = 0$, and there are no elements to be in their sorted positions. Maintenance: Assume that the invariant holds for some i . In the inner loop, we compare and swap adjacent elements. Termination: The loop terminates when $i = n - 1$. At this point, the largest n elements are in their sorted positions. Therefore, by induction, the algorithm is correct.' The 'Semantic Tags' section contains a search bar and a list of contributors: 'Utkan Gezer' and 'Leyla Yayladere'. Below the contributors is a 'Collaborate' button. There is also a 'References' section with an 'Add References' button and a reference entry: 'Equivalence in Complexity Power: DFA and NFA by Michael Sipser 01-01-2001'.

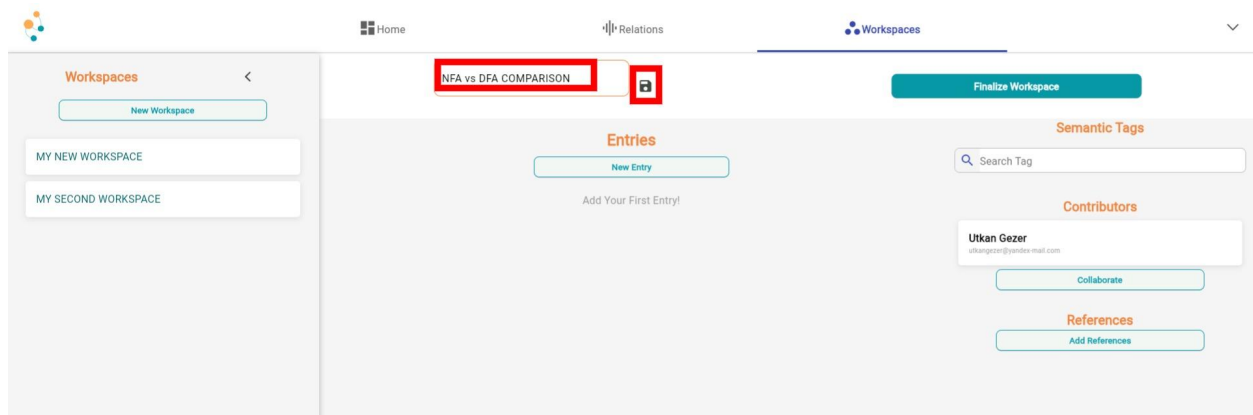
The screenshot shows the 'MY NEW WORKSPACE' interface after the 'Send to Review' action. The 'Send to Review' button has been replaced by an 'In Review' button. The main content area remains the same as in the previous screenshot, showing the 'Theorem', 'Proof', and 'Semantic Tags' sections. The 'Theorem' section contains the text 'Bubble Sort: Input: An array of n elements, $A[0], A[1], \dots, A[n-1]$ '. The 'Proof' section contains the text 'Bubble Sort Correctness Proof: Loop Invariant: At the start of each iteration of the outer loop, the largest i elements are in their sorted positions. Initialization: Before the first iteration, $i = 0$, and there are no elements to be in their sorted positions. Maintenance: Assume that the invariant holds for some i . In the inner loop, we compare and swap adjacent elements. Termination: The loop terminates when $i = n - 1$. At this point, the largest n elements are in their sorted positions. Therefore, by induction, the algorithm is correct.' The 'Semantic Tags' section contains a search bar and a list of contributors: 'Utkan Gezer' and 'Leyla Yayladere'. Below the contributors is a 'Collaborate' button. There is also a 'References' section with an 'Add References' button and a reference entry: 'Equivalence in Complexity Power: DFA and NFA by Michael Sipser 01-01-2001'.

Changing Workspace Title

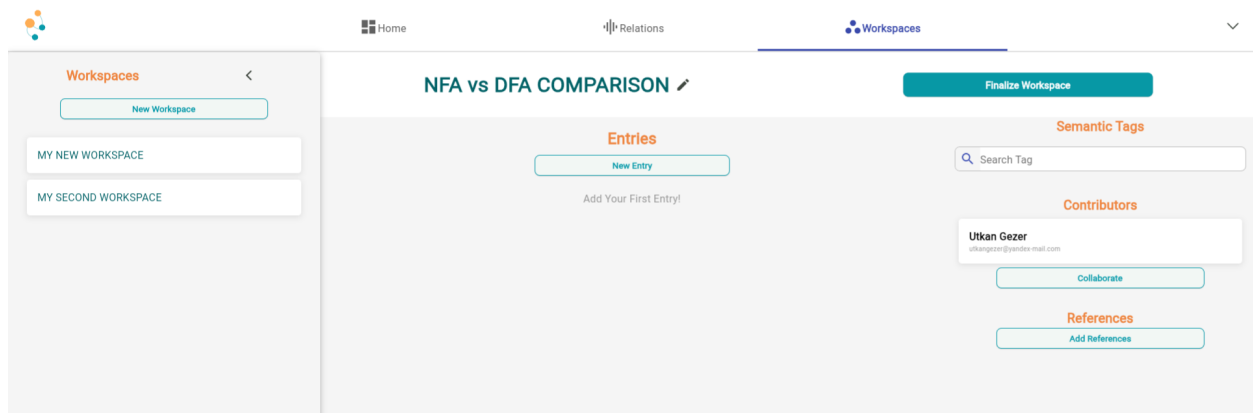
Go to your selected workspace where the current title is displayed at the top. Click on the pencil or edit icon next to the workspace title.



Once you click the edit icon, you can type in the new title for your workspace. After typing the new title, confirm the change by clicking the save icon.

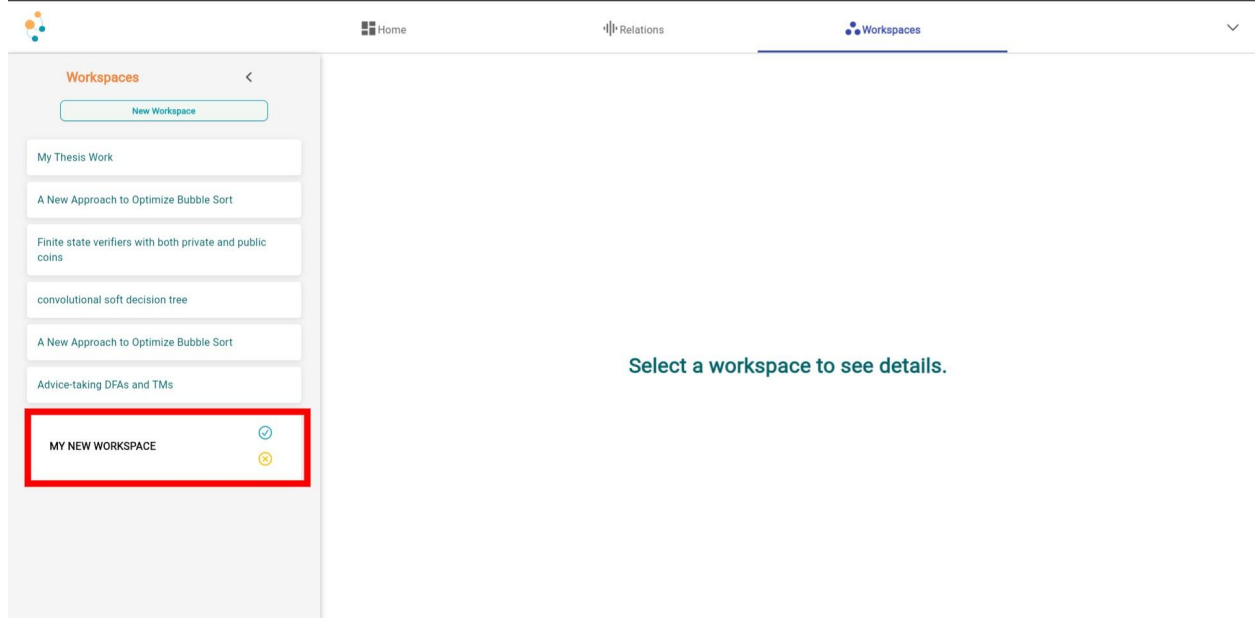


This will update the workspace title to the new name you have entered.

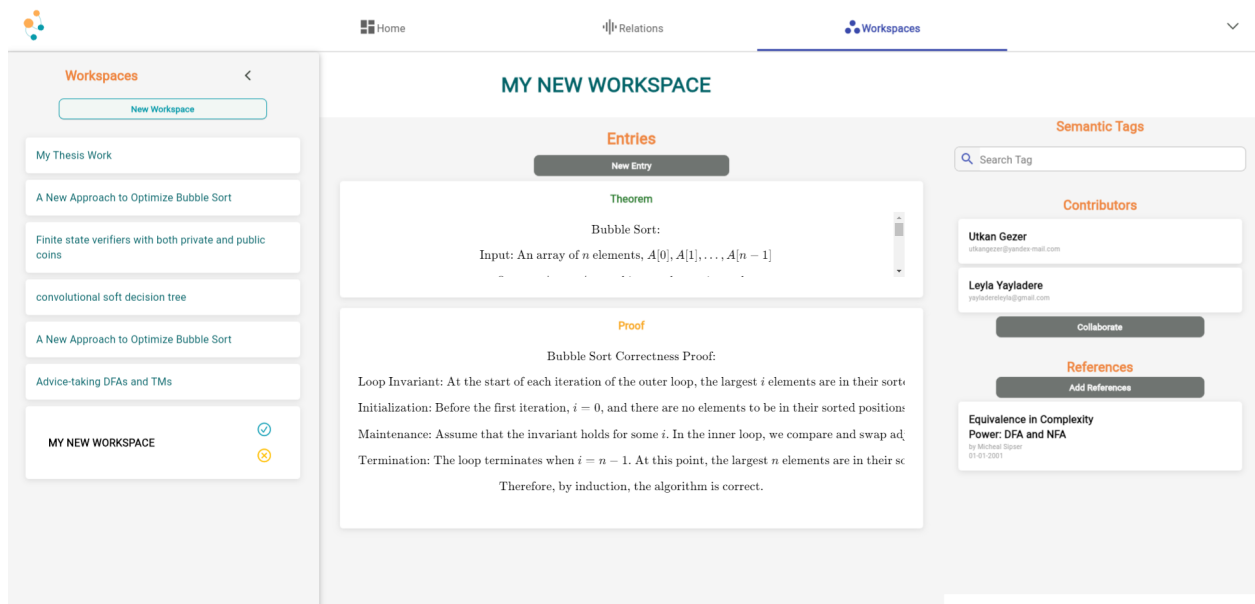


Accepting/Rejecting Collaboration Request

A notification appears on the workspace dashboard indicating a pending collaboration request, identified by a specific icon or section.



Clicking on the notification icon or the indicated section will open the request details. The request details will include information about the requester and possibly the reason for the request.



You have the option to accept or reject the request. This is done by clicking on a 'tick' icon to accept or a 'cross' icon to reject.

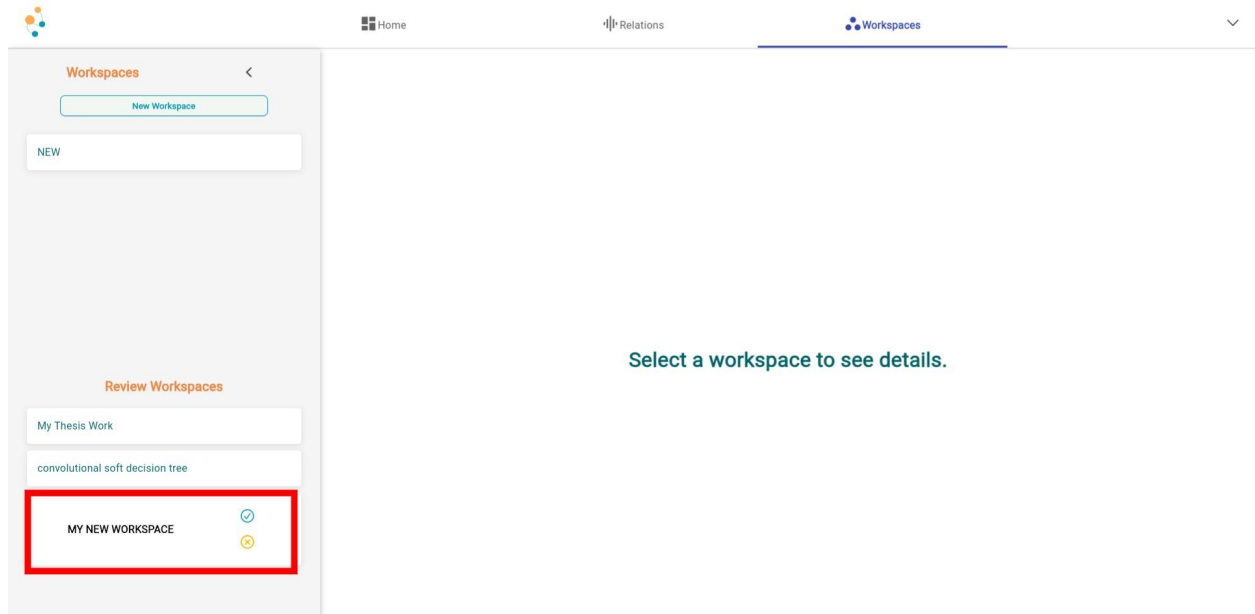
The screenshot shows a web interface for a workspace titled "MY NEW WORKSPACE". On the left, a sidebar lists various workspaces, with "MY NEW WORKSPACE" highlighted and a red box around its status icons (a green checkmark and a yellow cross). The main content area is titled "ENTRIES" and contains a "Theorem" section for "Bubble Sort" with its input and a "Proof" section for "Bubble Sort Correctness Proof". On the right, there are sections for "Semantic Tags", "Contributors" (listing Utkan Gezer and Leyla Yayladere), and "References" (listing "Equivalence in Complexity Power: DFA and NFA").

Once you click accept or reject, the system will confirm your decision and the request will either move to your list of collaborators or be removed from your pending requests.

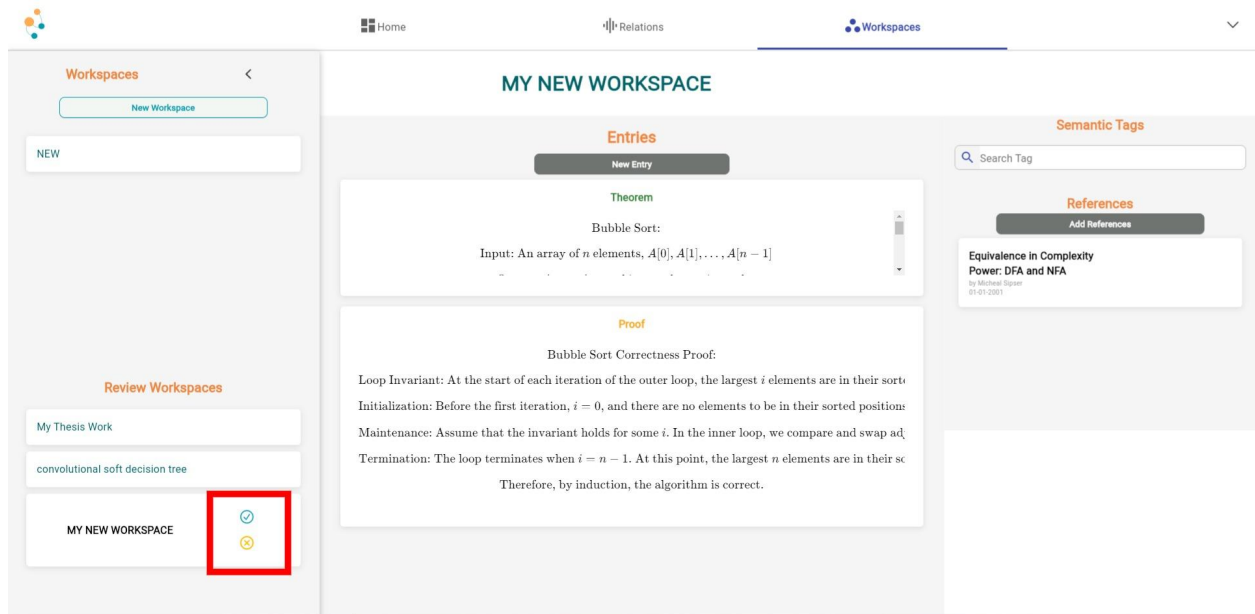
The screenshot shows the same "MY NEW WORKSPACE" interface, but the workspace is now in a "In Review" state, indicated by a button at the top right. In the left sidebar, the "MY NEW WORKSPACE" entry is now highlighted with a red box, and its status icons are no longer visible. The main content area and right sidebar remain the same as in the previous screenshot.

Reviewing a Workspace

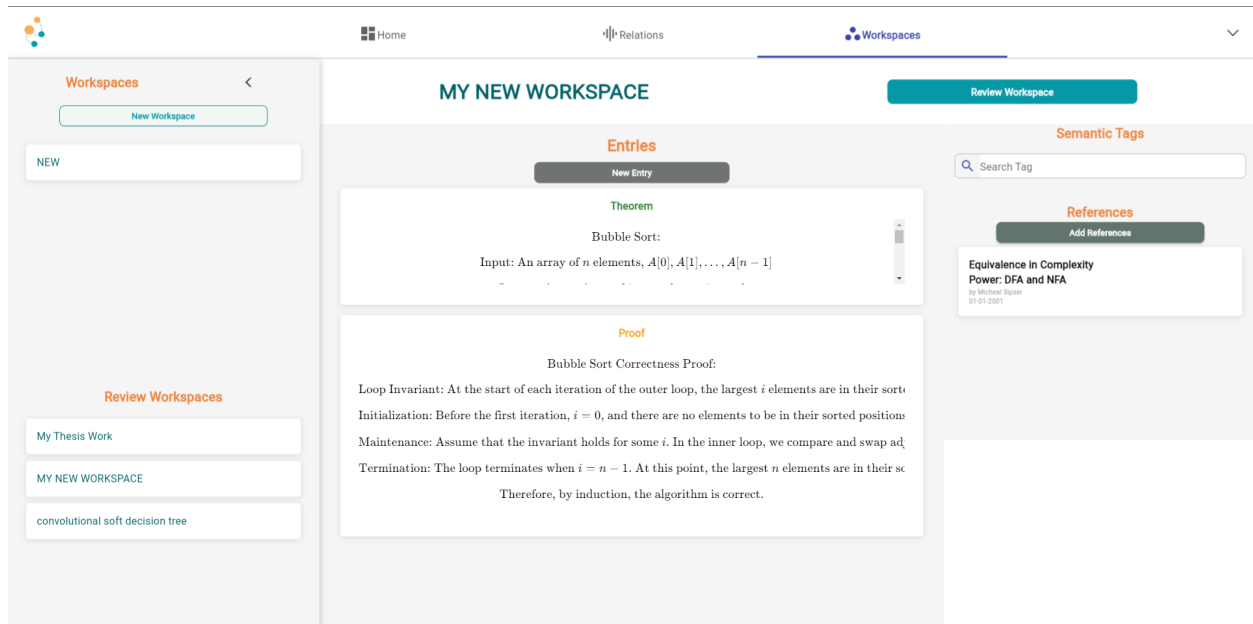
Reviewers receive a notification or see a visual cue in the interface that there's a workspace ready for review.



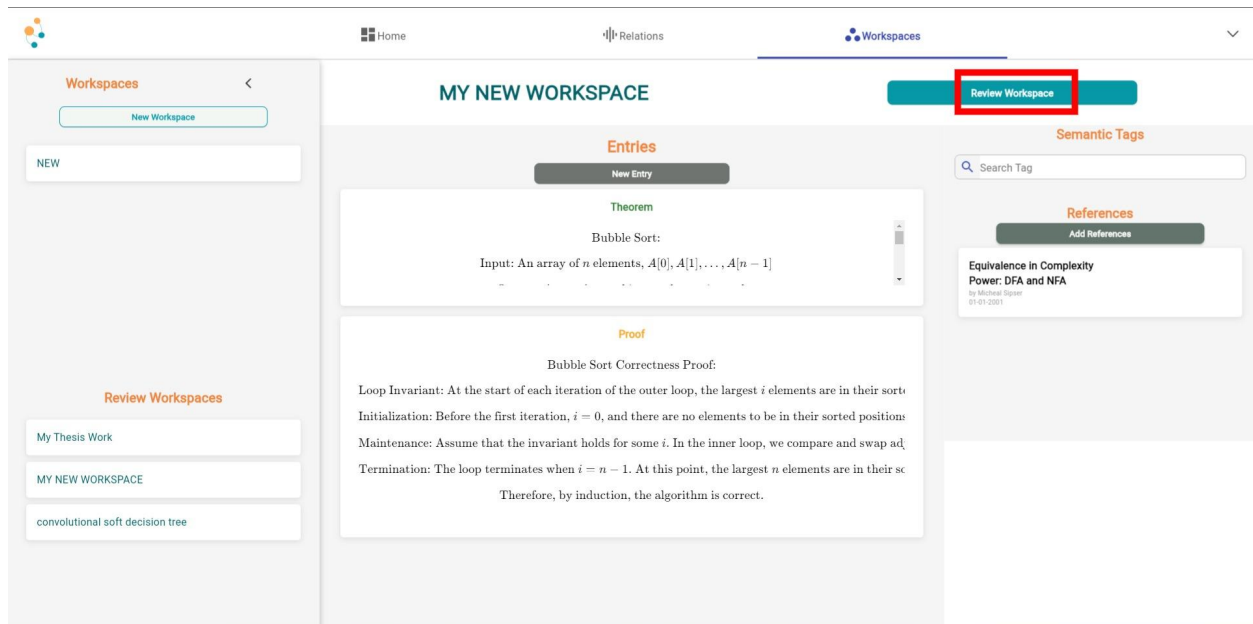
The reviewer is presented with the workspace details and can make comments directly within the workspace interface.



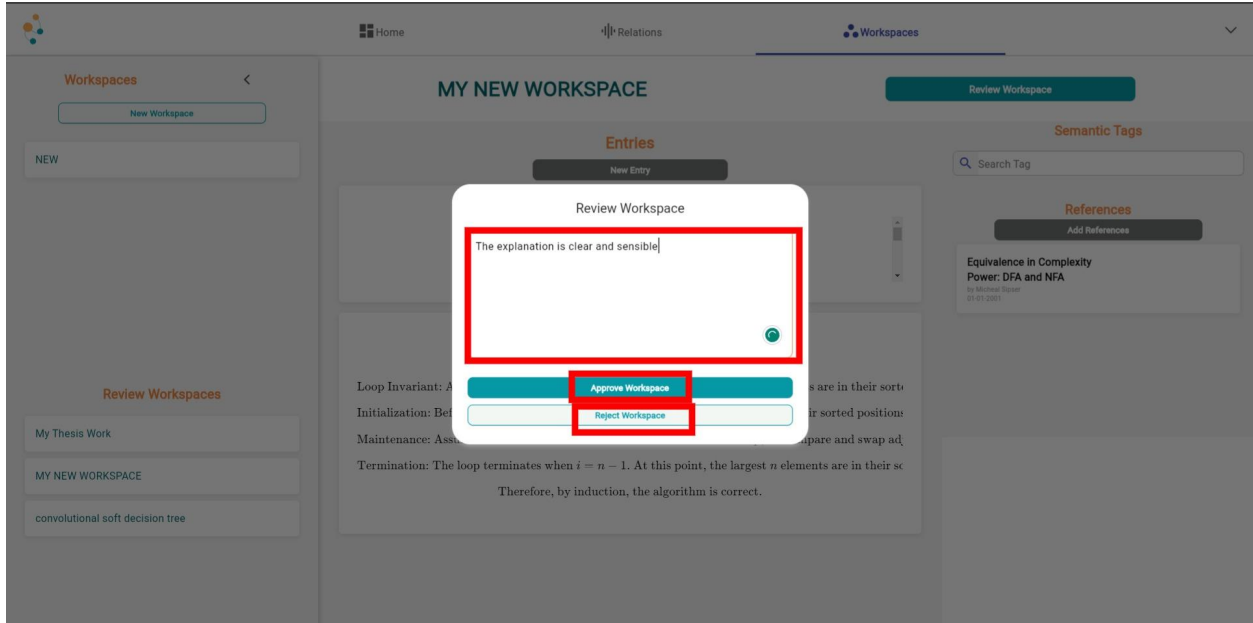
Upon reviewing the workspace contents, the reviewer can either approve or request changes. If reviewer reject to review the workspace someone else will be assigned randomly. Also they can't see the contributors of the workspace.



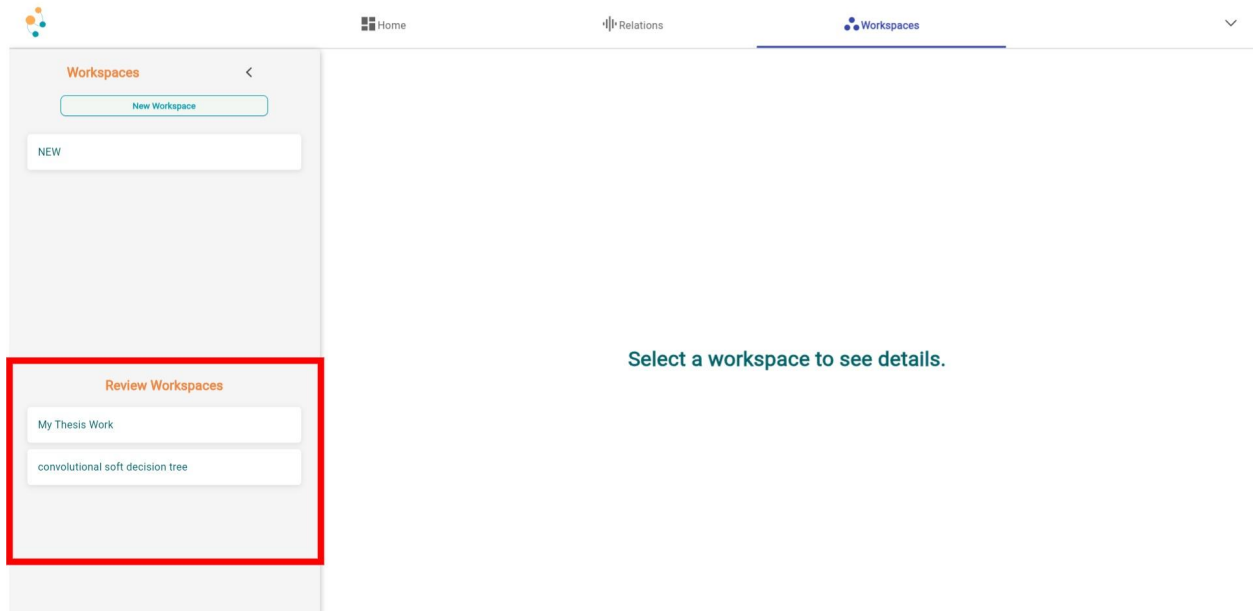
After the review is done, they can click the review workspace button.



Clicking this button will show a pop up to approve or reject workspace with an optional comment field.



After reviewing the workspace, it will be shown it review workspaces side.



Review Comments

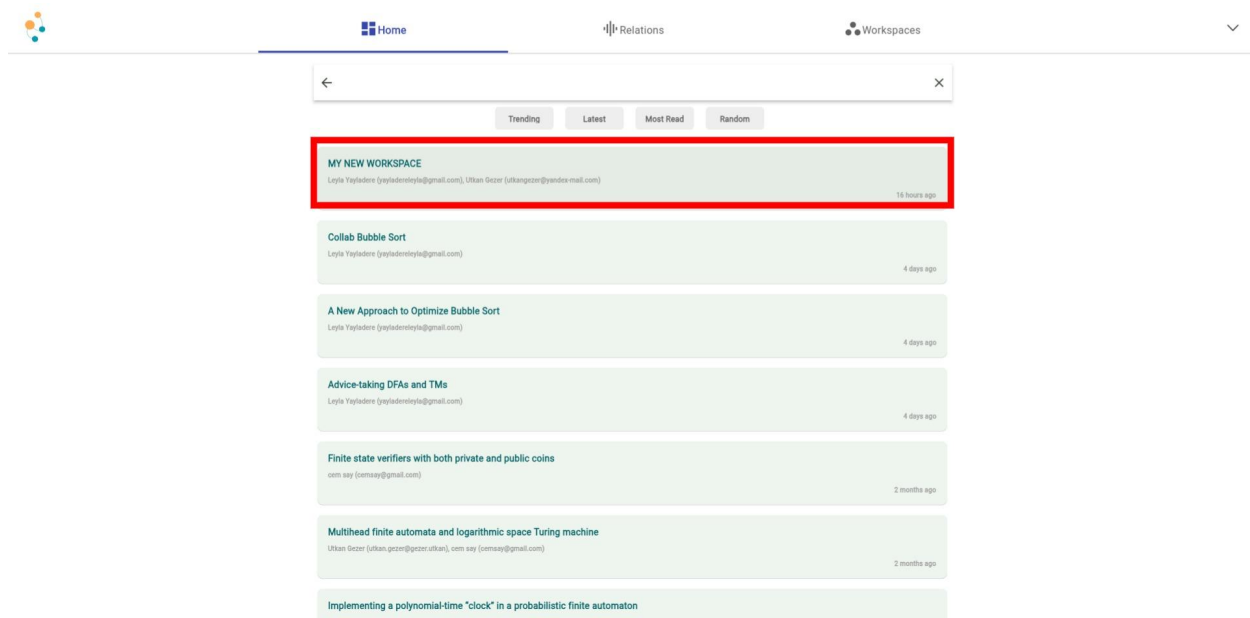
Contributors can see reviewer comments by clicking “See Review Comment” at the right side of the page with their acceptance status.

The screenshot shows the 'MY NEW WORKSPACE' interface. On the left is a sidebar with 'Workspaces' and a 'New Workspace' button. The main content area is divided into three sections: 'Entries', 'Semantic Tags', and 'Contributors'. The 'Entries' section contains a 'Theorem' and a 'Proof'. The 'Semantic Tags' section has a search bar and a 'Collaborate' button. The 'Contributors' section lists 'Leyla Yayladere' and 'Utkan Gezer'. A red box highlights the 'See Review Comments' button in the top right corner.

The screenshot shows the 'MY NEW WORKSPACE' interface with the 'Reviewer comments' section highlighted in a red box. The 'Reviewer comments' section contains two comments, both marked as 'Approved':
1. "The explanation is clear and sensible" (Approved)
2. "The notation in the proof could have been better, but overall it is good enough to be approved." (Approved)

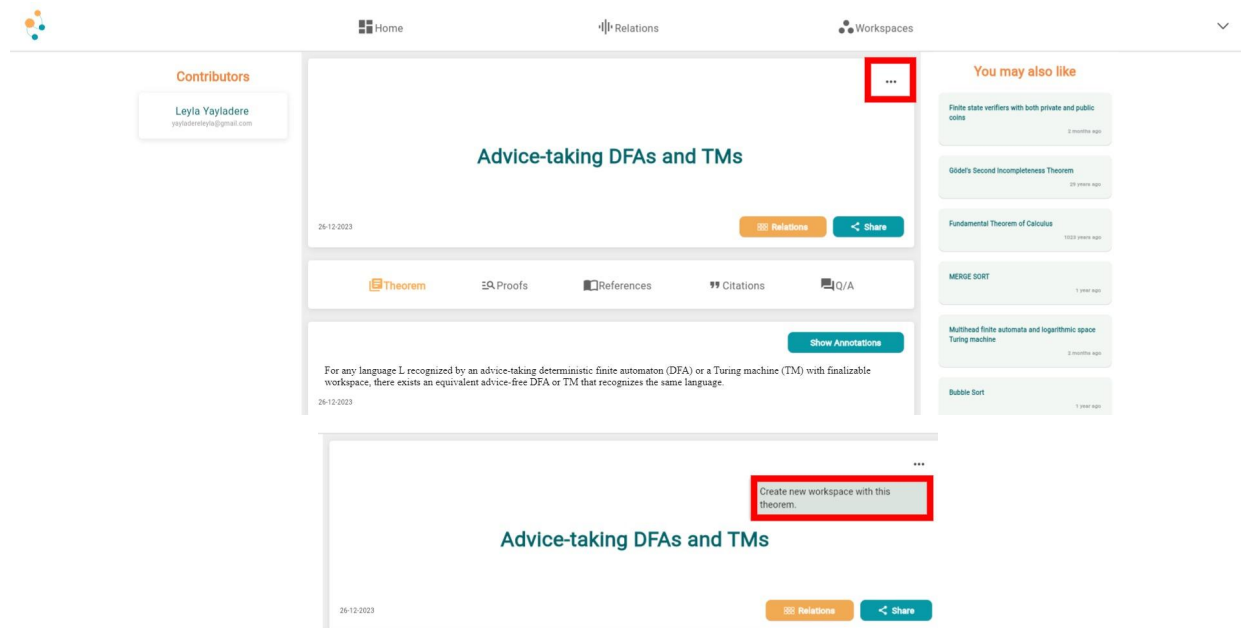
After Review Approval

After these steps workspace is added to the system publicly and named as “node”. If rejected it is not published.



Adding Proof to an Existing Node

To add proof to existing nodes. You should select “Create new workspace with this theorem” option from right top of the node.



After selecting this option, a new workspace will be created at the contributor workspaces page.

The screenshot shows the 'Workspaces' page in a web application. The navigation bar at the top includes 'Home', 'Relations', and 'Workspaces' (highlighted with a red box). On the left, a 'Contributors' section lists 'Leyla Yayladere'. The main content area features a workspace titled 'Advice-taking DFAs and TMs' by Leyla Yayladere, dated 26-12-2023. Below the title are buttons for 'Relations' and 'Share'. A navigation bar below the title includes 'Theorem', 'Proofs', 'References', 'Citations', and 'Q/A'. A 'Show Annotations' button is also present. The main text of the workspace reads: 'For any language L recognized by an advice-taking deterministic finite automaton (DFA) or a Turing machine (TM) with finalizable workspace, there exists an equivalent advice-free DFA or TM that recognizes the same language.' On the right, a 'You may also like' section lists several related theorems and topics, such as 'Gödel's First Incompleteness Theorem', 'Fundamental Theorem of Calculus', 'MERGE SORT', 'Implementing a polynomial-time "lock" in a probabilistic finite automaton', 'Hierarchical mixtures of generators for adversarial learning', 'De Morgan's First Theorem', 'Convolutional soft decision trees', 'Duality Principle', and 'Finite state verifiers with constant private randomness'.

The screenshot shows the 'Workspaces' page with a sidebar on the left. The sidebar is titled 'Workspaces' and contains a 'New Workspace' button and a list of workspaces: 'MY NEW WORKSPACE', 'NFA vs DFA COMPARISON', and 'Advice-taking DFAs and TMs' (highlighted with a red box). The main content area is empty and contains the text 'Select a workspace to see details.' The navigation bar at the top includes 'Home', 'Relations', and 'Workspaces'.

Now contributors can add new entries to the workspace and send them to the reviewer after finalizing it.

The screenshot shows a workspace titled "Advice-taking DFAs and TMs". On the left, there is a sidebar with a "Workspaces" section containing a "New Workspace" button and a list of workspaces: "MY NEW WORKSPACE", "NFA vs DFA COMPARISON", and "Advice-taking DFAs and TMs". The main content area has a header with the workspace name and a "Finalize Workspace" button. Below the header, there is an "Entries" section with a "New Entry" button. A red box highlights the "Theorem (Final)" entry, which contains the text: "For any language L recognized by an advice-taking deterministic finite automaton (DFA) or a Turing machine (TM) with finalizable workspace, there exists an equivalent advice-free DFA or TM that recognizes the same language." To the right, there are sections for "Semantic Tags" (with a search tag input), "Contributors" (listing "Utkan Gezer" with a "Collaborate" button), and "References" (with an "Add References" button).

This screenshot shows the same workspace, but the "Finalize Workspace" button has been replaced by a "Send to Review" button. The "Entries" section now shows two entries: "Theorem (Final)" and "Proof". The "Proof" entry contains the following text: "Bubble Sort Correctness Proof: Loop Invariant: At the start of each iteration of the outer loop, the largest i elements are in their sorted positions. Initialization: Before the first iteration, $i = 0$, and there are no elements to be in their sorted positions. Maintenance: Assume that the invariant holds for some i . In the inner loop, we compare and swap adjacent elements. Termination: The loop terminates when $i = n - 1$. At this point, the largest n elements are in their sorted positions. Therefore, by induction, the algorithm is correct." The "Contributors" and "References" sections remain the same.

Rejection

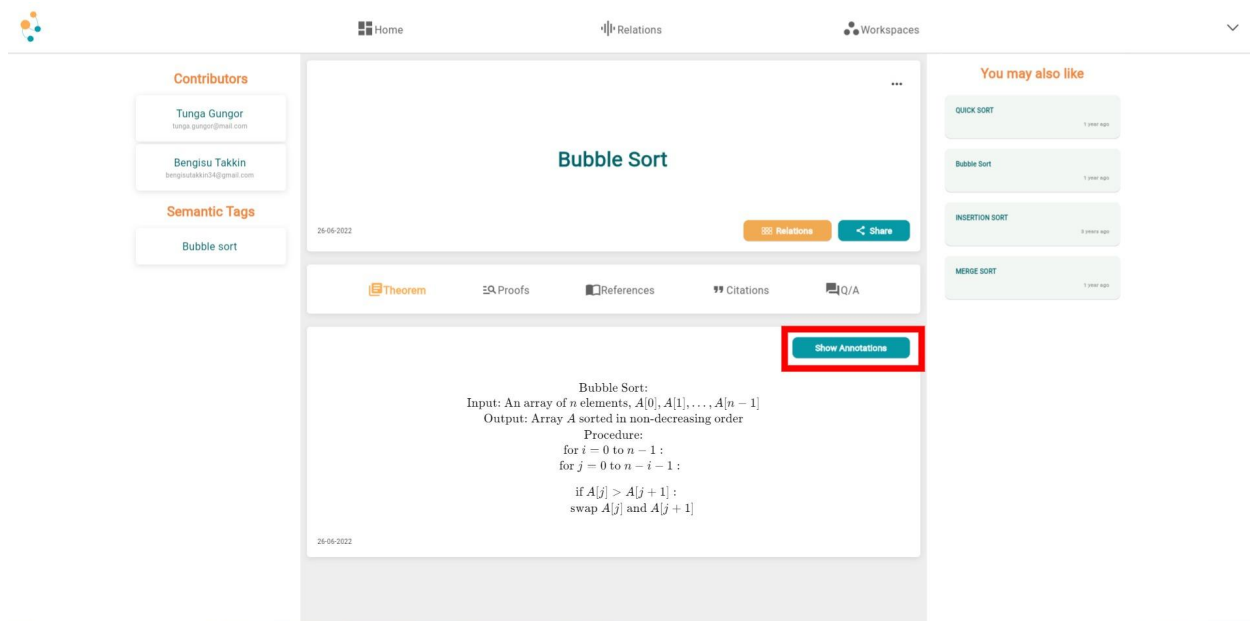
If one of the reviewers rejects the workspace, it is not accepted and published.

This screenshot shows the workspace in a review state. The "Send to Review" button has been replaced by an "In Review" button. A red box highlights the "Reviewer comments" section on the right, which contains two comments: "This proof is not proving this claim Rejected" and "This proof is not the proof of this claim Approved". The "Entries" section shows the "Theorem (Final)" and "Proof" entries. The "Contributors" and "References" sections are also visible.

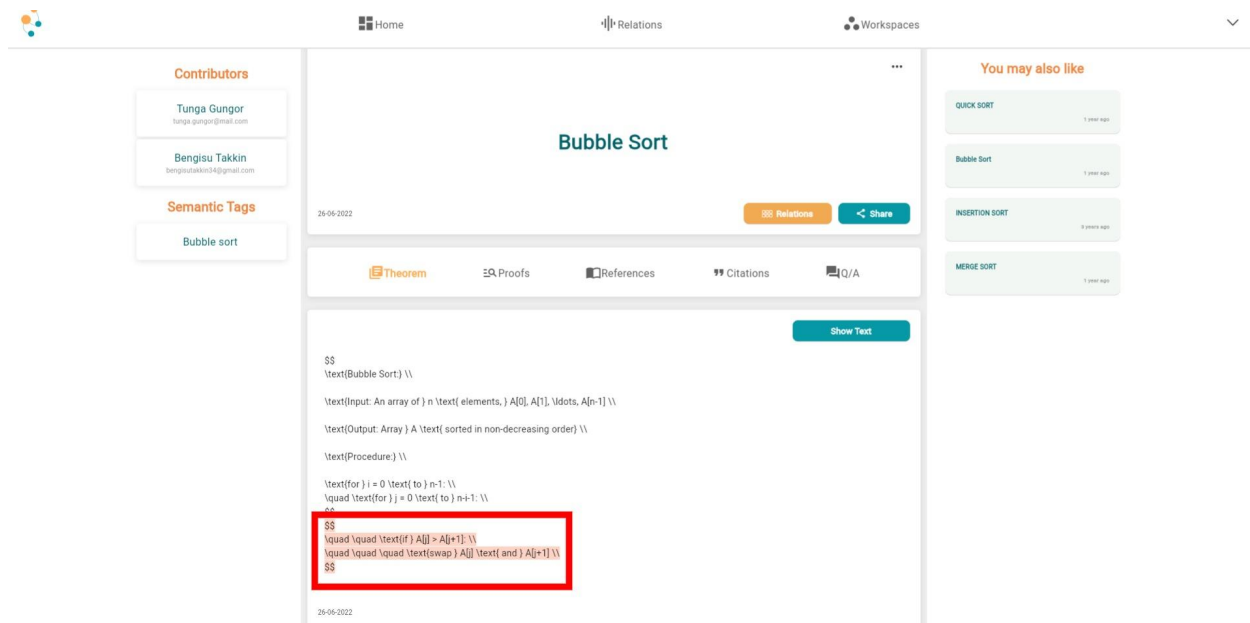
Annotations

Looking at Public Annotations

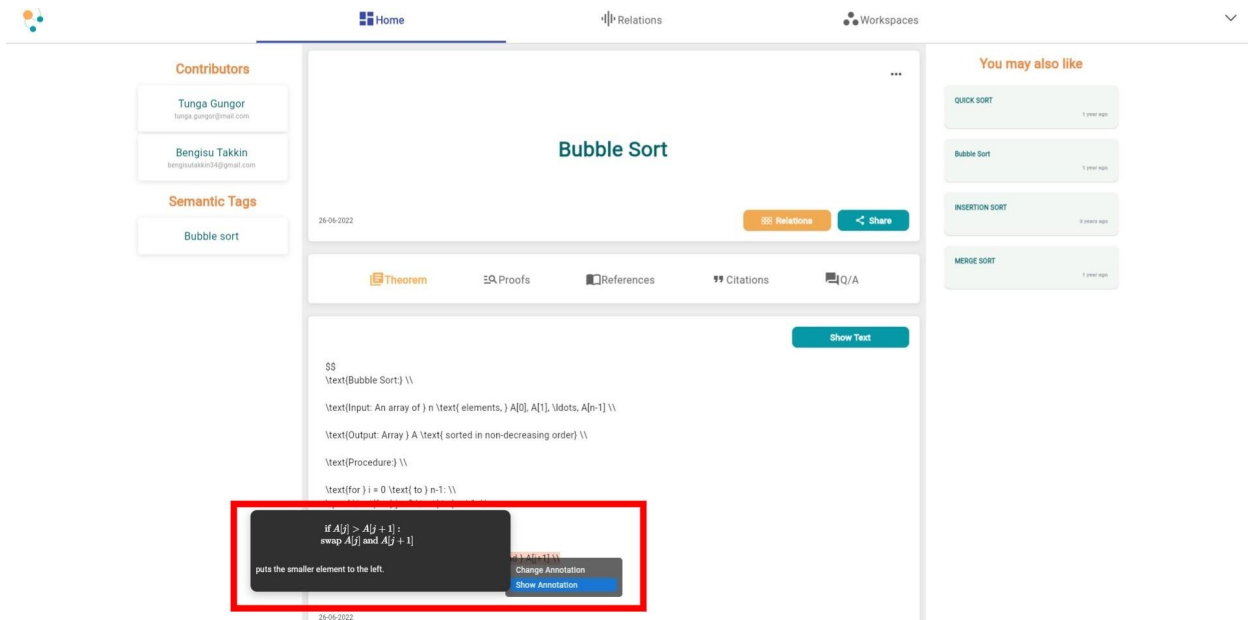
1. Annotations can be added/displayed to either the theorems or proofs within a node. Due to the challenges of adding/displaying annotations directly to LaTeX-formatted text, we have provided an alternative approach. By clicking the 'Show Annotation' button, the page will render the theorems and proofs without the KaTeX engine. This will display the raw text along with any existing annotations.



2. If there are any annotations, they will appear as highlighted text. Annotations that are colored pink are public annotations. These have been added by contributors of the node and are visible to all users.

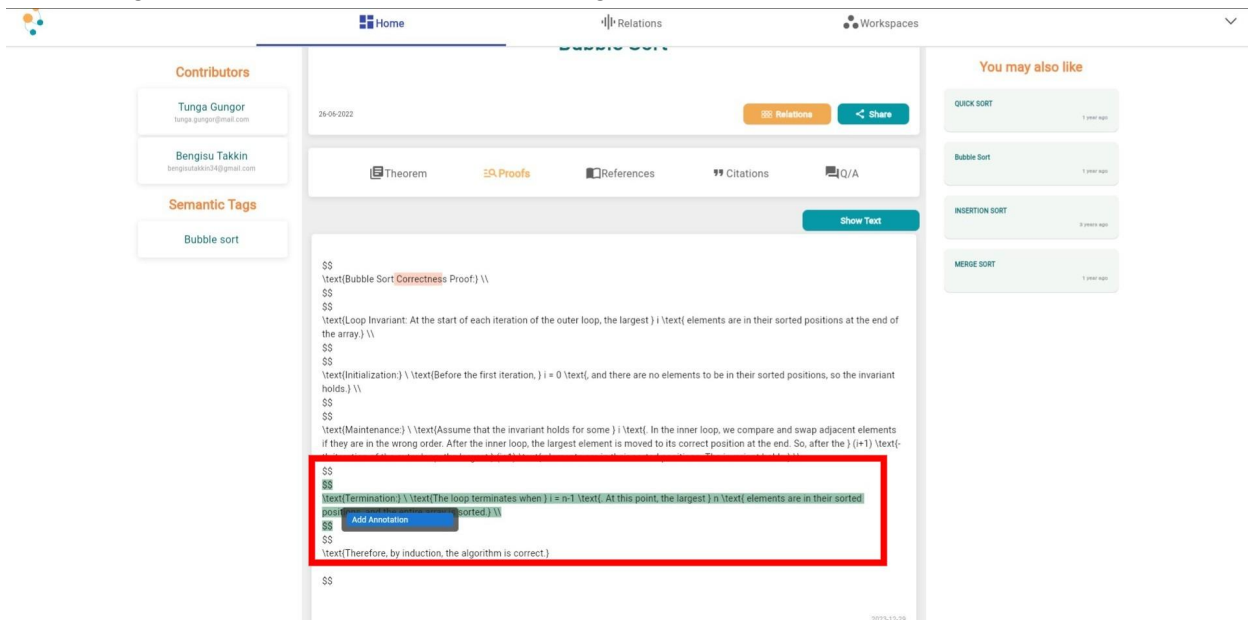


3. When you place your cursor over any part of an annotation and right-click, a menu will appear offering two options: 'Change Annotation' and 'Show Annotation'. Clicking on 'Show Annotation' will display both the content of the annotation and the KaTeX rendered version of the selected text. This functionality is specifically designed to enhance the user experience, addressing the challenges associated with annotating text in KaTeX format.

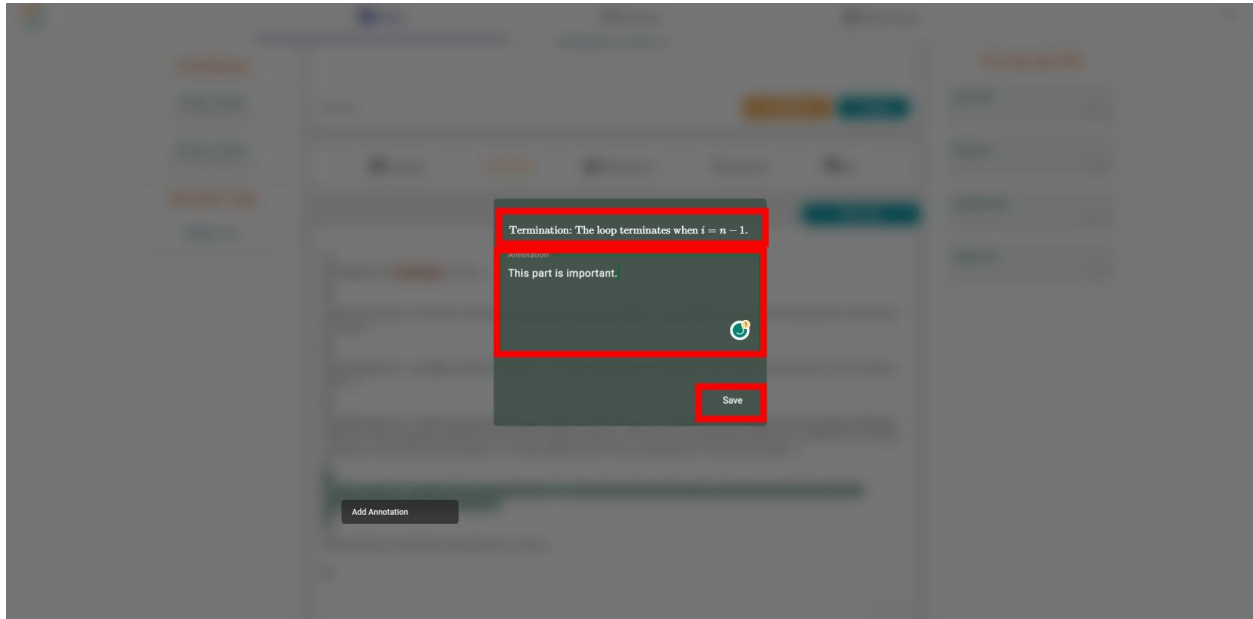


Adding Annotations

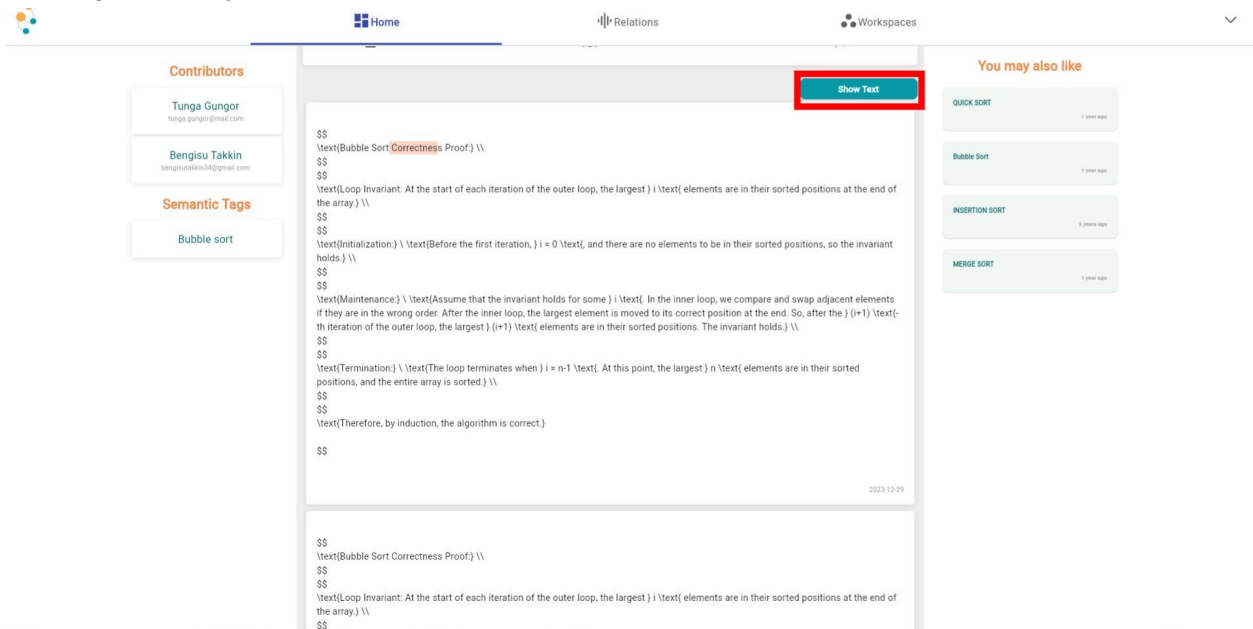
1. To add an annotation, first ensure that theorem or proofs are being displayed in their annotation version, which shows the raw text. Then, select the text you wish to annotate. The selected text will be highlighted in green. Next, place your cursor over any part of the highlighted text and right-click. A menu will appear offering one option: 'Add Annotation', click it.



2. After selecting 'Add Annotation', a popup window will open. This window displays the KaTeX rendered version of the text you selected, along with a box where you can enter the content of your annotation. Type your annotation in this box. Once you have entered the desired content, click save.



3. To view your newly added annotations, a refresh of the page is required. To do this, first click on 'Show Text' and then 'Show Annotation' again. This process effectively refreshes the display, allowing the newly added annotations to become visible.



4. Now, the annotation you have added will appear in purple. If you are not a contributor to that node, this annotation will only be visible to you. Note that there may be other annotations present, such as those colored in pink. A pink annotation indicates that it has been added by a contributor of the node and is visible to all users. This color-coding system helps distinguish between personal annotations (purple) and public annotations (pink), enhancing user understanding of their visibility.

The screenshot shows a web interface with a central document viewer. The document content is as follows:

```

SS
\text{Bubble Sort Correctness Proof} \\
SS
SS
\text{Loop Invariant: At the start of each iteration of the outer loop, the largest } i \text{ elements are in their sorted positions at the end of the array.} \\
SS
SS
\text{Initialization: Before the first iteration, } i = 0 \text{, and there are no elements to be in their sorted positions, so the invariant holds.} \\
SS
SS
\text{Maintenance: Assume that the invariant holds for some } i \text{. In the inner loop, we compare and swap adjacent elements if they are in the wrong order. After the inner loop, the largest element is moved to its correct position at the end. So, after the } (i+1) \text{-th iteration of the outer loop, the largest } (i+1) \text{ elements are in their sorted positions. The invariant holds.} \\
SS
SS
\text{Termination: The loop terminates when } i = n-1 \text{. At this point, the largest } n \text{ elements are in their sorted positions, and the entire array is sorted.} \\
SS
\text{Therefore, by induction, the algorithm is correct.}
SS

```

A purple annotation highlights the sentence: "Termination: The loop terminates when $i = n - 1$. At this point, the largest n elements are in their sorted positions, and the entire array is sorted." A tooltip for this annotation displays the text: "Termination: The loop terminates when $i = n - 1$. This part is important."

The interface includes a top navigation bar with "Home", "Relations", and "Workspaces". On the left, there are sections for "Contributors" (listing Tunga Gungor and Bengisu Takkin) and "Semantic Tags" (listing "Bubble sort"). On the right, a "You may also like" section lists related topics: "QUICK SORT", "Bubble Sort", "INSERTION SORT", and "MERGE SORT".