

Requirements Document

Union App
Group 13

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Objective:

Create an application that allows users to display ideas and data in a visual way, through the use of venn diagrams. To satisfy the customer's needs, the system should be able to provide a comfortable environment to design venn diagrams and full customizability. Below is the list of features that the system should have...

Feature	Information
Adding items to the Venn Diagram	The user should be able to add items easily onto the Venn Diagram, via a drag and drop mechanism.
Editing Venn Diagram items and labels	The user should be able to edit items/labels that are already on the venn diagram, instead of creating a new item.
Delete items from the Venn Diagram	The user should be able to delete the items that are on the venn diagram, via drag/drop mechanism or button.
Exporting the Venn Diagram as an image	The user should be able to export their venn diagram as an image after they are done designing it. Exporting the image allows their Venn Diagram to be portable.
Modifying the colors of items and circles	The user should be able to change the colors of the venn diagram to his/her preference.
Exporting Venn Diagram data	The user should be able to export their Venn Diagram data to a .json file so that they continue from where they left off.
Importing Venn Diagram data	The user should be able to import their Venn Diagram data so that they can continue to work from where they left off.
Teaching mode	Allow a user to import a Venn diagram and then try to replicate the layout of the diagram on their own.
Undo and Redo	Allow the user to undo and redo changes they do to the interface, through the use of buttons and keyboard shortcuts.

Use Cases:

Venn diagrams, also called Set diagrams or Logic diagrams, are widely used in mathematics, statistics, logic, teaching, linguistics, computer science and business. These diagrams serve to visually organize data, highlighting how the items are similar and different. Listed below are some ways users are going to interact with the system to create their diagrams.

Case 1	Starting the application
Type of User	All
Basic Flow	Step 1: Double Clicking on the .jar File
Alternative Flow	Step 1: Open Command Prompt/Powershell windows or Terminal on UNIX based machines Step 2: Navigating to the directory that contains .jar file Step 3: Run <code>java -jar UnionApp.jar</code>
Additional Info.	N/A

Case 2	Adding an Entry
Type of User	All
Basic Flow	Step 1: Clicking on the “Add Entry” button to open a prompt window. Step 2: Entering the data. Step 3: Clicking on the “Add” button
Alternative Flow	Step 1: Pressing CTRL/CMD + N on keyboard to open a prompt window. Step 2: Entering the data. Step 3: Clicking on the “Add” button
Additional Info.	“Add Entry” button should be located in a menu or a customization pane.

Case 3	Editing an Entry/Label
Type of User	All
Basic Flow	Step 1: Double Clicking on Entry/Label to open a prompt window. Step 2: Entering the data. Step 3: Clicking on the “Update” button.
Alternative Flow	Step 1: Clicking on the edit icon on the Entry/Label to open a prompt window. Step 2: Entering the data. Step 3: Clicking on the “Update” button.
Additional Info.	The edit icon should appear after hovering over the entry/label.

Case 4	Deleting an Entry
Type of User	All
Basic Flow	Step 1: Click and Hold onto the entry that you would like to remove Step 2: Drag and Drop the entry on top of a trash bin.
Alternative Flow	N/A
Additional Info.	Trash bins should be located on the corner of the window or on a customization pane.

Case 5	Exporting the Venn Diagram as an image
Type of User	All
Basic Flow	Step 1: Clicking on the “Save Screenshot” button to open file explorer. Step 2: Navigating to desired directory, and naming the .png file Step 3: Clicking on the “Save” button to save the screenshot.
Alternative Flow	N/A
Additional Info.	“Save Screenshot” button should be located in a menu or a customization pane.

Case 6	Modifying the colors of items and circles
Type of User	All
Basic Flow	Step 1: Clicking on the “Options” button to open a prompt window. Step 2: Changing the colors of the Venn Diagram items and circles using a color menu. Step 3: Clicking on the “Ok” button to save the settings.
Alternative Flow	N/A
Additional Info.	Each section of the venn diagram should have its own color.

Case 7	Exporting the Venn Diagram data
Type of User	All
Basic Flow	Step 1: Clicking on the “Export” button to open file explorer. Step 2: Navigating to desired directory, and naming the .json file Step 3: Clicking on the “Save” button to save the file.

Alternative Flow	Step 1: Pressing CTRL/CMD + S on keyboard to open file explorer. Step 2: Navigating to desired directory, and naming the .json file Step 3: Clicking on the “Save” button to save the file.
Additional Info.	“Export” button should be located in a menu or a customization pane.

Case 8	Importing previous Venn Diagram data
Type of User	All
Basic Flow	Step 1: Clicking on the “Import” button to open file explorer. Step 2: Navigating to desired directory, and clicking on the .json file Step 3: Clicking on the “Open” button to import the data onto the application.
Alternative Flow	N/A
Additional Info.	“Import” button should be located in a menu or a customization pane.

Case 9	Game Mode
Type of User	Teachers and Students
Basic Flow	Step 1: Click on the “Start” button on the left column Step 2: Select and open the desired solutions export from their computer Step 3: Another user then tries to replicate the layout of the entries on the venn diagram Step 4: The user then verifies their response using the “Verify” button on the left
Alternative Flow	Step 1: Click on the “Start” button on the left column Step 2: Select and open the desired solutions export from their computer Step 3: Another user then tries to replicate the layout of the entries on the venn diagram Step 4: The user then verifies their response using the “Verify” button on the left Step 5: The user clicks the “Reveal Answer” button to reveal the solution and stop the game
Additional Info.	“Start”, “Verify” buttons should be located in a menu or a customization pane.

Case 10	Changing the language
Type of User	All
Basic Flow	Step 1: Clicking on the “Options” button to open the Options modal. Step 2: Clicking on a dropdown to select the desired language

Alternative Flow	N/A
Additional Info.	Every string of the application should be available in all languages

Case 11	Delete all entries
Type of User	All
Basic Flow	Step 1: Click on the button labelled “Delete All” Step 2: A prompt appears telling the user that the action is irreversible. Step 3: The user then verifies that all entries have been deleted
Alternative Flow	N/A
Additional Info.	“Delete All” button should be located in a menu or a customization pane.

Case 12	Printing the Venn Diagram
Type of User	All
Basic Flow	Step 1: Clicking on the “Print” button Step 2: Clicking on a dropdown to select the desired printer to print from and clicking “Print” Step 3: Clicking on the “Print” button in the confirmation dialog to print the diagram
Alternative Flow	N/A
Additional Info.	“Print” button should be located in a menu or a customization pane.

Case 13	Undoing and redoing changes
Type of User	All
Basic Flow	Step 1: Clicking on the “Undo” or “Redo” buttons when available Step 2: See the changes being undone or replicated
Alternative Flow	N/A
Additional Info.	“Undo” and “Redo” buttons should be located in a menu or a customization pane.

Acceptance Test Cases:

Feature	Steps to Undertake	Expected Behaviour
Adding an Entry	Click on the “Add Entry” button or pressing CTRL + N on the keyboard.	Prompt window should open asking for the new entry data.
	Type in the new data into the input box.	The input box should start populating with the new data.
	Click on the “Add” button on the prompt window.	The prompt window should close and the entry should appear on the customization pane.
Editing Entry/Label	Double clicking on the entry/label or clicking on the edit icon.	Prompt window should open asking for the new data.
	Type in the new data into the input box.	The input box should start populating with the new data.
	Click on the “Update” button on the prompt window.	The prompt window should close and the entry should update to the new data.
Deleting an Entry	Click and Hold on the entry you would like to remove.	The cursor should change from pointer to grabber.
	Drag and Drop this entry on top of a trash bin.	The entry should be deleted and it should disappear from its original location.
Drag/Drop Entry Relocation	Click and Hold on the entry.	The cursor should change from pointer to grabber.
	Drag and Drop this entry at a new location.	The entry should disappear at the old location and appear at the new location.
Exporting the Venn Diagram as an image	Click on “Save Screenshot”.	File explorer should open asking for the location to save the file.
	Navigate to the desired directory and name the .png file.	File explorer should perform how it usually does.

	Click on the “Save” button on file explorer.	File explorer should close and a screenshot of the current state of the diagram should be saved at the specified location.
Modifying the colors of the items and labels	Click on the “Options” button.	A prompt window will open with multiple color menus for items and different sections of the circle.
	Change the colors of the Venn Diagram items and circles using a color menu.	The colors should change in the background.
	Clicking on the “Ok” button to save the settings.	The prompt window should close.
Exporting the Venn Diagram data	Click on the “Export” button.	File explorer should open asking for the location to save the file.
	Navigate to the desired directory and name the .json file.	File explorer should perform how it usually does.
	Click on the “Save” button on the file explorer.	File explorer should close and the data should be saved at the specified location.
Importing the Venn Diagram	Click on the “Import” button.	File explorer should open asking for the location to save the file.
	Navigate to the desired directory and choose the .json file.	File explorer should perform how it usually does.
	Click on the “Open” button on the file explorer.	File explorer should close and the data should now appear on the venn diagram.
Changing the language	Click on the “Options” button.	A prompt window will open with a selector for the language and color options.
	Click and select a language from the language selector	Dropdown should perform as it usually does.

	Click on the “Close” button in the Options modal.	The modal will close and the language throughout the application will update.
Undoing or redoing a change	Dragging and dropping and entry on the diagram	Dragging and dropping will work as it usual does.
	The “Undo” or “Redo” buttons become available on the left column	The buttons will become clickable once there are actions to undo or redo
	Click on the “Undo“ and “Redo” buttons	The dragging action will be reversed and the elements on the interface will update accordingly.
Printing the Venn Diagram	Click on the “Print” button on the left sidebar	A dialog will open with printers listed
	Select the desired printer to print from from the dropdown and clicking “Ok”	The dropdown will perform as it usually does. A confirmation dialog will appear.
	Click on “Print” in the confirmation dialog	The dialog will close and the print job will be sent to the printer