Venn Diagram Requirements Document

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Changelog

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Project Purpose

The purpose of this project was to create a Desktop app capable of creating and modifying Venn Diagrams. Users can use this diagram to show the relationships between two objects/subjects, and then leverage this organized information in the decision making process. The goal of a Venn Diagram is to identify and display the differences and similarities between two concepts or ideas. Our team felt that a Venn Diagram application that prioritized user experience and modularity would best serve our clients in the decision making process by using this tool.

System Capabilities

Our system is a user friendly application that users can use with ease to organize their ideas and facts as much as they want with the ability to come back to exactly where they left off in that specific session.

Users will be able to create their own account in order to continue on their previous session or to create a new one. They will be able to create new accounts and login. Only once a user enters valid login credentials will they be able to access the application.

If a user is satisfied with their session they can end the session and download a file containing the statistics and information on their session. Users will be able to save their sessions and come back another time to access it. From there the user would be able to start a new session if they pleased or delete their account if they don't

intend on using it anymore. Other than what our system allows for, what our system actually does is allow for users to choose any two topics which will be prompted to them.

After that the user can type in anything they feel is relevant to the topics that were entered and either they can type where they want it to go prior to submitting or they can just type it in without knowing yet. Choosing the first option will automatically add the entry into the Venn Diagram and display it while the second option will create a new text box where the user can drag into any place on the Venn Diagram as they please. These entries will also not be permanent in case the user changes their mind and can be dragged to different sections in the Venn Diagram. This option can be toggled on/off depending on the users preference of use.

Our system will have many features that the user can play with from colors and amount of circles. The goal of this application is to make sure that our application is very easy to use and that users can benefit from using it.

Product Goals

1. Users should be able to create and modify a Venn Diagram

2. The product should be able to pass all test cases with their appropriate preconditions

3. Users should be able to create an account and login/logout with ease

Product Requirements

Use Cases

Use Case 1: User login or register

Description

The first must be the login system. As we mentioned, users enter our venn diagram to log in or register to enter or create personal data storage space, and then use the venn diagram to solve some problems. So the first test is whether you can store or create new users.

Precondition

If you want to store data or user information, the database must be indispensable. We will first prepare a prototype database or rent an existing database on the Internet for testing.

Postcondition

After user login or registered account, the database will have a new storage area belonging to this user, record the time of this user login, edited content, etc.

Use Case 2: Entry Builder

Description

After logging in, it's time to go to the main body of the venn diagram. First of all, we want to test or use whether a user can add the content that the user wants. We will provide a text box for entering content. When the user enters himself in this text box, after entering the desired content and pressing enter, a new entry will be generated

Precondition

Users can log in or register to our database normally, and the database can record the user input normally. In addition, we need to add a function that can automatically generate entries based on the typed text on the body of the venn diagram

Postcondition

The entry can be generated normally and can be stored in the user's own account, which supports that the entry still exists when the user logs in again

Use Case 3: Drag and drop

Description

After the user generates his own entry, the next step must be to drag and drop the generated or preset entry, drag the entry to the user's ideal place and release the left mouse button, the entry can stop at the user where to release the left mouse button.

Precondition

Here we must ensure that at least the entry is created and stored correctly. After that, a function about dragging and dropping is necessary, and a program that records the current user's mouse position is also essential.

Postcondition

The entry can be dragged and accurately placed in the area where the user wants to drag it. If it is in the Venn diagram, the entry content is entered into the venn diagram and stored in the database

Use Case 4: Venn Diagram Entry Storage

Description

If the user drags an entry into the venn diagram, the entry will be stored in the Venn diagram, but in order to prevent too many entries, the entry will exceed the boundary of the venn diagram

Precondition

A function that can monitor the boundary of the venn diagram, and can detect and fold over the entry when the entry exceeds the boundary.

Postcondition

If the program detects that after one side of the venn diagram exceeds the fixed number of displayable entries, the later entries will be Overlapped.

Use Case 5: Set Title

Description

Users can use this set title button to change the names of the two categories. This is a completely customizable feature for customers. Users can change any name. This also greatly improves the practicality of the Venn diagram.

Precondition

The user must successfully log into the venn diagram, otherwise this feature is not available.

Postcondition

The input name cannot be empty or too long , otherwise it will show “please enter a valid entry”. After setting the title name, the title name at this time is immutable. To change it, use another button.

Use Case 6: Change Title

Description

The user can use this button to change the already-titled title name, which is similar to set title. This function is also completely provided to the user, which improves the high degree of freedom of the venn diagram.

Precondition

The user has defined the name of the venn diagram category, which means that the user must have used the set title button function.

Postcondition

The post-condition is similar to a set title. The redefined title must not be empty, otherwise the software will prompt "please enter a valid entry"

Use Case 7: Change Color

Description

This button function provides the user to define the background color of each category, making the UI interface of the entire venn diagram closer to what the user wants, and increasing the degree of freedom of customization.

Precondition

The user must register and login successfully to enter the main interface of the venn diagram.

Postcondition

There must be a category, the existing category cannot be empty. After selecting the color, you must press OK, otherwise it will not be saved

Use Case 8: Clear All

Description

This button function is provided to the user to eliminate all input. The user has entered a lot of content, but when you are not satisfied with the input content, deleting one by one is obviously not user-friendly. This button is provided to the user to clear all content at once and return to the initial state.

Precondition

The clear all button will only work if the user has already entered something. When it is completely blank, the clear all button will not work.

Postcondition

All interfaces will be reset, including the color and input content, back to the state where the venn diagram was initially entered.

Use Case 9: Export Button

Description

This button function is provided to the user to export the data in a user's current session. When the user has created alot of entries and is satisfied with the information, they want somewhere to put that information and access it later.

Precondition

The Export Button will only work when the user has existing entries in their current session. If there are no entries the button will not work.

Postcondition

All entries and their respective sides will be stored into an .xlsx file of your choice. You may close the application or continue using it.

Use Case 10: Import Button

Description

This button function is provided to the user to import the data from a .xlsx file into their current session. When the user wants to use entries that they created or exported from a previous session they can bring it into their current session with all their previous changes being erased. It allows for the user to exit and come back to where they left at.

Precondition

The Import Button will only work when the user chooses a file that has the same formatting as an exported file and agrees to delete the current state of the application. If the file is invalid it wont work.

Postcondition

All entries and sides stored on the .xlsx file will be displayed on the application

Use Case 11: Undo Button

Description

This button function is provided for the user to Undo any previous action they took in the application. When the user does something such as create and entry or add a color they may want to undo all the things they did. It allows for users to do this easily.

Precondition

The Undo button will work only when the user has made a previous action in the application. If the Application is in its default state then nothing will happen when pressing the Undo Button

Postcondition

The application will be in its previous state from the most recent action taken in the application

Use Case 12: Redo Button

Description

This button function is provided for the user to Redo any previous action they undid in the application. When the user does something such as create an entry or add a color and then undid it, they may want to redo all the things they did. It allows for users to do this easily.

Precondition

The Redo button will work only when the user has made an undid action in the application. If the Application is in its default state then nothing will happen when pressing the Redo Button

Postcondition

The application will be in its undid state from the most recent action undid in the application

Use Case 13: Game Mode Button

Description

This button is provided for the user to enter the Game Mode on the application. When the user doesn't want to create information for their own use and wants to play a game with the application, Game Mode can serve this function. It allows for users to test their knowledge in the application.

Precondition

The Game Mode Button will work in any scenario when the application is open

Postcondition

The User will be welcomed and then the Game Mode window should open

Test Cases

Test Case 1 : Login or register successfully

Description

User should be able to login using correct credentials

Precondition

The user has a valid username and password stored in database

Acceptance condition

The user is able to login

Test Case 2: Login failed

Description

User should not be able to login using correct credentials

Precondition

The user has a no valid username or password stored in database

Acceptance condition

The user is not able to login

Test Case 3: Add new entry

Description

User should be able to add entries to the Venn Diagram

Precondition

The Venn Diagram is empty

Acceptance condition

The user is able to write custom entries and add them to the Venn Diagram

Test Case 4: Collapse more entries in a category

Description

Maximum entries on the Venn Diagram does not produce any overflow

Precondition

Venn Diagram has reached the maximum amount of visible entries in a zone

Acceptance condition

The entries begin to overlap each other while still being recognized

Test Case 5: Export edited file

Description

User receives a prompt to end the session and export file

Precondition

All entries have been placed into the Venn Diagram and the data is now ready for export as a csv

Acceptance condition

Once the appropriate button is clicked, an option to save an output csv file to the user's local hard drive

Test Case 6: Set Title

Description

User can use set title to set the name of the circle category

Precondition

The user successfully waited for the trip, and the content already exists in the category

Acceptance condition

Categories are attached with user-defined names and are immutable

Test Case 7: Change Title

Description

Users can use change title to change the defined category name

Precondition

Category name has been defined, and the changed name cannot be empty

Acceptance condition

Category name changed successfully, showing the changed name

Test Case 8: Change Color

Description

Users can change the background color of each category to meet the various needs of users

Precondition

The user has successfully logged in and entered the main interface of the venn diagram

Acceptance condition

The color of each category can be changed separately, and the colors of each category can be independent

Test Case 9: Clear All

Description

Users can use clear all to clear all data, including the background color of the category

Precondition

The venn diagram used must be edited and there are one or more changes

Acceptance condition

All entries are cleared, the category name becomes blank, and the background color returns to the original white

Test Case 10: Export

Description

Users can use Export to move all their entries into a .xlsx file and keep it for future use.

Precondition

The venn diagram has existing entries in it

Acceptance condition

The entries are successfully saved into the file of choice

Test Case 11: Import

Description

Users can use Import to move all the contents in a .xlsx file with the same format as an exported file into their application.

Precondition

A valid file is chosen and consent is given to continue

Acceptance condition

The entries on the .xlsx file are successfully placed onto the application

Test Case 12: Undo

Description

Users can undo any action they took in the application using this button

Precondition

The application must have at least one action taken for anything to be undone

Acceptance condition

The application is back in a state where the most recent action is undone

Test Case 13: Redo

Description

Users can redo any action they took in the application using this button

Precondition

The application must have at least one action undid for anything to be redone

Acceptance condition

The application is back in a state where the most recent undid action is redone

Test Case 14: Game Mode

Description

Users can enter the Game Mode by pressing this button allowing them to play the Game Mode of the application

Precondition

As long as the Application is open the Game Mode is accessible to use

Acceptance condition

The User is welcomed and the Game Mode window appears