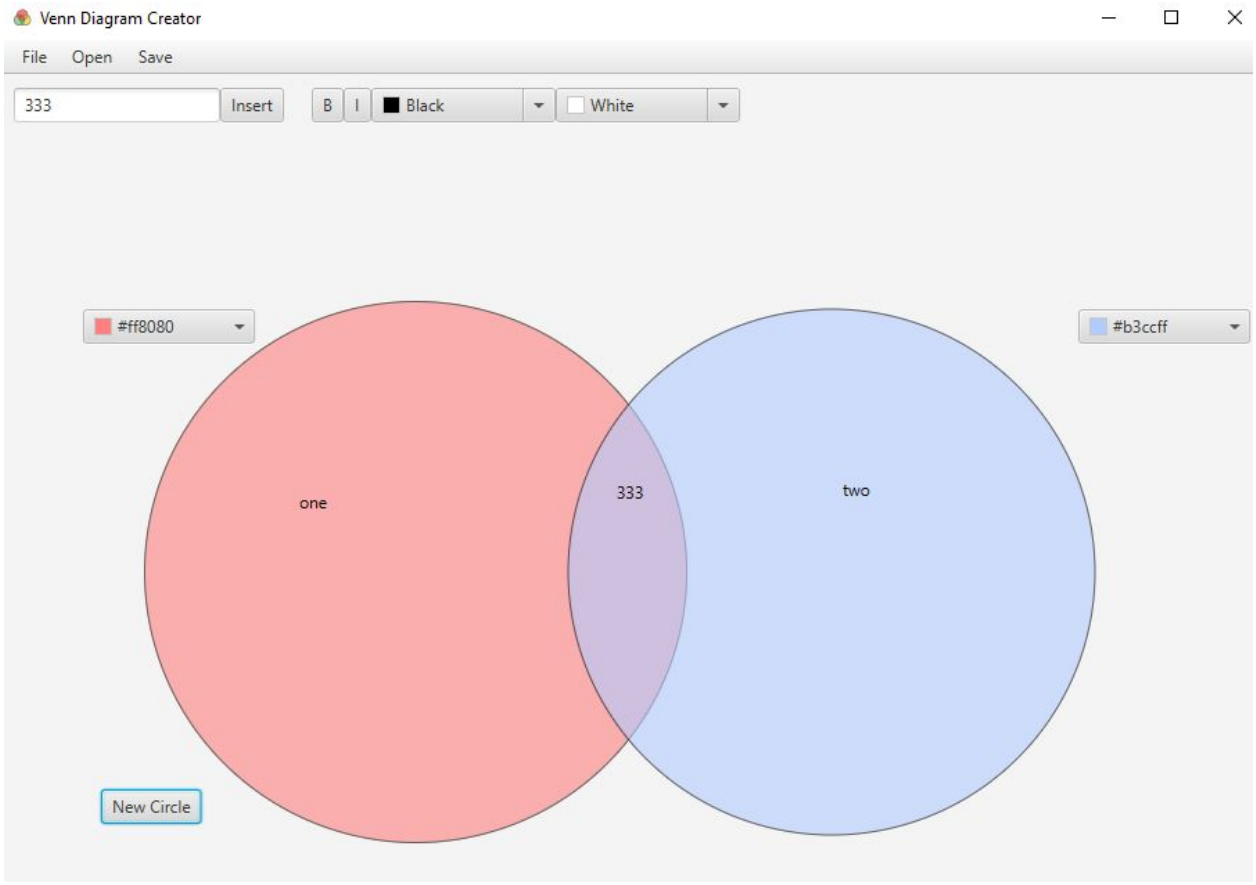
Midterm Submission: Group 1



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Requirements Document

What the System does for the Clients

To satisfy a customer's requirements best, there must be options for complete customizability, anything that is on the screen should be able to be changed. The base application consists of a simple non-customizable Venn diagram that drags and drops pre-loaded words with no customizability features. This base Venn diagram is a terrible design because it is limited by its size and customizability. The main customizable feature required to have a usable Venn diagram would be the resizability of elements. With this feature added the customer can add as many words into the diagram, and the Venn diagram would accomplish the base job. However, this is just the bare minimum as our application will provide everything that could possibly be needed in terms of customizability. Our application has various customizable features, such as; resizability and colour of the Venn diagram circles, optional font styles, colours, and sizes. And to neatly wrap up these features and keep them from clustering the screen, a pop-out toolbar will be created which will encapsulate all tools used to adjust the Venn diagram. Additionally, the application also has features that allow a file to be read and sorted into a Venn diagram, while also having the ability to manually input words for the Venn diagram. Furthermore, the application will have a save and load state which allows the client to save and load their previous work to progress on at a later time. Lastly, once the Venn diagram is completed by the client, they will have an option to export the final work to PDF for viewing.

Use Cases

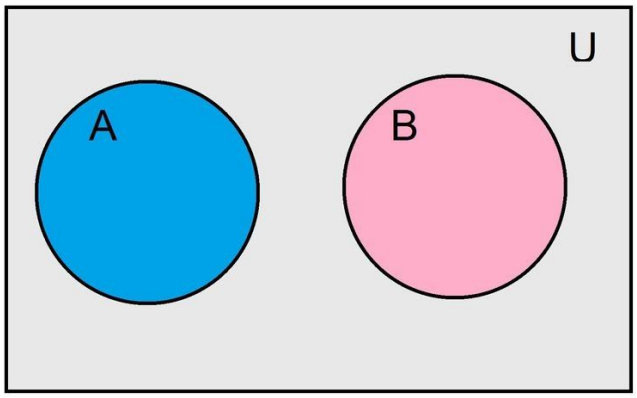
1. Given a word file containing certain numbers of values that each belong to 3 different categories: A, A U B, B.
    a. A and B are mutually exclusive, meaning A U B is empty
    b. A and B contain the same value, but they both have unique value, meaning A U B is not empty
    c. A and B are the same set, meaning A U B is A or B
    d. A includes B, meaning A U B is B (B includes A, meaning A U B is A)
2. Inputting values in the text field and using the drag-and-drop function
    a. A and B are mutually exclusive, meaning A U B is empty
    b. A and B contain the same value, but they both have unique value, meaning A U B is not empty
    c. A and B are the same set, meaning A U B is A or B
    d. A includes B, meaning A U B is B (B includes A, meaning A U B is A)

Acceptance Test Cases

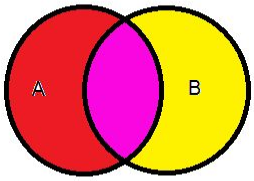
The following figures show how the Venn Diagram should appear position-wise. They do not reflect the colour, size or label. Those factors will be customizable.

1. User Case 1

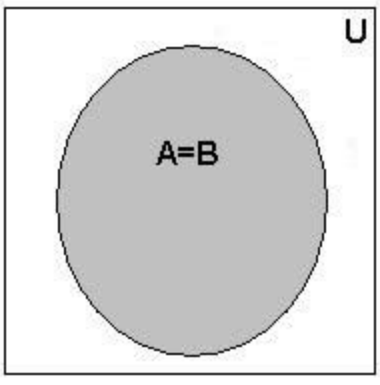
a.

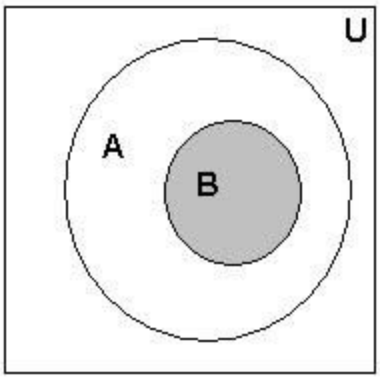


b.



c.



d. 

2. User Case 2 should have the same result position wise.

Venn diagrams for all 8 cases should all have customizable labels, sizes, and labels. These options need to be available to users in the most convenient way.

Testing Document

There are four test cases that we have implemented. Test case *a* is the situation in which neither of the Venn diagrams share any similarities and are their own two entities in the universe (figure 1a). Test case *b* is the scenario in which there are two venn diagrams which share features as well as having their own features (figure 1b). Test case *c* is the scenario where the two Venn diagram circles are completely identical (figure 1c). Lastly, test case *d* is the scenario where one Venn diagram circle is encapsulated within another Venn diagram circle (figure 1d).

These test cases were derived through the reality of outcomes. Assuming that we have two Venn diagram circles, the only possible arrangements are the test cases explained above. Even if additional Venn diagram circles were added, the number of base scenarios would remain the same, however, there could be a conjunction of test cases. For instance, if there were three Venn diagram circles there could be a layout combining figures *a* and *b,* where two circles would share similarities and the third would be unique to both.

The test cases listed above are sufficient because they are the only possible outcomes of the base case of having two Venn diagram circles. Any additional circles being added would result in a conjunction of the test cases.

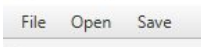
User Manual

Installation
In order to install and run the software, system requirements on the README available on the github must be met.
https://github.com/gagarao-melvin-216469637/Venn

After downloading and extracting the application from github, the user simply

Environment
Upon running the application, various options interfaces are available to be used. All of which can be used independent of one another.

Menu Bar



Each menu option can be extended upon being selected. The following is a textual representation:

- File
  - Exit: closes the application
- Open
  - Upload a Word file: opens a file select prompt
  - Basic Template: (currently not functional) resets to a default Venn Diagram
- Save
  - Screenshot: saves a .png of the current workspace
  - Venn file: (currently not functional) saves the workspace for future use

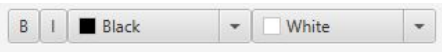
Text Generation

In order to generate custom text to drag and drop into the Venn Diagram, the user must:

1. Fill the *TextField* with text.

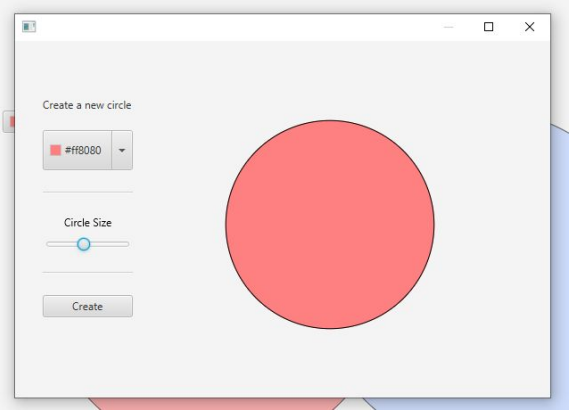
2. (Optional) Customize the text *bold, italic, fill,* and *background color*.

3. Finally, the user must confirm their decision by pressing the *Insert* button

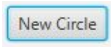
   

New Circle



If there needs to be another set region, it can be added and customized in a separate window through the *New Circle* button.

1. Press the *New Circle button* in the bottom left corner.



2. (Optional) Customize the circle's *color* and *size* while viewing the preview

3. Confirm the customizations by pressing *Create*