Software Requirements Document

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1.0 Purpose

This Software Requirements Document will be detailing what our project will need in order for it to be successful. It is intended for our design team and an agreement upon the customer in order to create a high quality end-product.

2.0 Definitions, Acronyms, and Abbreviations

Venn Diagram: A diagram representing mathematical or logical sets pictorially as circles or closed curves within an enclosing rectangle (the universal set), common elements of the sets being represented by the areas of overlap among the circles.

3.0 Overview

This requirements document will include a description of the software product for the customer, use cases and test cases.

4.0 The Overall Description

The software product to be produced is a customizable Venn diagram that inputs text into any form that the user wants. It will provide an easy way to create Venn diagrams that will receive texts as input. The main objective for this software will be not restricted to anything. The user is free to input and draag the texts as well as resizing the circle however he likes. Needs from the customer is to make this software user friendly and easy to use for anyone, provide customizability for the diagram, and having the functionality for any text based comparison that's free for the user's choice. Each circle in the diagram will be colour coded and will include its own legend based on its colour that includes a title and statistical calculations. The customer will be able to change the title of each section of the Venn diagram in the legend as well as customizable text color, size, and font. The customer will also be able to choose whether they want to change the format of adding text by having an automatic placement and resizing or going manual. Overall, this Venn diagram provides an easy way to input text into a diagram in a fully customizable and user friendly fashion.

Use Cases

Welcome Frame:

1) Open a Venn Diagram to edit

Brief Description – When the user needs to import a Venn Diagram the user selects Open.

Actors – The user of the Venn diagram.

Preconditions – The user has started the application.

Basic Flow – The user clicks on Open and navigates through their files to find their desired Venn Diagram to open in the main frame. Once the user clicks the file the user hovers over open and clicks it to open the Venn Diagram. The Venn Diagram appears open in front of the user and the user is free to modify it however they like.

Post Conditions – The user is now on the main frame.

2) Creating a new Venn Diagram

Brief Description – When the user needs to start a new Venn Diagram that uses new values the user selects Create.

Actors – The user of the Venn diagram.

Preconditions – The user has started the application.

Basic Flow – The user starts the application.

Alternate Flows – The user hovers their mouse over the Create button and clicks it. The user will be taken to the main frame where the default minimum 2 circles will appear with default titles and no text in them.

Post Conditions – The user is now in the main frame.

3) Exiting the application

Brief Description – When the user doesn't want to Open or Create a Venn Diagram.

Actors – The user of the Venn diagram.

Preconditions – The user has started the application.

Basic Flow – The user hovers over the Exit button and clicks it. The user will return to the page they were at before starting the application

Post Conditions – The user has exited the application.

Main Frame:

1) Inputting data

Brief Description – When the user needs to input data into the Venn diagram.

Actors – The user of the Venn diagram.

Preconditions – The user has chosen the number of circles, has selected his format option, and has continued form the welcome frame.

Basic Flow – The user will click on the Add Text empty box and input his text. He has the option to resize the text, change the font, change the color of the text, and change the color of the background behind the text. Then the user can hover over the Add Text button and click it to add the text to the main frame. Then the text will appear on the Venn Diagrams. The user has the option to drag the text anywhere he wants. The text will also appear as an object on the list beside the main frame.

Exception Flows – If the user has made a very large text it will not be fully displayed on the Venn Diagrams.

Post Conditions – The user has entered a text as input and it has appeared on the Venn Diagram.

2) Manipulating The Legend

Brief Description - When the user has added text or circles to a section of the Venn Diagram, the legend will appear, with a default title and object type displayed. The user will be allowed to edit the title.

Actors - The user of the Venn diagram.

Preconditions - The user must have already selected the number of circles and has continued from the welcome frame.

Basic flow - The user will navigate their mouse over to the legend that will have the Default text. Under the legend "Names" you can change the names of the circle or the text written without modifying its contents. Once the user has pressed on the default title the user can double click on the text to change it to whatever the user wants. The user can also change the color of the circle to make it easier to know what circle has what title.

Exception Flows - The user clicks out of the bounds of the text of the default title which causes nothing to happen.

Post Conditions - The user has created a title for the legend or modified a current one.

3) Adding/ Deleting circles

Brief Description - The user wants to add more circles, or delete existing ones to add more information that intersect.

Actors - The user of the Venn Diagram

Preconditions - The user has continued from the welcome frame and has at minimum 2 circles for deletion and at maximum 7 circles for addition.

Basic flow - The user has kept the default adder to 1. The user hovers over the Add button and clicks it. The user kept the default mode which is Automatic resizing, so the circle will automatically be added and resized to fit into the screen.

Alternate flows - The user can click on the number for the adder and change it or press the up arrow to go up to 7 circles added. The user adds 2-7 circles as many times as he wants before reaching the max. The user can input information on many circles now.

Alternate flows - The user can click on any of the circles in the legend and press delete to remove any circle the user dislikes or doesn't want until the user reaches the minimum.

Post conditions - The main frame now has between 2-7 circles depending on the actions done by the user.

Acceptance Test Cases

Scope
Included
- Desktop support
- Text input
- Able to add 2-7 circles with proper functionality

Excluded
- Mobile support
- Statistical Analysis
- Able to add circles beyond capacity

Welcome Frame:

1) Opening a Venn Diagram:

Step 1: Click on the Open button

Expected Result: A directory frame appears for the user to navigate and locate the desired Venn Diagram
Actual Result: A directory frame appeared for the user to navigate and locate the desired Venn Diagram

Step 2: Open the file that user wants

Expected Result: The file opens and the main frame appears.
Actual Result: The file opened and the main frame appeared.

2) Creating a new Venn Diagram:

Step 1: Click the Create Button

Expected Result: The main frame opens with an empty Venn Diagram.
Actual Result: The main frame opened with an empty Venn Diagram.

3) Exiting the Application:

Step 1: Click on the Exit button

Expected Result: The welcome frame disappears and the application exits.
Actual Result: The welcome frame disappeared and the application exited.

Main Frame:

1) Inputting Data:

Step 1: The user will click inside of the text box beside the Add Text button

Expected Result: An input will be added
Actual Result: Input was added.

Step 2: The user will click the Add Text button.

Expected Result: Inputted Text will appear in the circles.
Actual Result: Input Text appeared in the circles.

2) Manipulating The Legend:

Step 1: The user will navigate their mouse pointer over to the created legend and double click.

Expected Result: The default title will be highlighted to indicate the text is now editable.
Actual Result: The default title was highlighted.

Step 2: The user will enter whatever they prefer as a title and click off of the text field or press enter.

Expected Result: Their title now appears in the legend selected.
Actual Result: Title successfully appeared.

3) Adding/ Deleting Circles:

Step 1: The user will click on the Add Button

Expected Result: The button is clicked and another circle is added.
Actual Result: Another circle appears.

Step 2: The user selects one of the circles from the legend or main frame.

Expected Result: The selection is highlighted to show confirmation of selection.
Actual Result: The selection was highlighted.

Step 3: The user clicks the Delete button.

Expected Result: The selected circle gets deleted from the frame and legend.
Actual Result: The circle gets deleted.