**Venn Diagram Project:**

**Prototype User Manual**

**Group 4**

This Prototype Manual was prepared as a requirement for York University’s Software Development Project Course, EECS 2311.

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# Version History

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| --- | --- | --- | --- | --- |
| **Revision** | **Date** | **Author(s)** | **Section/Pages**  **Affected** | **Remarks** |
| Version 1 | February 9th, 2020 | Nabi Khalid, Nourin Abd El Hadi, Andrew Hocking, Anika Prova | Entire Document | Initial document, Subject to revision |
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# 

1. Introduction

## 1.1. Purpose

The purpose of the Venn Diagram program is simple, to provide a simple, clean, and concise Venn Diagram application that will surpass the basic Venn Diagram capabilities.

Table 1: Components Completed

|  |  |
| --- | --- |
| **Item** | **Interface/Feature** |
| **1.** | **It allows the user to take a screenshot of the Venn diagram and save the image to their computer.** |
| **2.** | **It allows the user to drag and drop text that they enter to any circle they want.** |
| **3.** | **It allows the user to add customizable titles for the diagram and each circle.** |

Table 2: Components to be Developed, see [Section 5: Future Work](#_5._Future_Work)

|  |  |
| --- | --- |
| **Item** | **Interface/Feature** |
| **1.** | **It will allow users to upload and compare images.** |
| **2.** | **It will be able to automatically check if there is a union.** |
| **3.** | **It will be able to download Venn diagrams as text files.** |
| **4.** | **It will be able to upload a text file and have the contents compared.** |

## 1.2. Scope and Scalability

The scope of this project is very large and broad, with lots of room for improvement. Some examples of the potential scale of this project include the addition of more than two sets in a Venn diagram, ability to save and load Venn diagrams, and the ability to add more than just text into a Venn diagram. These are only a few examples of the scope of the project; the Venn Diagram project is by no means limited to these. See [Section 5: Future Work](#_5._Future_Work) for more information.

## 1.3. Getting Started

Ensure Java is installed on your computer. If it is not, it can be obtained for free at <https://www.java.com/en/download/>. Next, download the Venn.jar file and double click on it to open it. Once the program has opened, you can then type in the text field that says “Add an item…” and click the add button to the right of the field. After that, drag the text to the desired section of the Venn diagram and let go of the text. Repeat until you are finished inputting text. You may click in the sections labeled “Title of Venn Diagram” and “Enter Title” and type in your own titles. Once you are satisfied with your Venn diagram, you can click the “Save Venn Diagram!” button at the bottom of the screen to save an image of your Venn diagram.

# 2. Features

This section describes the features of the final prototype for theVenn Diagram Project as well as if they are implemented yet or not.

Table 3:Features of the Venn Diagram Project

|  |  |
| --- | --- |
| **Feature** | **Description and Implementation status** |
| Screenshot | Takes screenshot of diagram and saves it. Implemented. |
| Drag and Drop | Drag text from one list to the different circles. Implemented. |
| Customizable Titles | Change the diagram’s titles. Implemented. |
| Automatic Union | Checks for duplicates and puts them in the centre of the Venn diagram automatically. Not yet implemented. |
| Comparing Images | Upload and compare images. Not yet implemented. |
| Delete Items | Delete items from Venn diagram. Not yet implemented. |

# 3. Usage Scenarios

The Venn Diagram is useful for any scenario in which one might want to compare and contrast two categories or things. It allows for an easy visual demonstration of the similarities and differences between any two categories or things. One can easily imagine hundreds of possible uses for this type of comparison. One can easily imagine hundreds of possible use cases for this type of comparison. Below is an example of one such use case, in which the Venn Diagram program being used to compare apples and oranges.

A Venn diagram comparing apples and oranges

|  |  |  |
| --- | --- | --- |
| **Usage Scenario # and availability** | **Usage Scenario** | **Expected Behavior** |
| 1 | Opening the Application | Access to entire UI |
| 2, after 1 | Clicking on Title Box (right above the Venn Diagram) | Granted access to type in desired title of Venn Diagram |
| 3, after 1 | Clicking on either of the Set Title Boxes | Granted access to type in desired title of Set |
| 4, after 1 | Clicking on the Data Entry Box | Granted access to type in data, limited to text only |
| 5, after 1, 4 | Clicking add after typing in data | Data added into text chart beside Venn Diagram, ready to place |
| 6, after 1, 4, 5 | Dragging and dropping text from the chart into a Set (or intersection) within the Venn Diagram | Text is added to set that it is dropped on top of, text disappears from chart |
| 7, after 1, 4, 5, 6 | Dragging and dropping text from one Set in the Venn Diagram to another | Text is removed from its previous set, and added to the set is dropped on top of |
| 8, after 1 | Clicking on settings (left hand side) | Granted access to change the colours of the titles, background of the Venn Diagram, sets, and size of the sets |
| 9, after 1, 8 | Clicking on the drop down colour menus, selecting one of the many available colours | Granted access to change the colour of the specified element (titles, background, sets) |
| 10, after 1, 8 | Dragging the size bar of each Set left or right | Changes the size of the set that the bar is associated with |
| 11, after 1 and any changes | Clicking export to image (left hand side) | Save the current state of the Venn Diagram as a .png file to a specified location, image only shows the Venn Diagram and its title |
| 12, after 1, changes | Clicking Save (left hand side) | Saves the current state of the Venn Diagram as a .venn file to a specified location |
| 13, after 1, changes, and 12 | Clicking Open (left hand side), finding .venn file, opening it | Opens the file finder on the computer, once .venn file is found, it can be opened, edited, and saved once again |
| 14, after 1, | Clicking Clear Diagram (left hand side) | Clears all text within the Venn Diagram, all text is sent back to item chart |
| 15, after 1, 6, 7 | Clicking Delete Item after clicking on a block of text | Deletes text from Venn Diagram and Item chart |

# 4. The User Interface

The user interface of the application is simple and intuitive. Below is a visual explanation of each part of the user interface and their individual functions:

**A:** The title of Venn diagram. The user can click this section and type in a custom title for the diagram. By default, this will be the name of the image saved when pressing the “Save Venn Diagram!” button, item D.

**B:** The title of the circles. The user can click these sections and type in custom titles for the individual circles in the diagram.

**C:** The circles. Each circle represents one category or object of the two that are being compared. The user can drag things from the list on the left (item F) into one or both of these circles. The centre section represents things shared by both circles.

**D:** Screenshot button. The user can click this button at any time to save the current Venn diagram as an image. The title of the image defaults to the title of the Venn diagram if there is a custom title provided (item A), or to “Venn Diagram” otherwise.

**E:** Item creation area. The user can type in the box labeled “Add an item…” a new item they would like to add to the Venn diagram. Pressing the “Add” button will add this new item to the list (item F).

**F:** The item list. Every item the user adds (item E) is added to this list. The items in this list can be clicked and dragged into the circles (item C) to add them to the Venn diagram.

**A picture containing iPod

Description automatically generated**

**E**

**F**

**D**

**C**

**B**

**A**

# 5. Future Work

Section 1.2 expanded briefly on the future of the Venn Diagram project; this section will provide necessary depth.

**1. Comparison of three sets in a Venn diagram**

In a future release, the Venn Diagram application will have the option to compare three sets (or potentially more) of data rather than just two. This allows even more flexibility for the user, as three or more sets result in many more intersections. The backend set intersection logic will be a challenge to implement however it can be done. This makes room for a much wider set of use cases to be appeased as well.

**2. Adding images and files into a Venn diagram**

In a future release, the Venn diagram will be able to support comparison of images and files, in addition to the comparison of text that it is capable of now. This also provides more flexibility to the user and opens up wider use cases.

**3. Saving and loading Venn diagrams (Version 1, Implemented)**

In a future release, the user will be able to save Venn Diagram states to a file and open it again later for further editing. This removes the need of keeping the application open to continue working with the Venn Diagram later on.

**4. Creating a login system, with users**

In a future release, users will be able to create their own accounts (with usernames and passwords). Accounts will have Venn Diagrams that the user made associated with them.