1.0 Introduction

1.1 Purpose

The purpose of this document is to provide a summary of the Venn Diagram desktop app, describe use cases, and describe acceptance test cases.

1.2 Scope

Venn Diagram Desktop app will be a desktop application that is used to create Venn Diagrams. It will run on Windows, MacOS and Linux platforms as a Java Application.

2.0 General Description

A Venn Diagram shows a representation of sets with elements in the universe and their intersection of it exists. Typically a Venn Diagram will have two sets represented by circles and elements within those sets. However, a Venn Diagram can theoretically have any discrete number of sets represented by any shape.

2.1 Application Description

The application will allow users to create a Venn Diagram with multiple sets and customizable esthetic options. Data for the sets will be received through user input or through a text file upload.

2.2 Overview of Functional Requirements

The functionality of this application will be that of a versatile Venn Diagram. This includes being able to choose between a range of shapes and colours for each set, and being able to add a number of elements to each set without sacrificing functionality or aesthetics.

2.3 Assumptions, Constraints, Dependencies

We assume that the users are familiar with the logic that goes into sorting objects into each set. We also assume that the functionality of the application is treated as a 3 set venn diagram and nothing more.
Constraints that are faced include the GUI that we are using, some functionality may be limited based on what JavaFX allows us to create.

3.0 Requirements

3.1 Functional Requirements

- The system must allow a user to create an item which will display the name.
- The system must allow the user to add items to the sets displayed on the Venn diagram
- The system must have customizability including:
    - Sizing of circle
    - Colour of the circle
    - Position of circle in the diagram
- The system must allow the user to delete items from the Venn Diagram
- The system must allow the user to save the state of a Venn Diagram
- The system must allow the user to load a saved state of a Venn Diagram
- The system must allow the user to export a Venn Diagram as an excel file.
- The system must allow the user to undo and redo states of the system
- The system must allow the user to refactor items

3.2 Non-Functional Requirements

- The Items within the item list will be sorted lexicographically.
- The user interface must be dynamic in sizing
- The user interface must have scalable components

3.0 Use Cases

001	
Goal	Creating an item
Precondition	None
Success End	Item has been created and listed

Failure End Condition	Item has not been created
Trigger	User prompts system to create an item
Success Scenario	1. User inputs text for item 2. (optional) user inputs amount of item 3. System creates an item and places it in a list.

002	
Goal	Creating a Group
Precondition	None
Success End	Group has been created
Failure End Condition	Group has not been created
Trigger	User prompts system to create a group
Success Scenario	1. User inputs shape 2. User inputs name of group 3. System creates a group and adds it to group list

003	
Goal	Inserting item into group
Precondition	Item exists in list Group exists in list
Success End	Item is added to group
Failure End Condition	Group has not been created
Trigger	User prompts system to insert an item into group
Success Scenario	1. User selects item(s) 2. User selects group(s) 3. User prompts system to add item(s) to list 4. System adds selected item(s) to lists

004	
Goal	Change circle colour
Precondition	None
Success End	Circle has changed colour
Failure End Condition	Circle remains the same colour
Trigger	User prompts system to change colour
Success Scenario	1. User requests to change a circle colour 2. System prompts the user to select a circle to change the colour of. 3. User selects the circle to change the colour of. 4. System prompts the user to select a colour to change the circle to 5. User selects the colour 6. System changes the specified circle to the desired colour.

005	
Goal	Delete an item
Precondition	Item exists in the list or in the diagram
Success End	Item is removed from the system
Failure End Condition	Item still exists in the system
Trigger	User prompts the system to delete an object
Success Scenario	1. User selects items. 2. User requests to delete the selected items from the system 3. System deletes the item from the diagram and list

006	
Goal	Change circle size
Precondition	None

Success End	Circle size has been changed
Failure End Condition	Circle size is the same
Trigger	User prompts system to change the size of a circle
Success Scenario	1. User prompts the system to change the size of the circle to the desired size. 2. System changes the size of the circle to the desired size.

007	
Goal	Identify the group the item belongs to
Precondition	Item exists
Success End	System displays the group
Failure End Condition	Circle size is the same
Trigger	User prompts system to change the size of a circle
Success Scenario	1. User prompts the system to change the size of the circle to the desired size. 2. System changes the size of the circle to the desired size.

008	
Goal	Move circle location
Precondition	None
Success End	Circle has moved locations
Failure End Condition	Circle location remains the same
Trigger	User prompts system to move the location of a specified circle
Success Scenario	1. User prompts system to move the location of a desired circle 2. System moves the specified circle to the specified location

009	
Goal	Save a state
Precondition	None
Success End	State has been saved
Failure End Condition	Unable to save the state of a venn diagram
Trigger	User prompts system to save the current state of the Venn diagram
Success Scenario	1. User prompts system to save the state of the venn diagram 2. System prompts the user to select a desired location to store the state file. 3. User selects a location to store the state file. 4. System saves the state of the diagram in a file at the specified location.

010	
Goal	Load a save file
Precondition	A file saving the state of the venn diagram exists.
Success End	System loads the saved state into the program
Failure End Condition	System notifies user of failed load
Trigger	User prompts system to load a save file.
Success Scenario	1. User prompts system to load a saved file 2. System prompts user to select the desired file to load 3. User selects the desired save file to load 4. System loads the file into the program and displays the state

011	
Goal	Export state as excel
Precondition	A file saving the state of a Venn diagram as an excel file
Success End	System saves the state as an excel file
Failure End Condition	System notifies user of failed export
Trigger	User prompts system to export state as excel file
Success Scenario	1. User prompts system to export the current diagram state to an excel file format. 2. System prompts user to select the desired location for the exported excel file 3. User selects the desired location for the exported excel file 4. System exports the state as an excel at desired location

012	
Goal	Undo the most recent action
Precondition	An action has previously been made
Success End	System has reverted to the previous state
Failure End Condition	System remains in the current state
Trigger	User prompts system to revert to the previous state
Success Scenario	1. User prompts the system to revert to the previous state 2. System reverts to the previous state reflected through the diagram and items list

013	
Goal	Redo to a previously made action

Precondition	An action has previously been made
Success End	System has changed to a previously undone state
Failure End Condition	System remains in the current state
Trigger	User prompts system to a state that the system had previously been in
Success Scenario	1. User prompts the system to change to a state from which it was previously reverted from 2. System changes to a state that was reverted to previously, reflected in the diagram and items list.