EECS2311-W20 Project: Venn Create

Chidalu Agbakwa (216337784) Jihal Patel (216376436)
Shangru Li (214488993) Robert Suwary (215446016)

January 24, 2020

Revisions

Date	Revision	Description
24 January 2020	1.0	Initial release of this document

Requirements Document:
Venn Create

Contents

List of Figures

List of Tables

1 Purpose of Venn Create

The system under development is a desktop app that can draw customizable Venn diagrams.

A Venn diagram (also called primary diagram, set diagram or logic diagram) is a diagram that shows all possible logical relations between a finite collection of different sets. It is a great way to present relationships between sets of objects, such as set intersection or set difference.

By using Venn Create, user can easily create Venn diagrams with customized labels, in different size and shape. Which can be used to compare and contrast two or more objects, events, people, or concepts. Clearly illustrating the differences and similarities between different entities.

Venn Create provides a user-friendly interface, so that new users will be able to use the application with minimum efforts. In addition, the application provides essential functionalities, such as export/import existing Venn diagrams, printing and customized theming.

2 Document Conventions and Dictionary

- **Venn diagram**: a diagram that shows all possible logical relations between a finite collection of different sets.
- **acceptance test**: a test conducted to demonstrate to the user (or customer), prior to delivery, that their requirements for the product are met. In this document it is a sequence of actions that the user may perform at the User Interface (e.g. `at1.txt`) and the expected response of the system to those actions (e.g. *at1.expected.txt*). Acceptance tests help to validate that the system is "fit for use".

3 High level goals

The high level goals are:

G1: Draw and display customizable Venn diagrams created by users.

4 Use Case Diagram and Textual Use Cases

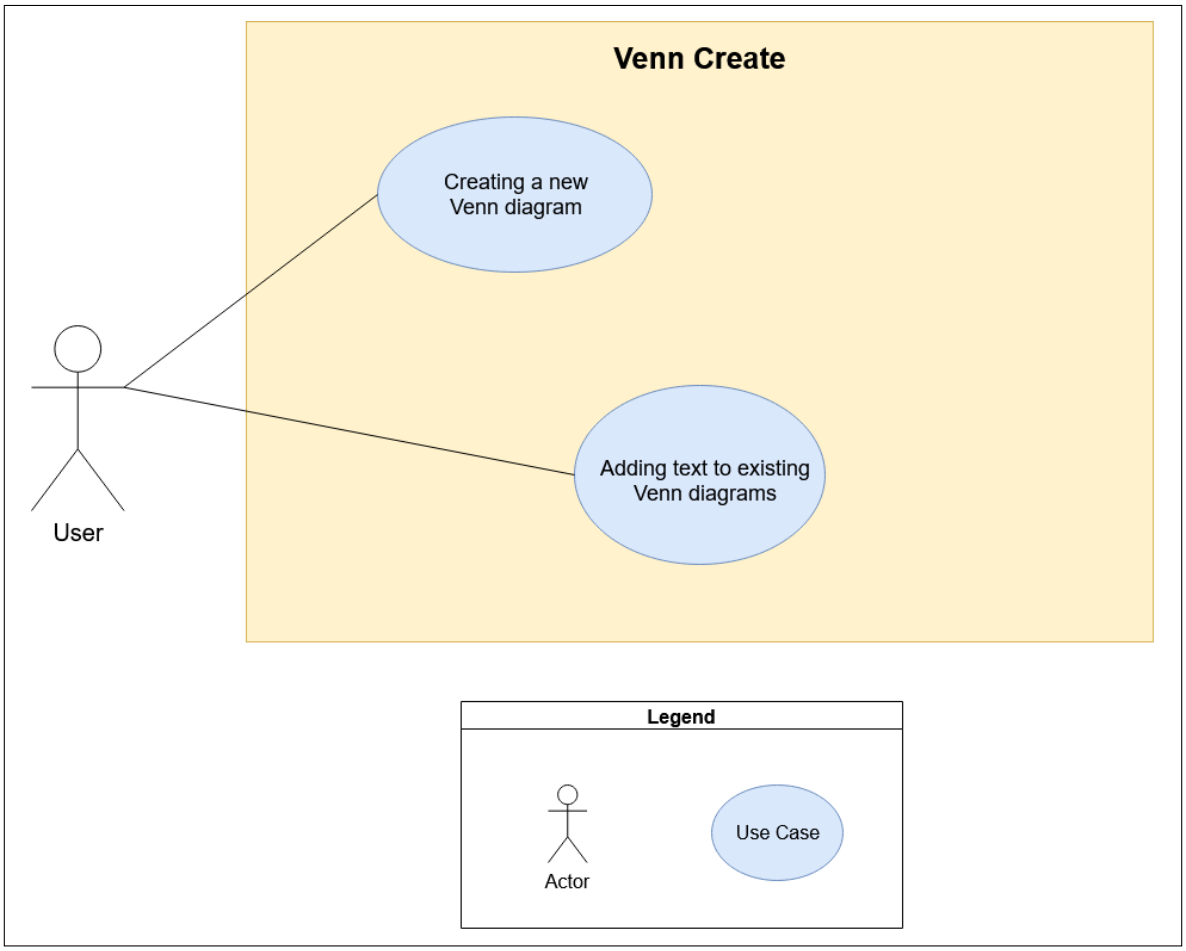

Figure 1: Use Case Diagram

Use Case Textual Description 1

Use case at1: Adding a Venn Diagram

This use case describes the operation of a user adding a new Venn diagram to the application.

Related System Goals: G1

Primary Actor: User

Precondition:
User have already opened the application.

Postcondition:
A new Venn diagram has been added to the application.

Main success scenario:

1. The user may view the existing Venn diagrams displayed on the application (if there is any), and familiarize themselves with the user interface of the program.
2. When ready the user will add a new Venn diagram to the application.

Use Case Textual Description 2

Use case at2: Adding text label to existing Venn diagrams.

Given that at least one Venn diagram exists in the application, this use case describes how a user add a text label to an existing Venn diagram.

Related System Goals: G1

Primary Actor: User

Precondition:
At least one Venn diagram exists in the application.

Postcondition:
A text label is added to an existing Venn diagram.

Main success scenario:

1. User chooses which Venn diagram to add the new text label.
2. User type in the content of the new text label to be added.
3. The text label is added to the corresponding Venn diagram.

5 E-Descriptions: Environmental Constraints

ENV1	The application will run on desktop computers.	Traceability reference: see Purpose.

6 R-Descriptions: Functional Requirements

REQ2	User shall be able to add new Venn diagrams to the application.	Traceability reference: see High level goals, Purpose and acceptance test at1.

REQ3	User shall be able to add text labels to the existing Venn diagrams.	Traceability reference: see High level goals, Purpose and acceptance test at2.

7 User Interface

This is the user interface of Venn create.

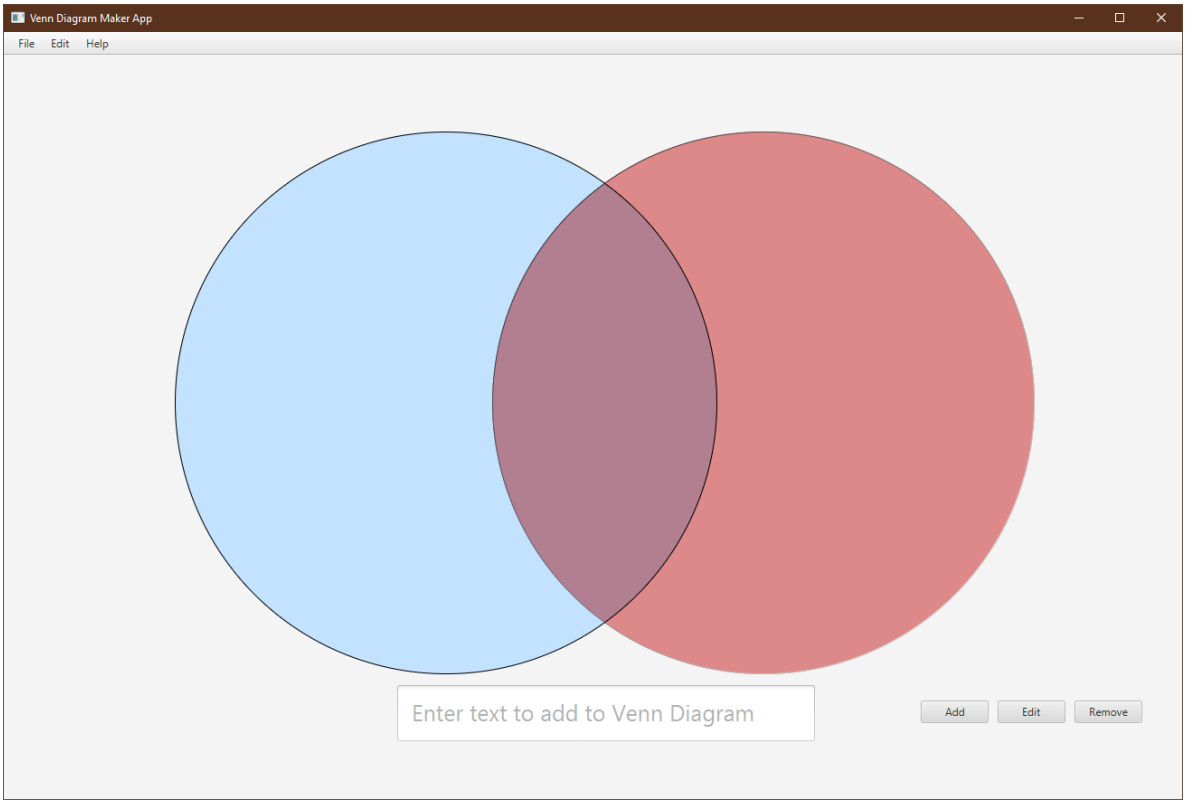

Figure 2: User Interface of Venn Create

8 Acceptance Tests

The table below describes the relationship between our use cases and concrete acceptance tests.

Use Cases	Description	Acceptance Tests
UC1	Adding a Venn diagram	at1
UC2	Adding a text label to existing Venn diagrams.	at2

Table 1: Acceptance Tests for each Use Case

The following pages contain detailed descriptions of acceptance tests at1-at2.

Acceptance Test at1

Purpose: Testing the add Venn digram functionality

Category: Basic

Precondition:
User has successfully opened the application.

Reproduction Steps:
1. In the menu bar, click 'File'.
Result: A menu bar drop down menu is displayed.

2. In the drop down menu, click 'Add Venn diagram'.
Result: A new Venn diagram is added and displayed on the application.

Acceptance Test at2

Purpose: Testing the add text label to existing Venn diagram functionality

Category: Basic

Precondition:
User has successfully opened the application.
At least one Venn diagram exists in the application.

Reproduction Steps:

1. Click the text field at the lower centre of the application.
Result: Text field should be ready to accept user input.

2. Type 'Foo' to the text field.
Result: Text field should now display 'Foo'.

3. Click the 'Add' button on the right side of the text field.
Result: A text label contains 'Foo' is added to Venn Diagram.

9 Traceability Matrix

The following table outlines which R-descriptions are tested by which acceptance tests.

REQ	at1	at2
REQ2	X	
REQ3		X

Table 2: Traceability matrix for R-descriptions