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| York University |
| Requirements Document |
| EECS 2311 – Software Development Project |

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Software Development Project  
Requirements Document

Version 2.0

Project: The Authoring App

Date: November 20, 2018

Prepared and Reviewed by: Abarna Kucheri Subburaman

# A. Introduction

## Summary

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|  | This document discusses the requirements needed for the development of the project. It describes the user needs, required features, acceptance test cases, and their sufficiency for this project. Further details are provided for the scope of the project and specific requirements requested by the client. |

## Objective

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|  | The Authoring App is built to be an accessible app aiding educators and providing them an opportunity to be inclusive of the hearing and visually impaired students. The objective of this app is to replicate a braille cell and its features in the virtual realm. We replicate the braille cell using Treasure Box Braille which is a software that teaches students on how to read Braille.  This app lets educators create question and answer scenarios to play in class and have the software give the corresponding message such as right or wrong when the students answer the questions by pressing buttons. The app is made accessible to accommodate a wide range of users. |

## High-Level Requirements

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|  | Based on the needs specified by the client, we have developed list of requirements necessary for a successful project. |

The app must satisfy the following requirements:

* Program must support accessibility features in order to be used through screen readers by the visually impaired users
  + The app should work seamlessly with screen readers
* Program must support at least two operating system platforms
  + The app supports Windows and Linux platforms
* Program must have a user-friendly interface
* Users should be able to use the program at ease, that is, users should be able to freely add, edit and delete actions in a scenario.
* Program must run without errors and host error logs with messages to indicate user is doing something wrong
* Program must maintain a simple format for user to see their input actions meanwhile still maintain the correct format for the scenario in order to play it through TBB

## Deliverables

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|  | There are two sets of final deliverables for this project. The product deliverable is the Authoring App, which is released as a JAR file, is the software program which supports the creation, modifications and simulation for a scenario. The project deliverables are the four types of documents requested by the client for this project and they are the Requirements Document, Design Document, User Manual and Testing Document. The end product is expected to be delivered by November 30, 2018 by the client and it should satisfy the criteria set by the client at the initial stage of development. |

## Assumptions

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|  | There were a few underlying assumptions made in the design process of the program. These assumptions were made to provide user with the most optimal experience. |

The following assumptions were made in order to narrow down the criteria of requirements for the project:

* User is familiar with the technology necessary to use this application
* User is fluent in the English language
* User is running software on one of the following platforms: Windows, Linux
* User understands the concept of braille cell and how to work with one
* User is comfortable working with and searching through different directories

# B. Project description

## About the Project

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|  | The idea for this project was brainstormed as an alternative for Treasure Box Braille. The Treasure Box Braille (TBB), is a device which displays words or characters in Braille and the users respond through the buttons. Given that TBB is still a relatively new technology, it is not very affordable for the average user. From the educators’ perspective, it is extremely expensive for the school to invest in a huge quantity of TBB to support full sized classes. The school and/or the organization’s budget can restrain educators from utilizing this device and incorporate it into their classrooms. This project provides an affordable, user-friendly app which educators, average user or visually-impaired, can use teach their students Braille. |

## Use Cases

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|  | A use case is a list of actions typically defining the interactions between the user and the system to achieve a goal. In the Authoring App, the user opens program to a main menu that has four possible action paths. The four paths are Create a Scenario, Edit Existing Scenario, Play a Scenario and Exit App. The table below explains the four different action paths and their use cases. |

Table 1: List of Use Cases for Main Menu of Authoring App

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| --- | --- |
| Use Case | Sequence |
| Play a Scenario | 1. System opens a File Chooser 2. User selects scenario file 3. System plays scenario in an interactive manner using the screen reader on device |
| Create a Scenario | 1. System opens a new window with a panel of button actions which the user can use to add actions to scenario. The window has a list which updates and displays all the current added events. 2. User can add scenario actions from two categories: General Actions and Braille Cell Actions. 3. Once user completes adding all the action events, user can save it as a text file in a directory of their choice and can either edit or play scenario at a later time. |
| Edit a Scenario | 1. System translates the formatted scenario file and loads it onto User Interface (UI) list. 2. System opens a new window with a panel of button actions which the user can use to add actions to scenario. The window has a list which updates and displays all the current added events. 3. User can make changes to existing events or add additional events to scenario. 4. Once user completes the modifications, user can save the changes to file. 5. System edits and appends changes onto text file. 6. User can access modified scenario file from the previously saved location. |
| Exit the App | 1. User is exited out of the application. 2. System closes the program. |

## Acceptance Test Cases

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|  | Acceptance Test Cases are formulated to evaluate the system’s compliance with the business requirements. It assesses whether the project is acceptable for delivery. The table below provides the results of acceptance testing for the Authoring App |

Table 2: List of Acceptance Test Cases for Authoring App

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| --- | --- | --- | --- | --- |
| ID | Test Cases | Expected Result | Pass/Fail | Date Tested |
| 3.1 | Running Program opens main menu | A new window show the list and all button components necessary to write a successful scenario | Pass | November 19, 2018 |
| 3.2 | User can press buttons and add events to list | Pressing action buttons show open smaller panels which allows user to enter the information and add element to list | Pass | November 24, 2018 |
| 3.3 | User can edit existing event in list | User should be able to change the selected line on list without affecting other events | Pass | November 24, 2018 |
| 3.4 | User can delete an event from list | User should be able to delete selected line on list without affecting other events | Pass | November 24, 2018 |
| 3.4 | Pressing back button takes user back to home page | Home page window is visible and user can navigate from the first step again | Pass | November 25, 2018 |
| 3.5 | Hovering over button with mouse enables accessibility features | User hovers over buttons and screen reader is able to read the title and description of specified buttons | Pass | November 29, 2018 |
| 3.6 | User presses save button to save scenario file | Scenarios are saved as text file in the correct format and can be accessed for later user | Pass | November 26, 2018 |
| 3.7 | User presses edit scenario button in home page to modify existing scenario | A file chooser window is opened to allow user to select file. Once file is selected, the app translated the formatted file and loads it onto list in UI | Pass | November 29, 2018 |
| 3.8 | Referring to user manual, user can use the keyboard shortcuts made available in app | The specified shortcuts perform the task and provide user with ease of access | Pass | November 30, 2018 |
| 3.9 | User selects file to play scenario and start simulation | Pressing play scenario button opens file chooser for user to select file. System is able to start simulation successfully provided the file is formatted correctly | Pass | November 29, 2018 |

## High-Level Timeline/Schedule

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|  | The design plan for this project has been established at the start of the semester after consulting with client regarding the requirements. There was a midterm release in February, 2018 but it failed to meet more than 50 % of the criteria set by the client. After receiving feedback from client, the app has been redesigned and developed accordingly. The project development is expected to be finished and deployed by November 30, 2018 as requested by client. The app is expected to meet all criteria and satisfy the client’s requirements for this project. |

## References

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|  | Guidance on project expectations from the professor and TAs  Java APIs which are provided by the Java Oracle  Format of report is derived from the default layout options in Microsoft Word |