WASHINGTON STATE UNIVERSITY
VANCOUVER

CS 320 Course Project Final Report

for

Rune Telling Website

Prepared by

Group Name: Rune Tellers

Samantha Deshazer	**011670519**	**Samantha.deshazer@wsu.edu**
Julion Oddy	**011704697**	**julion.oddy@wsu.edu**
Daniel Belousov	**011747698**	**daniel.belousov@wsu.edu**

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1 Introduction

RunicSpreads is a webpage that tells the user their daily fortune and can be used to generate random spreads of runes. The user can select the displayed runes from the spreads, each having their own unique meaning and reverse meaning, to get their unique meanings. The daily spread changes depending on the date at which the user accesses the webpage.

1.1 Project Overview

This project is being developed for user entertainment within the browser. The purpose of the overall system is to take in user input and output a response, the user's fortune, which will depend on the date on which the program is being used and the number of runes set for the spread. The features implemented will be within the browser's capabilities, such as use of cookies, JavaScript version and JavaScript enablement preferences set.

This project is evolving with work, the diagrams contained in this document are generalized for version one of this project as new features can be added later.

1.2 Definitions, Acronyms and Abbreviations

- Runes - Nordic symbols that each have different meanings, both literal and metaphorical.
- Spread – Different types of organizations when pulling runes to interpret said runes in different ways. IE a single rune spread relies on pulling and placing one rune, while a past/present/future spread relies on pulling 3 runes and placing them in an order that of the name suggests.

1.3 References and Acknowledgments

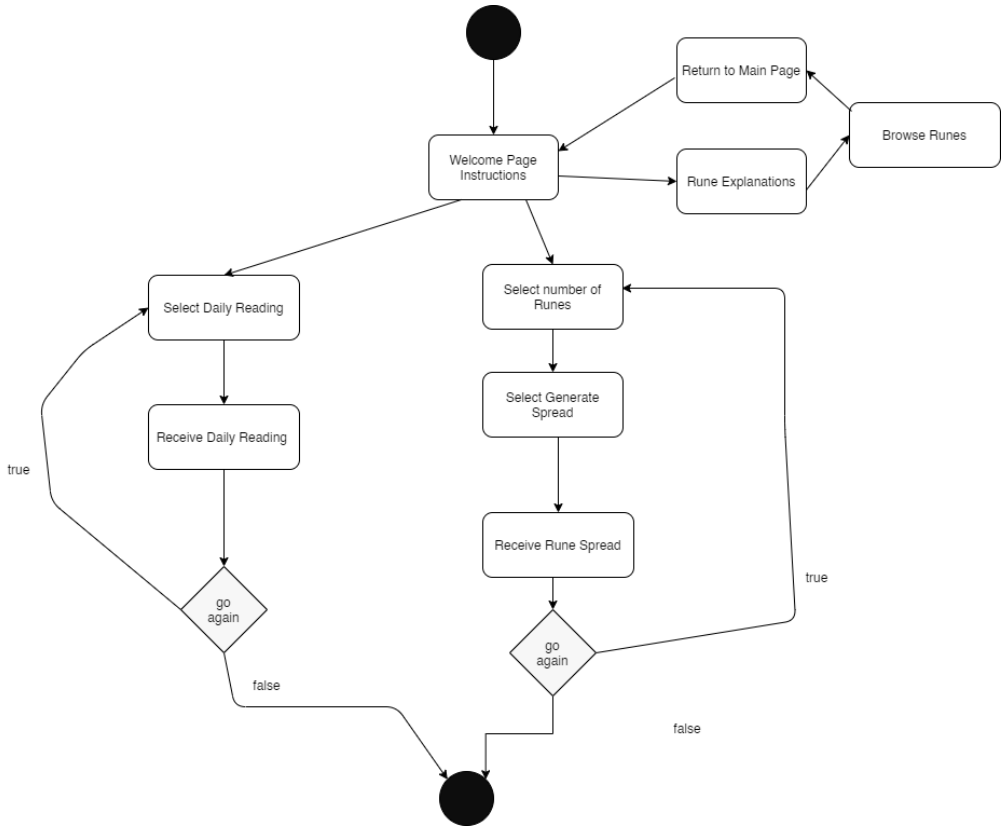
Claris, "Meaning of The Runes," *Rune Meanings - The Elder Futhark*, 14-Jun-2003. [Online]. Available: http://www.sunnyway.com/runes/meanings.html. [Accessed: 06-Nov-2020].

S. Wilcox, "Beginner's Guide To Rune Stone Casting," *Psychic Gurus*. [Online]. Available: https://www.psychicgurus.org/rune-casting/. [Accessed: 06-Nov-2020].

Help.syncfusion.com. 2020. System Requirements | Javascript | Syncfusion. [online] Available at: <https://help.syncfusion.com/js/installation-and-upgrade/system-requirements> [Accessed 15 December 2020].

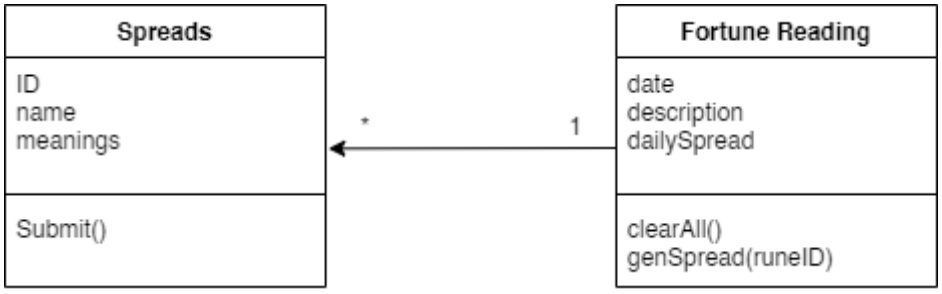
2 Design

2.1 Runic Spreads Website Activity Diagram

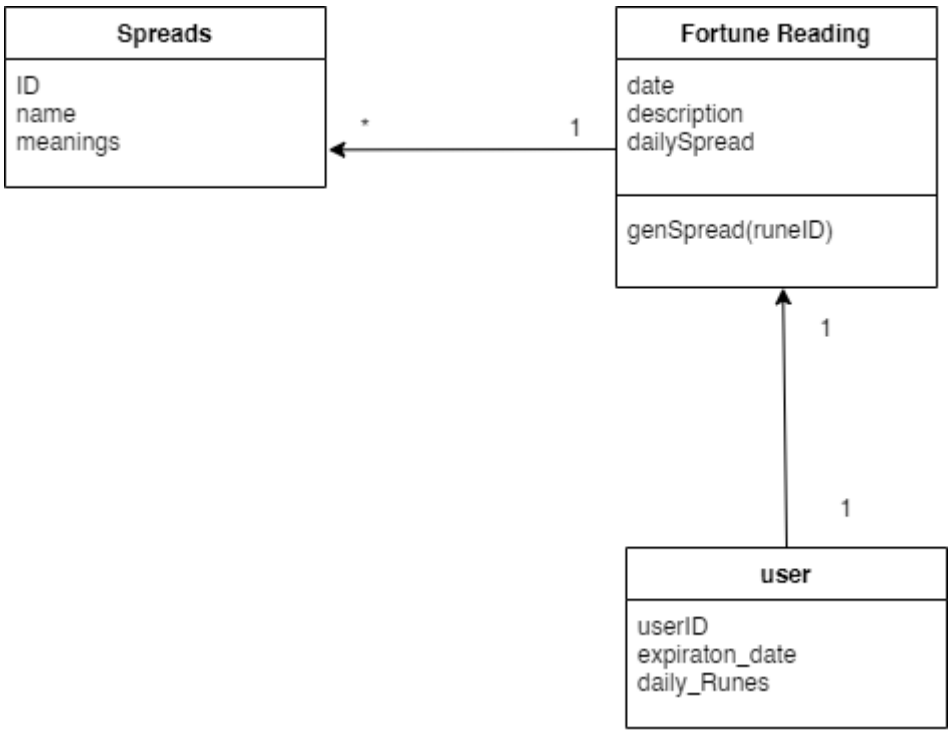


Upon visiting the webpage, the user can browse runes, reading their meanings in order to select a spread for fortune telling. The user may select more than one rune and generate a custom spread of runes (a maximum of 7 runes). The user is given their fortune, the user can choose to do either activity again.

Runic Spreads Class Diagrams

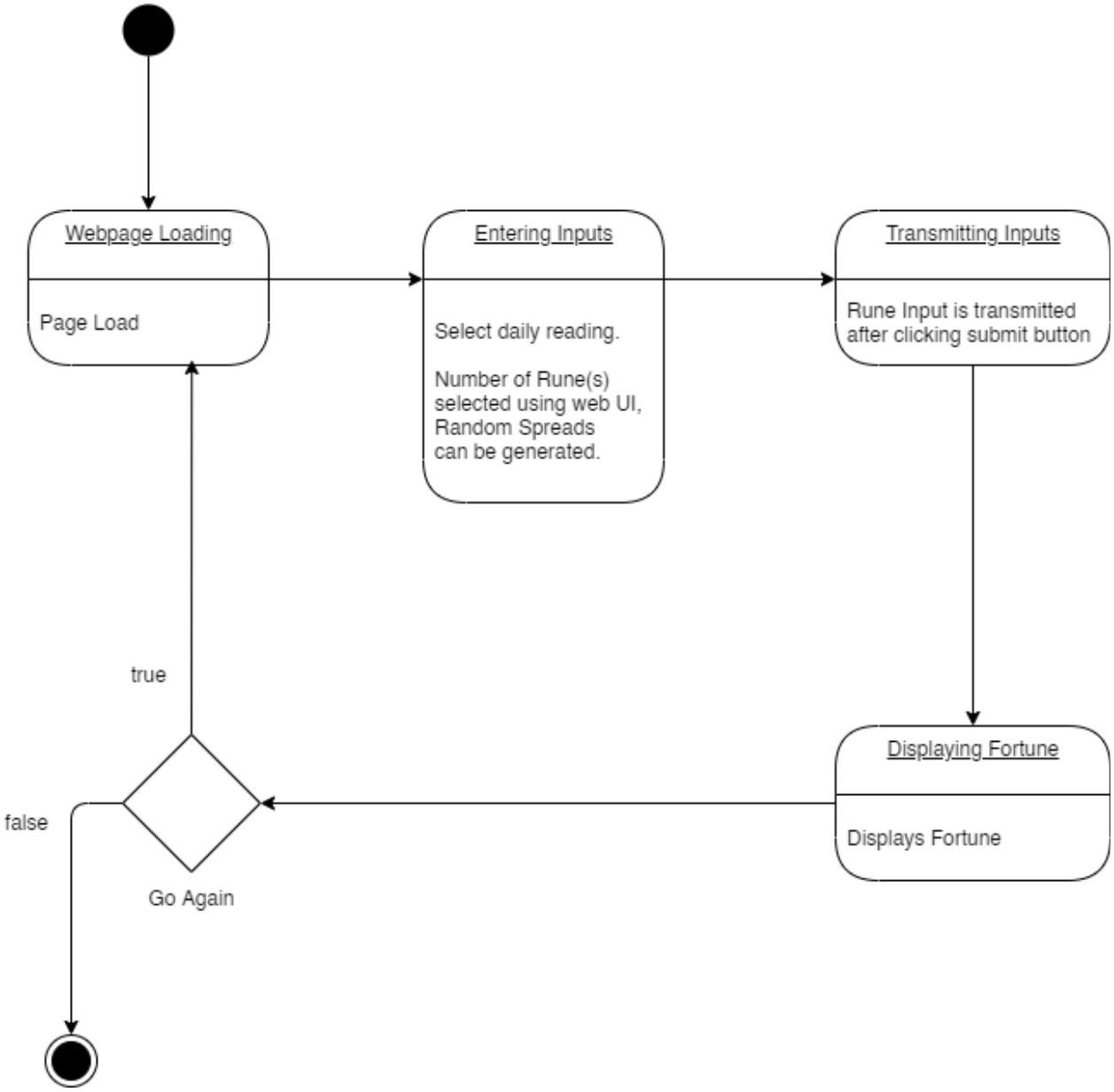


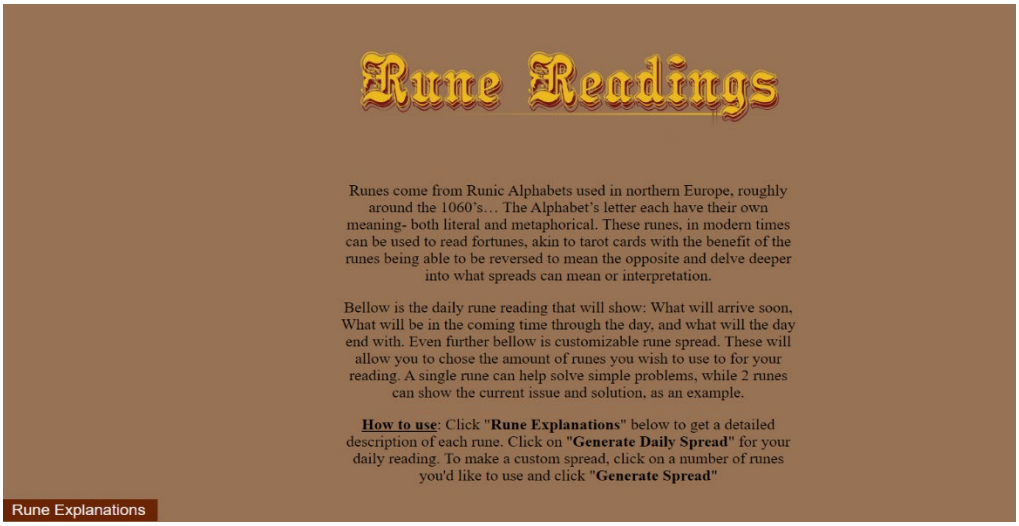
As seen in this generalized class diagram each rune spread has its own ID, name, and meanings, the user can submit the spreads for fortune reading, there can be multiple spreads to one reading. The reading will have a daily spread and a description of each rune.

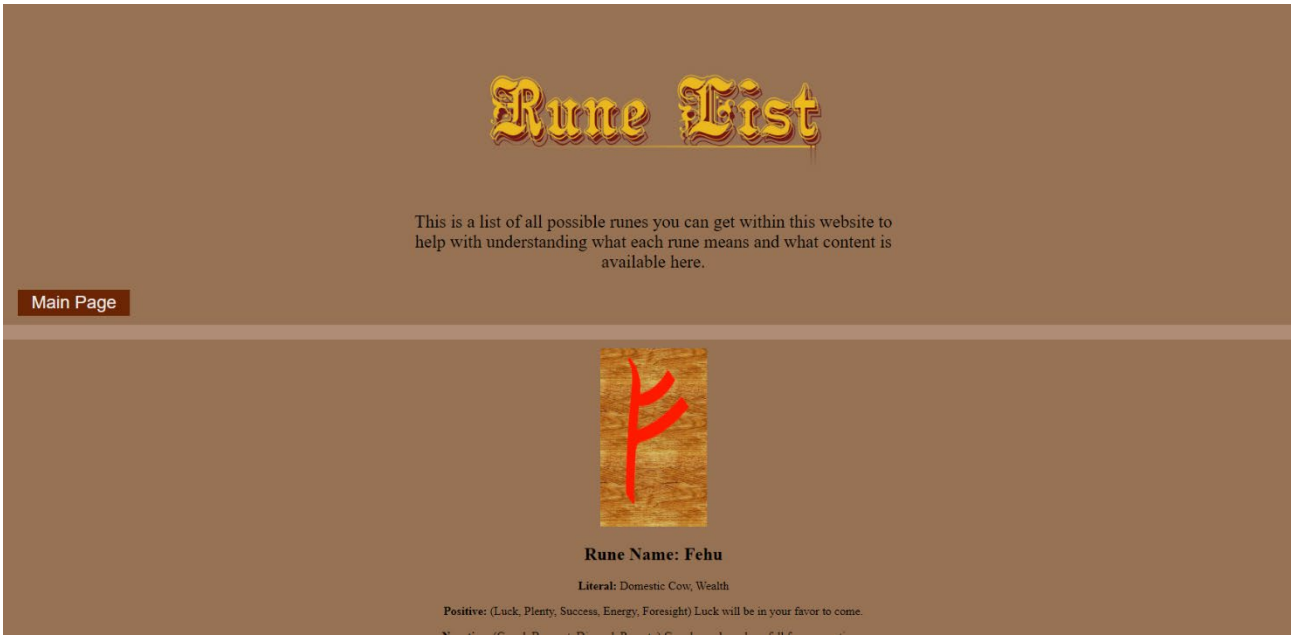


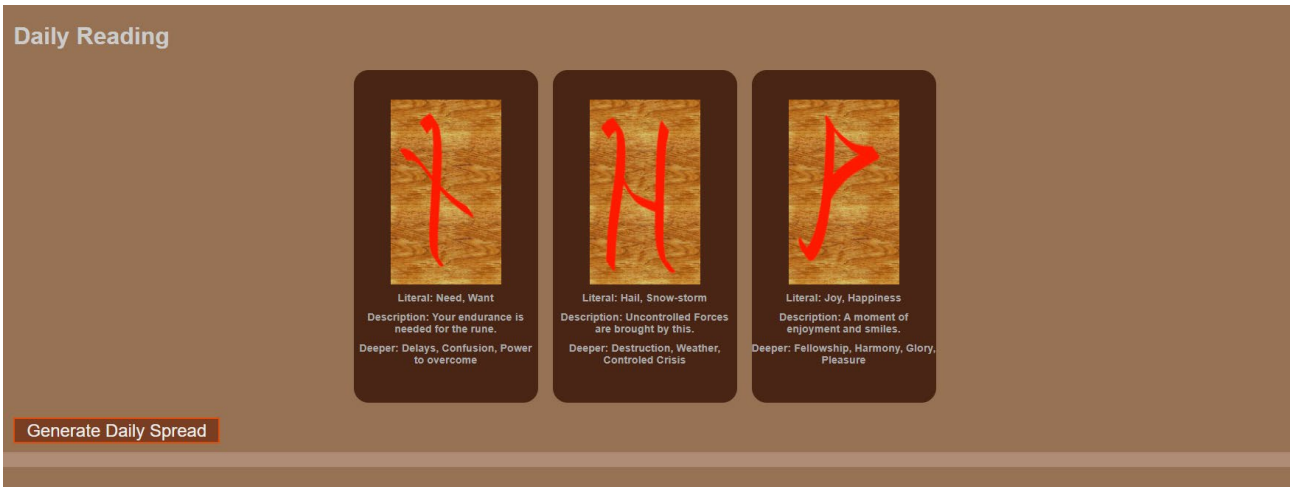
Building off the original class diagram, it is shown that each user has their own ID using cookies to attribute to the daily spread and expiration date. This is so the user cannot refresh the page for a new spread within a 24-hour time period. genSpread() is a method that allows new spreads to be generated.

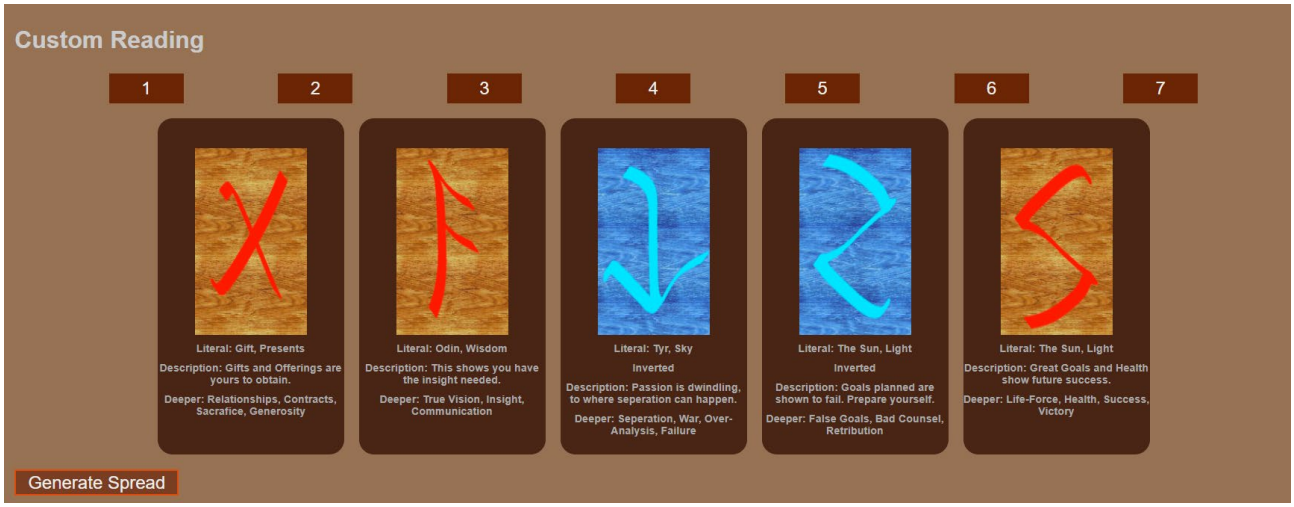
Behavioral State Diagram:




Rune Readings
Runes come from Runic Alphabets used in northern Europe, roughly around the 1060's… The Alphabet's letter each have their own meaning- both literal and metaphorical. These runes, in modern times can be used to read fortunes, akin to tarot cards with the benefit of the runes being able to be reversed to mean the opposite and delve deeper into what spreads can mean or interpretation.
Bellow is the daily rune reading that will show: What will arrive soon, What will be in the coming time through the day, and what will the day end with. Even further bellow is customizable rune spread. These will allow you to chose the amount of runes you wish to use to for your reading. A single rune can help solve simple problems, while 2 runes can show the current issue and solution, as an example.
How to use: Click "Rune Explanations" below to get a detailed description of each rune. Click on "Generate Daily Spread" for your daily reading. To make a custom spread, click on a number of runes you'd like to use and click "Generate Spread"
Rune Explanations


Rune List
This is a list of all possible runes you can get within this website to help with understanding what each rune means and what content is available here.
Main Page
Rune Name: Fehu
Literal: Domestic Cow, Wealth
Positive: (Luck, Plenty, Success, Energy, Foresight) Luck will be in your favor to come.





3 Implementation

3.1 Development Environment

Programming Languages Used:

- JavaScript
- HTML
- CSS

IDE's Used:

- Atom
- JSFiddle
- Windows/Linux Terminals

Other Tools:

- GitHub
- Image Hosting
- PhotoShop
- Dafont

3.2 Task Distribution

Daniel: Main functions of website, website hosting, color scheme.

Julion: Rune images, adjustments to website, descriptions and rules.

Samantha: adjustments to website, documentation, title images.

3.3 Challenges

Cookies were a challenge to work with in determining a daily rune reading. We successfully generated and checked a cookie's value but found storing the daily runes array in the cookie difficult as not to refresh and lose the data. These challenges can be seen in our secondary branches on our GitHub page. Making the webpage adaptable for mobile display was also a challenge. Keeping images from breaking out of place or getting skewed from the change in display ratio.

4 Testing

Summary:
We tested our webpage consistently by webhosting or running the html document. We tested user cases where the user may select daily spread or generate a random spread combination. Hosting the webpage also allowed us to test saved cookie data.

4.1 Testing Plan

Function	Priority
Runes	Having a list of runes, along with their value and description was the first step in development.
RandomRune	Ability to display a random combination of runes.
FetchRunes	Fetch randomly picked runes. This was important for custom spreads function.

GenSpread	Displays generated runes and assigns images and descriptions. This was used for both daily readings and generate rune activities.

4.2 Tests for Functional Requirements

Feature	Tests
Getting a Random Rune	Generating a random number between 0 and 23. Outputting the rune to console to check for correctness.
Inverting a Rune	Symbolizing an inverted run with a negative number. Outputting the array to console to check for correctness.
Generating a daily spread	Generating 3 random runes held in an array. Outputting the array to console to check for correctness.
Generating a custom spread	Fetching the number of runes dynamically from what amount the user chooses and outputting that amount of random runes. Outputting the array to console to check for correctness.
Browse runes page	Making a separate html page for descriptions of the runes for the user to read through.

4.3 Tests for Non-functional Requirements

Feature	Tests
Images for runes	Checking that each rune has a corresponding image that is displayed correctly.
Inverted runes	Adding an upside-down image and inverted css filter to the image of the inverted runes, making sure their value and images correspond correctly.

4.4 Hardware and Software Requirements

A capable modern web browser with JavaScript enabled must be used to view the webpage. Hardware can be a computer or mobile device with minimum processing power and memory.

5 Analysis

Daniel: About 20 hours total spent on coding up the main page HTML and css as well as getting the basic JavaScript to work on the custom spread buttons and cards. The most difficult thing for me was probably working on making the buttons properly affect the custom spread layout

Julion: Total of 4.5 hours on Documentation, and 5 hours of coding/material set up for the project in total. Most challenging was Document 1, really defining what we needed to do/produce and what we wanted.

Samantha: 8 hours total on milestone documentation and diagrams. 15 hours programming and learning how to use cookies. Cookies were not required but found it to be the most challenging for me.

6 Conclusion

This project helped us learn Git, JavaScript and CSS. We learned how cookies are created and parsed, we also learned how to effectively use branches and to communicate our errors and our fixes. This project taught us agile methods of development as our team would have once a week SCRUM meetings to discuss implementation over Discord.

Appendix A - Group Log

Our group met over Discord weekly to go over changes and possible ideas or fixes. This communication was crucial when working together on our version control, so we do not have merge conflict to the main branch. This communication was also critical for understanding each other's code and the flow of implementation of each feature.