

# SYSTEM REQUIREMENTS SPECIFICATION

**MVP**

## UF Moon Project

VERSION: 2

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## Section 1. Introduction

### 1.1 Purpose

*Specify the purpose of this System Requirements Specification (SyRS) and its intended audience.*

⇒ This document provides a description of the usage and requirements for the UF Moon Project web page for both the users and the administrator.

### 1.2 Business Context

*Provide an overview of the business organization sponsoring the development of the system, including the mission statement and organizational objectives of the business unit.*

⇒ Michelle Gould is a consulting astrologer looking to provide astrological forecasts to individuals that are interested. She operates out of Gainesville, Florida and she teaches at the Avalon School of Astrology. She serves on the board for Avalon, served for eight on the ISAR board and was a founding member of the Association of Young Astrologers (AYA), a nonprofit organization advocating for young persons in astrology.

### 1.3 Scope

*Describe the scope of the system to be produced.*

⇒ An astrological wellness web application that works as a stand-alone website, or within your online calendar (Google Calendar or Outlook) or smartphone calendar. Alternatively, the user can choose to receive information via text or email.

### 1.4 User Characteristics

*Identify each type of user of the system by function, location, and type of device. Specify the number of users in each group and the nature of their use of the system.*

⇒ Admin: Currently 1 Person, Michelle Gould, who will have access to the entire database of horoscope entries and the admin controller page, having sole permission to modify the contents of these entries. More admin users can be added at a later date.

⇒ Clients: (All other users) A user that has either created their account previously and wants to access settings or information about their astrological profile or a new user that wants to make an account with the website to get their astrological data/sign up for mailing list services.

## Section 2. General System Description

### 2.1 Project Context

- This system is a new web application that combines astrology's insight into the cyclical nature of time, growing literature on circadian cycles, Rudolf Steiner's theory of biodynamics, and aspects of mindfulness. This is a standalone website that allows users to sign in with personal information to calculate the astrological sign and house of the user. Users could also receive personalized astrological guidance in email messages or events in their google calendar based on their sign, house, and current moon phase.

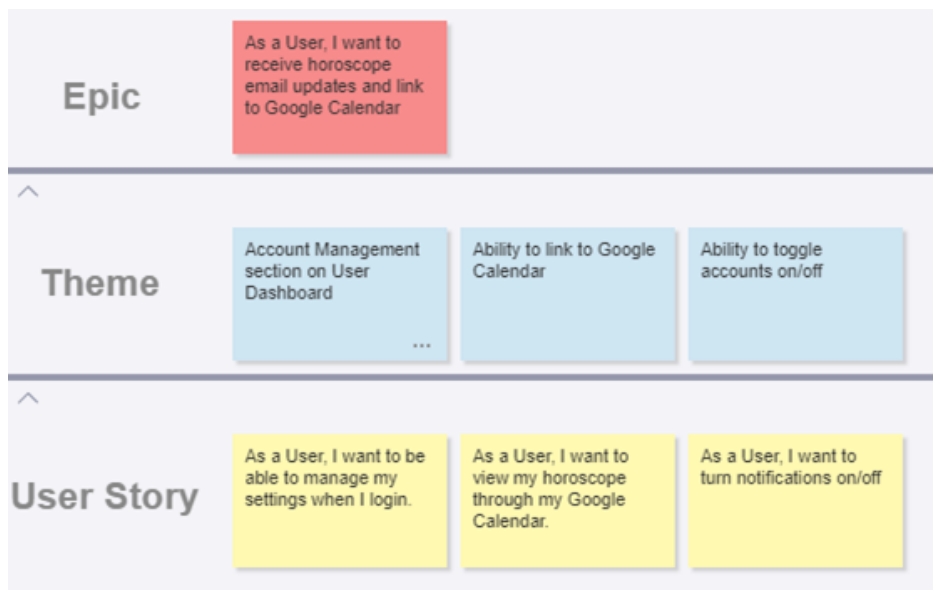
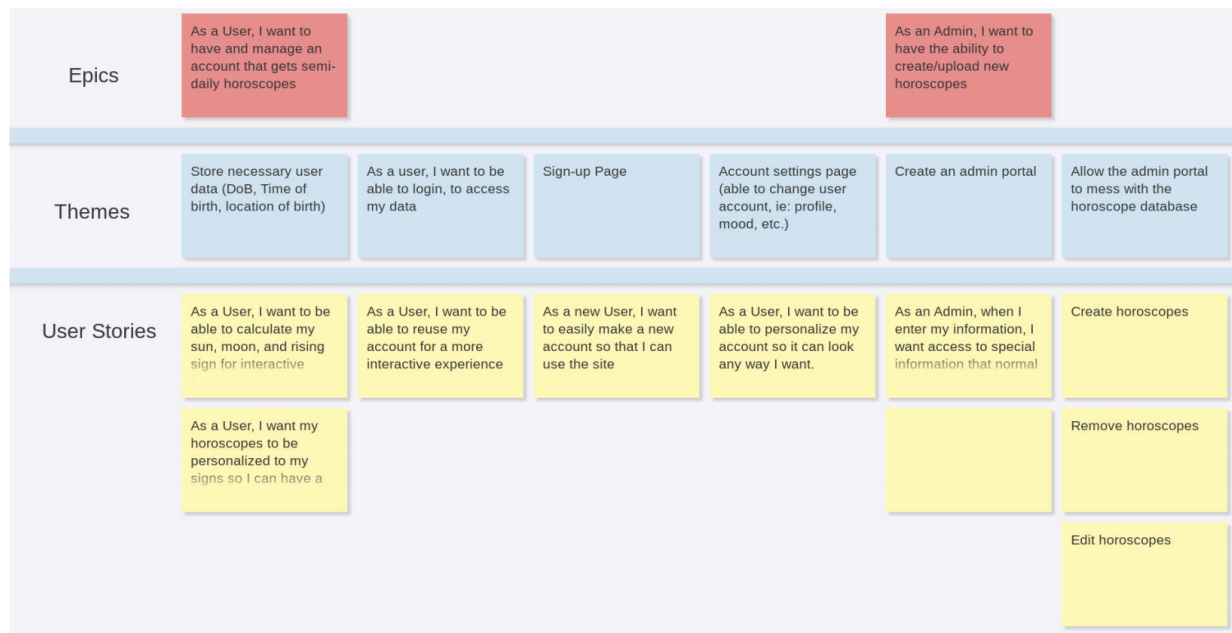
### 2.2 Modes and States

- The system is in the state of receiving user personal information (Name, date, time, place of birth, and etc.)
- The system is in the mode of calculating users' Sun position and the astrological ascendant for the date, time, and place of birth.
- The system is in the state of interacting with Google calendar to push user's horoscope information

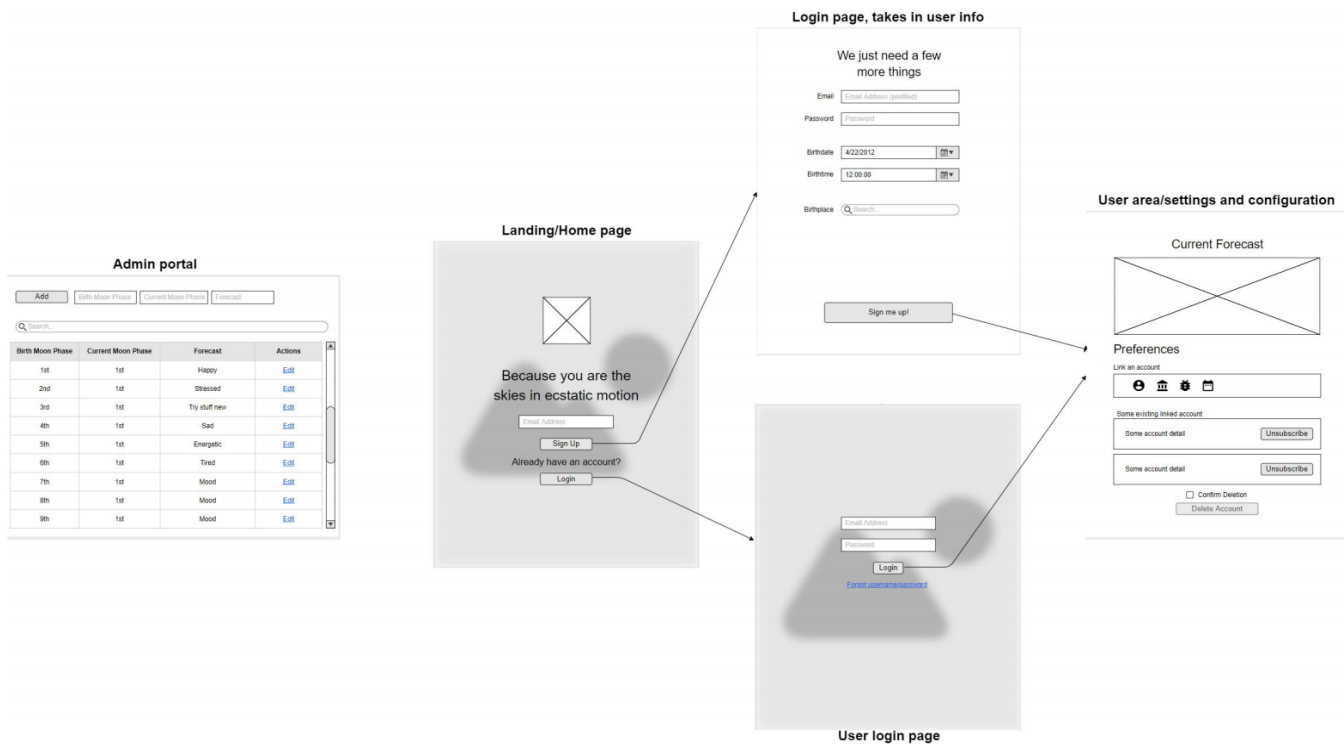
### 2.3 Main Condition, Capabilities, and Constraints

- MongoDB Database for storing user information and horoscopes
- Frontend for user experience and backend for data undertaking
- Cross-platform support for desktop and mobile
-

## Section 3. User Stories/Story map



## Section 4. Wireframes



## Section 5. Description of Features

### 5.1 User Features

⇒ User Sign Up Page - The user has the ability to input their first name, email address, password, date of birth, time of birth, and place of birth for initial sign-up. The email address and password will be saved in the database so that the user will be able to access their account in a future login. The Sign-Up button will redirect the user to the User Dashboard Page.

⇒ User Dashboard Page - The user has the ability to access settings after login, in order to change specific details about the user's account, such as email and Google Calendar settings. They can also link any unlinked accounts so things like Google Calendar can be authorized and enabled. Users also have the ability to view their personal information like their username, sign, house/ascendant, and current horoscope.

⇒ User Login page - The user has the ability to input an email and password and press the Login button. The Login button brings them to the User Dashboard Page.

⇒ Google Calendar Entries - The user can enable and receive Google Calendar Entries whenever the Moon changes phases. These entries will include within them a copy of the text from the horoscope corresponding to their respective sign, house, and the current moon phase. These entries will be created a week at a time, every Sunday at 12:00AM.

⇒ Emails - The user can enable and receive emails whenever the Moon changes phases. These entries will include within them a copy of the text from the horoscope corresponding to their respective sign, house, and the current moon phase. These emails will be styled and sent on the morning of the moon phase change.

### 5.2 Administrator Features

⇒ Administrator Page (Horoscope Filter/View) - The admin-user has the ability to filter through pre-existing horoscopes. This will allow the admin user to access existing horoscopes, view details, and facilitate the editing of the horoscopes. The edit button will redirect the admin-user to the Admin Edit Page and then back to the Admin Dashboard once the edit is saved.

⇒ Administrator Edit Page - The admin-user has the ability to make edits to quote, quote author, quote source, horoscope, best activities, moon theme, sign theme, and house theme. When edits are complete the admin-user can press the save button at the bottom to commit changes and return to the administrator page.

## Section 6. Description and Navigation for Admin Dashboard

### 6.1 Accessing Admin Portal

1. Type admin username and password on the login page
2. Press login or Return/Enter
3. You will be sent to the User Dashboard
4. You can then navigate to the admin dashboard at `https://mvp-heaven.herokuapp.com/AdminPage`
5. The admin page will only load if your account is considered an administrator, otherwise, it will redirect the user back to the User Dashboard.

### 6.2 Filtering Admin Portal Horoscope

1. Click the search bar above the Horoscope table.
2. Type a search query. The text portion is not case sensitive and will search in the summary field of the horoscopes. You can filter by parameters as well, such as `s=1` for 1st sign, `h=6` for 6th house, and `m=3` for the 3rd moon phase.
3. Press Return/Enter.
4. The filtered horoscopes can be viewed in the main table pain.
  - i. To clear the filter, either refresh the page or enter a blank search: "".

### 6.3 Viewing Admin Portal Horoscope

1. Click to select a horoscope from the table
2. The details can be seen in the details pane to the right-hand side of the dashboard.

### 6.4 Updating/Editing Admin Horoscope

1. Click to select a horoscope.
2. On the details pane, click the Edit button.
3. On the edit page, make the desired changes.
4. At the bottom of the page, click Save.
5. Your changes are now saved in the database.



## 6.5 Filter Examples

Below is a table of some example entries, followed by a table of search queries and which entries they match, with an explanation of why they match those entries

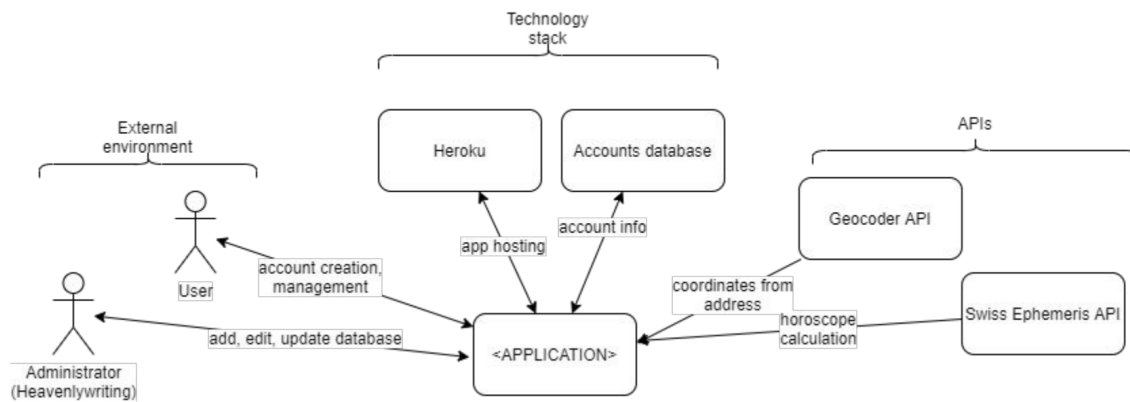
### 6.5.1 Table of Example Horoscope Table Entries

	House	Sign	Moon	Summary
<u>A</u>	1	1	1	A summary
<u>B</u>	1	5	2	A cool summary
<u>C</u>	5	3	3	Summary
<u>D</u>	2	3	3	Summary
<u>E</u>	5	4	6	Something else

### 6.5.2 Table of Example Horoscope Table Entries

Query	Matches	Reason
""	<u>A</u> <u>B</u> <u>C</u> <u>D</u> <u>E</u>	An empty filter will match anything
h=1	<u>A</u> <u>B</u>	<u>A</u> and <u>B</u> have a house of 1
h=1 s=3	<u>A</u>	<u>A</u> is the only one that has a house of 1 and a sign of 3
summary	<u>A</u> <u>B</u> <u>C</u>	The text filter is not case sensitive
a summary	<u>A</u>	Even though <u>B</u> 's "A cool summary" has all of the words, the text filter searches for the full text, including spaces
m=3 summary	<u>C</u>	Parameter filters and text filters can be mixed
summary m=3	<u>C</u>	Parameter filters can appear before or after search text
sum m=3 mary	<u>C</u>	" s=3 " is removed from the text filter, including the spaces, leaving "summary" for the text search, matching <u>C</u> but not <u>D</u> .

## Section 7. System Context Model



## Section 8. Technology Stack

Our Project utilizes the MERN stack to operate. The specific components are as follows:

Service	Use Case
MongoDB	Database entries (horoscopes, users, and session information)
Express	Communication between the frontend and backend via HTTP Requests (Routing)
React	Frontend components and the User Interface for both Clients and Administrator Users
NodeJS	Backend components that do the calculations, send emails, add calendar entries, etc
Various NPM Packages and APIs	We also use a variety of NPM Packages and APIs such as Material UI, Mongoose, Swiss Ephemeris, MomentJS, GeoTz, Google Places, Google OAuth2, Google Calendar, OpenCage, etc

## Section 9. System Requirements

### 9.1 List of API with Keys step by step

Google, NodeMailer, MongoDB, Sessions, and OpenCage all have API keys, secrets, and passwords stored in config.js. These keys are listed in the table below.

Service	Secret Name	Env. Var. Name	(Current) Secret Value
Google	[removed]	CLIENTID	[removed]
Google	[removed]	CLIENTSEC	[removed]
Google	[removed]	GOOGLE_KEY	[removed]
Node Mailer	[removed]	EMAIL_PASS	[removed]
Session	[removed]	SES_SEC	[removed]
OpenCage	[removed]	OC_KEY	[removed]
MongoDB	[removed]	DB_URI	[removed]

If new accounts are needed for these services, these values may be updated with the new ones from their accounts. For security reasons, these keys are not stored in the GitHub. To get your development environment up and running, create the file, relative to the project directory, server/config/config.js and paste the below code into it:

```
//This file holds any configuration variables we may need
//'config.js' is usually ignored by git to protect sensitive
information, such as your database's username and password
```

```
const config = {
  db: {
    uri: '[removed]', //uri here
  },
  openCage: {
    key: '[removed]'
  },
  session: {
    secret: '[removed]'
  },
  googleAuth: {
    clientID: '[removed]',
    clientSecret: '[removed]',
    apiKey: '[removed]'
  },
},
```

```
    emailPass: '[removed]'  
  };  
  
export default config;
```

## 9.2 Environmental Variables

The API keys from above must be placed in environment variables when deployed so that they can be accessed on the deployment server. Refer to the table in 9.1 for their environment variable names.

## 9.3 Log-In Credentials

All accounts use [removed] as the username and [removed] as the password. These accounts are:

- MoonFlow at <https://mvp-heaven.herokuapp.com/> -- For accessing the admin page
- Google at <https://console.cloud.google.com>
- OpenCage at <https://opencagedata.com/>
- MongoDB Atlas at <https://www.mongodb.com/cloud/atlas>
- Heroku at <https://dashboard.heroku.com/>
- GitHub at <https://github.com>

The only exception is FreshPing at <https://www.freshworks.com/website-monitoring/> which uses Astrologyheaven1 as the password.

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## Section 10. Project Handoff Guidelines

In continuing the deployment of this project, some things need to be considered so that optimal functionality is maintained. With the current deployment to Heroku, we use FreshSpring to ensure that the site remains online 24/7 by pinging it every 5 minutes. With the credit card on file in Heroku, this ensures that we have 1000 hours per month that we should never exceed. FreshSpring must be disabled if the credit card is removed from Heroku.

While Heroku could be used for the app as it grows, it may get expensive if the user base grows beyond Heroku's capabilities. Therefore, we recommend that future developers look into AWS EC2 for scalable cloud computing. It would require some more set up to ensure the backend can function and scale; however, it would also be cheaper.

For the deployment to Heroku, instructions on how to deploy from Github is located here: <https://devcenter.heroku.com/articles/git#creating-a-heroku-remote>. The Github account for heavenly writing has access to the Github repo and credentials are noted in section 9.3.

If the number of users using Google Calendar was to grow greater than 100, the app would need to be reviewed and verified by Google. The process by which you gain verification can be found at <https://support.google.com/cloud/answer/9110914?hl=en>. Google Calendar is considered a sensitive scope so you need to prepare a case for why Google Calendar access is needed (Adding horoscopes to the Google Calendar). This process can take up to 3-5 days for review.

The Swiss Ephemeris has some conditions around its use. There are two options available for this and both are noted on the Swiss Ephemeris website linked below ([https://www.astro.com/swissephe/swephinfo\\_e.htm](https://www.astro.com/swissephe/swephinfo_e.htm)) under the section "*How to license the Swiss Ephemeris*". In summary, the entire project must either be made free and open-source, or a license may be purchased from Swiss Ephemeris to use their code.

All of the descriptions of APIs and their usage are found within the README.md and DOCUMENTATION.md files.