Software Requirements Specification

for

Hartford Educational Playbook

Version 2.0 approved

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Revision History

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Kyle Chutjian, Sam Spinner, Isaac Crawford, Sadjell Mamon | 10/3/22 | Initial submission | 1.0 |
| Kyle Chutjian, Sam Spinner, Isaac Crawford, Sadjell Mamon | 10/13/22 | Revised | 2.0 |

# Introduction

## Purpose

The purpose of this document is to specify the requirements for the future development of the Educational Playbook system. This project will be completed by Spring 2023. This document provides key information about the requirements that the Educational Playbook system will entail.

The goal of this application is to aid doctors, nurses, and business partners of Hartford Healthcare who require additional professional training, and to guide medical educators in preparing standardized procedures to teach doctors and nurses. This new application provides users with a learning management system to follow a process and create standardized procedures as well as share relevant medical information in a time efficient manner. Our main goal is to provide a tool for users to enable effective curriculum development and define a team’s roles and responsibilities.

## Intended Audience and Reading Suggestions

This document is intended for developers and project managers to get a complete understanding of the system requirements elicited from the client. It also contains a list of requirements and their associated use cases, describing how the system is intended to be used. It is suggested that the reader starts with the overall description and ends with the system requirements.

## References

[Hartford HealthCare Educational Playbook](https://drive.google.com/file/d/1Tlox69JZWArmj2RKXJf7BDyPjFM_fSAf/view?usp=sharing) Documentation provided by Thomas Nowicki.

[Educational Playbook Vision Document](https://drive.google.com/file/d/1lj-yTAS7aqOhqFUpsT0RSc1a59GKSd-c/view?usp=sharing) by Kyle Chutjian, Sam Spinner, Isaac Crawford, Sadjell Mamon.

# Overall Description

## Product Perspective

Hartford Healthcare desires to advance their simulated medical learning systems. This new product should allow medical staff to digitally record data and intake forms to allow administrators to access data quickly and efficiently. By creating a system for data collection and viewing, this product should allow medical administrators to perform gap analysis and better understand or determine problem areas within the hospital.

## Product Functions

* Allow all users to create an account and log in
* Allow the administrators to manage permissions of all users
* Allow all users to view the homepage
* Allow all users to submit intake forms
* Allow admin users to review, approve, and archive intake forms
* Allow admin users to create curriculum development documents
* Allow admin users to compare intake success rates over time

## User Classes and Characteristics

Admin users – The administrators will use the system to gather data from intake forms, set permissions for non-admin users, and allow these users to review submitted forms for further analysis. The administrators may use the system to develop curriculums or standardizations of procedures that have alarming data.

Client users – The regular system users will use the system to fill out and submit intake forms with specific data. These users may view the homepage containing curriculum building plans and gap analysis information.

Program Lead Users – The Program Leads will be assigned by admins to handle specific approved intakes and develop them into curriculums, but without any of the administrative abilities that the admin user has.

## Operating Environment

The system will be hosted on a website that will be accessible by the latest version of all common web browsers (Google Chrome, Safari, Firefox, etc.). The system will require an internet connection to be accessible. No additional software components or applications will be required to use the system.

## Design and Implementation Constraints

The database must be able to handle up to 100 requests at a time.

The client is responsible for maintaining the application after completion.

## Assumptions and Dependencies

N/A

# Specific Requirements

## System Features and Requirements

### **Create Account**

3.1.1.1 Description and Priority

The system allows users to create an account.

High priority: 9.

3.1.1.2 Functional Requirements and use cases

REQ-1: The system should allow users to register an account by entering any email address and a password.

|  |  |
| --- | --- |
| **Name of Use Case** | Create an Account |
| **Brief Description** | A client creates a new account. |
| **Actor(s)** | Client |
| **Basic Flow** | 1. The client inputs their email and password. 2. The system validates the email and password. 3. The client is logged into their new account. |
| **Alternate Flow(s)** | 1a. The client does not enter an email.  1a1. The system displays an error message prompting the user to enter a username.  1b. The client does not enter a password.  1b1. The system displays an error message prompting the user to enter a password.  2a. The client does not enter a valid email.  2a1. The system displays an error message prompting the user to enter a valid username.  2b. The client does not enter a valid password.  2b1. The system displays an error message prompting the user to enter a valid password. |
| **Pre-conditions** | 1. The user has an email. 2. The client is on the create account screen. |
| **Post-conditions** | 1. The client is redirected to their dashboard. |
| **Special requirements** | N/A |

### **Log In**

3.1.2.1 Description and Priority

The system allows users to log into their personal account.

High priority: 9.

3.1.2.2 Functional Requirements and use cases

REQ-2: The system should allow users to log in to their account by entering their email address and password.

|  |  |
| --- | --- |
| **Name of Use Case** | Log In |
| **Brief Description** | A user logs into their account. |
| **Actor(s)** | Client, admin |
| **Basic Flow** | 1. The client inputs their email and password. 2. The system validates the email and password. 3. The client is logged into their account. |
| **Alternate Flow(s)** | 1a. The client does not enter an email.  1a1. The system displays an error message prompting the user to enter a username.  1b. The client does not enter a password.  1b1. The system displays an error message prompting the user to enter a password.  2a. The client’s email is not in the system.  2a1. The system displays an error message prompting the user to create an account or contact an admin.  2b. The user does not enter a valid password.  2b1. The system displays an error message prompting the user to enter a password with the required elements. |
| **Pre-conditions** | 1. The client has an account. |
| **Post-conditions** | 1. The client is redirected to their dashboard. |
| **Special requirements** | N/A |

### **Change a User’s Permissions**

3.1.3.1 Description and Priority

The system allows admins to change the permission of a specific user. The options are client and admin.

High priority: 8.

3.1.3.2 Functional Requirements and use cases

REQ-3: The system should allow admins to change the permissions of specific users.

|  |  |
| --- | --- |
| **Name of Use Case** | Change a User’s Permission |
| **Brief Description** | An admin changing a user’s permission. |
| **Actor(s)** | Admin |
| **Basic Flow** | 1. The admin selects the gear icon on the navigation bar. 2. The system displays a list of all users and their permission-level: client or admin. 3. The admin changes permission for the specified user. 4. The system displays the changes to the user’s permission and asks the admin to confirm. 5. The admin confirms their changes. 6. The system saves the changes to the user’s permission. |
| **Alternate Flow(s)** | N/A |
| **Pre-conditions** | 1. The user has an account with admin-level permission. 2. The user is on their dashboard. |
| **Post-conditions** | 1. The specified user’s permission changed to the selected role. |
| **Special requirements** | N/A |

### **Submit Intake Information**

3.1.4.1 Description and Priority

The system allows clients to submit an intake form with all their information on it.

High priority: 8.

3.1.4.2 Functional Requirements and use cases

REQ-4: The system should allow users to submit an intake form by entering current data available, data source, baseline metrics, target metrics, metric review cadence, leadership champions, and SMEs.

|  |  |
| --- | --- |
| **Name of Use Case** | Submitting Intake Information |
| **Brief Description** | A client filling out intake information. |
| **Actor(s)** | Client |
| **Basic Flow** | 1. The client selects to submit intake information. 2. The system displays empty intake data for the user to fill out. 3. The client inputs what they can from among the current data available, data source, baseline metrics, target metrics, metric review cadence, leadership champions, and SMEs, then uploads the necessary documents and submits the information. 4. The system verifies that all submitted data is complete and displays a confirmation. |
| **Alternate Flow(s)** | 3a. The client does not enter data into all fields.  3a1. The system prompts the user, asking if they want to fill out the empty fields or proceed as is.  3b. The client has uploaded an incompatible file type.  3b1. The system prompts the user to use the correct file type. |
| **Pre-conditions** | 1. The user has an account and is logged in. 2. The user is on their dashboard. |
| **Post-conditions** | 1. Admin-level users can view the new intake form. |
| **Special requirements** | N/A |

### **Approve Intake Data**

3.1.5.1 Description and Priority

The system allows admins to approve intake data submitted by clients.

High priority: 8.

3.1.5.2 Functional Requirements and use cases

REQ-5: The system should allow admin to approve an intake form by reviewing the problem and supporting documentation.

|  |  |
| --- | --- |
| **Name of Use Case** | Approve Intake Data |
| **Brief Description** | An admin can approve submitted intake information. |
| **Actor(s)** | Admin |
| **Basic Flow** | 1. The admin selects the intake data to approve. 2. The system displays the content of the intake to the admin. 3. The admin reviews the problem and documents, provides comments, and approves the intake data. 4. The system displays a confirmation. |
| **Alternate Flow(s)** | 3a. The client did not provide enough documents to support the problem.  3a1. The admin does not approve the intake form. |
| **Pre-conditions** | 1. The user has an “admin” account and is logged in. 2. There is a list of submitted intake forms on the admin’s dashboard. |
| **Post-conditions** | 1. Clients will receive a notification once their intake forms are approved. |
| **Special requirements** | N/A |

### View Intake Success Rate

3.1.6.1 Description and Priority

The system allows clients to view the data from the submitted and approved intake forms.

Low priority: 4.

3.1.6.2 Functional Requirements and use cases

REQ-6: The system should allow the admin user to compare the intake success rate before and after the curriculum development is provided.

|  |  |
| --- | --- |
| **Name of Use Case** | View Intake Success Rate |
| **Brief Description** | An admin views the information submitted through the intake data. |
| **Actor(s)** | Admin |
| **Basic Flow** | 1. The admin selects a time frame to view the results of the intake information. 2. The system displays all data on submitted intake information in that time range and whether each intake was successful or not. |
| **Alternate Flow(s)** | 1a. There is no submitted intake information for the time selection.  1a1. The system will ask the admin to select a time range that contains submitted intake information. |
| **Pre-conditions** | 1. The admin has an account and is logged in. 2. Some intake information has been selected. |
| **Post-conditions** | N/A |
| **Special requirements** | N/A |

### Create a Curriculum

3.1.7.1 Description and Priority

The system allows admin users to create a curriculum by compiling lectures, simulations, readings, videos, and hands-on learning.

High priority: 8.

3.1.7.2 Functional Requirements and use cases

REQ-7: The system should allow the admin user to create a curriculum for a specific user with approved intake information.

|  |  |
| --- | --- |
| **Name of Use Case** | Create a Curriculum |
| **Brief Description** | An admin can create a curriculum for an educator with approved intake data. |
| **Actor(s)** | Admin |
| **Basic Flow** | 1. The admin selects to create a new curriculum. 2. The system asks the admin to select the client that the curriculum is for. 3. The admin selects an client that requires a curriculum. 4. The system asks the admin to provide documents for the client’s curriculum. 5. The admin uploads the necessary documents that go into the client’s curriculum. 6. The system displays each document on the page. 7. The admin saves the curriculum. 8. The system displays a confirmation message. |
| **Alternate Flow(s)** | N/A |
| **Pre-conditions** | 1. The user has admin-level permission. 2. The user has a specific curriculum development plan open. 3. The chosen curriculum development plan must have an approved intake form. |
| **Post-conditions** | 1. The client and admin can view their new curriculum document. |
| **Special requirements** | N/A |

### Perform Needs Assessment

3.1.8.1 Description and Priority

The system allows qualified users to perform a needs assessment on a specific user’s documents.

Medium priority: 6.

3.1.8.2 Functional Requirements and use cases

REQ-8: The system should allow program leads and admins to perform needs assessments for curriculum development plans they have sufficient permission to view.

|  |  |
| --- | --- |
| **Name of Use Case** | Perform Gap Analysis |
| **Brief Description** | An admin or client can perform a needs assessment on an approved intake. |
| **Actor(s)** | Admin, Program Lead |
| **Basic Flow** | 1. The admin/program lead selects to perform a needs assessment. 2. The system displays the questions for the admin/program lead to fill out information for the needs assessment. 3. The admin/program lead fills out the questions and saves the information. 4. The system displays a confirmation message. |
| **Alternate Flow(s)** | N/A |
| **Pre-conditions** | 1. The admin has their approved intake dashboard open. 2. The system displays a list of approved intakes. 3. The admin selects an approved curriculum development plan to perform a needs assessment on. 4. The system prompts the admin to select a program lead to assign the task to. 5. The admin selects a program lead to perform the needs assessment or selects to perform the needs assessment themselves. 6. The system displays a confirmation message. 7. The admin/program lead selects to perform the needs assessment. |
| **Post-conditions** | The admin and/or client can see the completed needs assessment. |
| **Special requirements** | N/A |

### Archive Intake Data

3.1.9.1 Description and Priority

The system allows qualified users to archive either inadequate intake data or completed curriculums that are no longer needed.

Medium priority: 7.

3.1.9.2 Functional Requirements and use cases

REQ-9: The system should allow admins and program leads to archive open intake data and curriculum development plans.

|  |  |
| --- | --- |
| **Name of Use Case** | Archive Intake Data |
| **Brief Description** | An admin can archive either pending intake data or a curriculum development plan. |
| **Actor(s)** | Admin, Program Lead |
| **Basic Flow** | 1. The admin selects the pending intake data. 2. The system displays the intake data. 3. The admin selects to Deny the intake. 4. The system archives the intake form and returns the admin to the home screen. |
| **Alternate Flow(s)** | 1a. The Program Lead/Admin selects the curriculum development plan.  1a1. The system displays the curriculum development plan.  1a2. The program lead/admin selects to archive the curriculum development plan.  1a3. The system archives the intake form and returns the program lead/admin to the home screen. |
| **Pre-conditions** | 1. There is submitted intake data that is either pending or approved. |
| **Post-conditions** | The intake form/curriculum development plan can be found in the archived section. |
| **Special requirements** | N/A |

### View Dashboard

3.1.10.1 Description and Priority

The system allows users to view their respective dashboard once they log in.

High priority: 9.

3.1.10.2 Functional Requirements and use cases

REQ-10: The system should allow all users to view their respective dashboard according to their permission level.

|  |  |
| --- | --- |
| **Name of Use Case** | View Dashboard |
| **Brief Description** | All users can view their respective dashboards when they log in. |
| **Actor(s)** | Admin, Program Lead, Client |
| **Basic Flow** | 1. The user logs into the system.  2. The system displays the dashboard matching the user’s permission level. |
| **Alternate Flow(s)** | 1a. The user inputs incorrect account credentials.  2a. The system displays a warning about incorrect credentials. |
| **Pre-conditions** | 1. The user inputs correct account credentials |
| **Post-conditions** | The user can access and use the dashboard. |
| **Special requirements** | N/A |

### View Curriculum

3.1.11.1 Description and Priority

The system allows users to view a specific curriculum plan.

High priority: 9.

3.1.11.2 Functional Requirements and use cases

REQ-11: The system should allow all users to view a specific curriculum plan.

|  |  |
| --- | --- |
| **Name of Use Case** | View Curriculum |
| **Brief Description** | A user can view a specific curriculum plan. |
| **Actor(s)** | Admin, Program Lead, Client |
| **Basic Flow** | 1. The user accesses the dashboard.  2. The system displays the dashboard.  3. The user selects to view a curriculum.  4. The system displays the curriculum. |
| **Alternate Flow(s)** | 4a. There is no curriculum available to display. |
| **Pre-conditions** | 1a. The user is logged into the system. |
| **Post-conditions** | The user can access and use the curriculum. |
| **Special requirements** | N/A |

### View Pending Form

3.1.12.1 Description and Priority

The system allows admins and program leads to view pending forms.

High priority: 9.

3.1.12.2 Functional Requirements and use cases

REQ-12: The system should allow all admins and program leads to view pending forms.

|  |  |
| --- | --- |
| **Name of Use Case** | View Pending Form |
| **Brief Description** | An admin and program lead can view pending forms. |
| **Actor(s)** | Admin, Program lead |
| **Basic Flow** | 1. The admin/PL accesses the admin dashboard.  2. The system displays the dashboard.  3. The admin/PL selects to view a pending form.  4. The system displays the pending form. |
| **Alternate Flow(s)** | 4a. There is no pending form available to display. |
| **Pre-conditions** | 1a. The admin/PL is logged into the system. |
| **Post-conditions** | The admin/PL can access and use the pending form. |
| **Special requirements** | N/A |

### View Approved Form

3.1.13.1 Description and Priority

The system allows admins and program leads to view approved forms.

High priority: 9.

3.1.13.2 Functional Requirements and use cases

REQ-13: The system should allow all admins and program leads to view approved forms.

|  |  |
| --- | --- |
| **Name of Use Case** | View Approved Form |
| **Brief Description** | An admin and program lead can view approved forms. |
| **Actor(s)** | Admin, Program lead |
| **Basic Flow** | 1. The admin/PL accesses the admin dashboard.  2. The system displays the dashboard.  3. The admin/PL selects to view an approved form.  4. The system displays the approved form. |
| **Alternate Flow(s)** | 4a. There is no approved form available to display. |
| **Pre-conditions** | 1a. The admin/PL is logged into the system. |
| **Post-conditions** | The admin/PL can access and use the approved form. |
| **Special requirements** | N/A |

### View Learning Objectives

3.1.14.1 Description and Priority

The system allows users to view their learning objectives.

High priority: 9.

3.1.14.2 Functional Requirements and use cases

REQ-14: The system should allow all users to view the curriculum learning objectives.

|  |  |
| --- | --- |
| **Name of Use Case** | View Learning Objectives |
| **Brief Description** | A user can view their learning objectives. |
| **Actor(s)** | Admin, Program Lead, Client |
| **Basic Flow** | 1. The user accesses the dashboard.  2. The system displays the dashboard.  3. The user selects to view an approved intake form.  4. The system displays the curriculum.  5. The user selects learning objectives. |
| **Alternate Flow(s)** | 3a. There is no intake form data available to display. |
| **Pre-conditions** | 1a. The user is logged into the system. |
| **Post-conditions** | The user can access and use the intake data. |
| **Special requirements** | N/A |

### Add/Delete Learning Objectives

3.1.15.1 Description and Priority

The system allows users to add and delete learning objectives.

High priority: 8.

3.1.15.2 Functional Requirements and use cases

REQ-15: The system should allow all users to add and delete learning objectives.

|  |  |
| --- | --- |
| **Name of Use Case** | Add/Delete learning objectives |
| **Brief Description** | A user can add and delete learning objectives. |
| **Actor(s)** | Admin, Program Lead, Client |
| **Basic Flow** | 1. The user accesses the dashboard. 2. The system displays the dashboard. 3. The user selects to view an approved intake form 4. The system displays the curriculum. 5. The user selects learning objectives. 6. The system displays text boxes to submit learning objectives. |
| **Alternate Flow(s)** | 5a. There are no current learning objectives to delete |
| **Pre-conditions** | 1a. The user is logged into the system. |
| **Post-conditions** | The user can develop curriculum strategies based on the goals found in the learning objectives. |
| **Special requirements** | N/A |

### Edit Intake Information

3.1.16.1 Description and Priority

The system allows clients to edit an intake form’s data.

High priority: 8.

3.1.16.2 Functional Requirements and use cases

REQ-16: The system should allow clients to edit an intake form’s data.

|  |  |
| --- | --- |
| **Name of Use Case** | View Intake Data |
| **Brief Description** | A user can edit an intake form’s data. |
| **Actor(s)** | Admin, Program Lead, Client |
| **Basic Flow** | 1. The user accesses the dashboard.  2. The system displays the dashboard.  3. The user selects to edit an intake form’s data.  4. The system displays the saved intake form’s data.  5. The user edits the data and selects save. |
| **Alternate Flow(s)** | 3a. There has not been an intake form submitted yet. |
| **Pre-conditions** | 1a. The user is logged into the system. |
| **Post-conditions** | The user can access and use the intake data. |
| **Special requirements** | N/A |

### View Intake Data

3.1.17.1 Description and Priority

The system allows users to view an intake form’s data.

High priority: 9.

3.1.17.2 Functional Requirements and use cases

REQ-17: The system should allow all users to view an intake form’s data.

|  |  |
| --- | --- |
| **Name of Use Case** | View Intake Data |
| **Brief Description** | A user can view an intake form’s data. |
| **Actor(s)** | Admin, Program Lead, Client |
| **Basic Flow** | 1. The user accesses the dashboard.  2. The system displays the dashboard.  3. The user selects to view an intake form’s data.  4. The system displays the intake form’s data. |
| **Alternate Flow(s)** | 4a. There is no intake form data available to display. |
| **Pre-conditions** | 1a. The user is logged into the system. |
| **Post-conditions** | The user can access and use the intake data. |
| **Special requirements** | N/A |

## Other Nonfunctional Requirements

### Performance Requirements

The system should display the log-in screen within 5 seconds.

The system must have database security that meets HIPAA requirements.

The system must be able to handle 100 intake submissions.

### Safety Requirements

The system does not cause harm to the user in any way.

### Security Requirements

When the user is creating an account, the system will send an email to the provided email to confirm the user’s identity.

When the user logs in, the system will authenticate them.

The system must store usernames and passwords in a database that is secure.

### Software Quality Attributes

The system will be available during all operating hours of the facility.

### Responsiveness Requirements

The system will be operable on both mobile and computer devices.

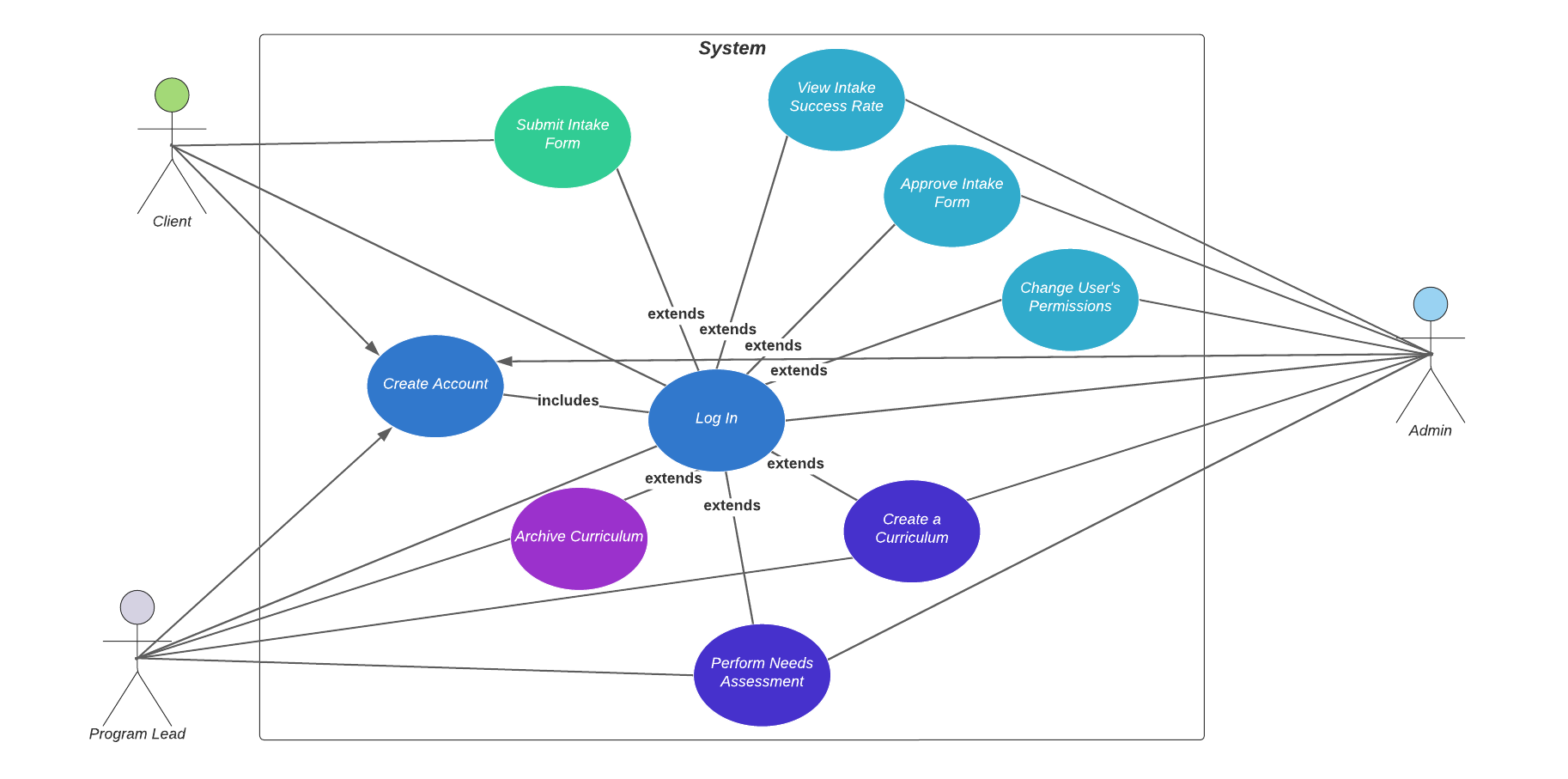
### Other Requirements

Both the administration and developers are required to sign and uphold the non-disclosure agreement.

Appendix A: Glossary

N/A

Appendix B: Analysis Models



Appendix C: To Be Determined List

N/A