Winter 2020

Revision History

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# iCLINIC System Glossary

## Introduction

This document is used to define terminology specific to the problem domain, explaining terms, which may be unfamiliar to the reader of the use-case descriptions or other project documents. Often, this document can be used as an informal *data dictionary*, capturing data definitions so that use-case descriptions and other project documents can focus on what the system must do with the information.

## Glossary

The glossary contains the working definitions for the key concepts in the iCLINIC System.

|  |  |
| --- | --- |
| Term | definition |
| Digitize | Convert physical resources, like documents, into a digital form that contains the same information. |
| User-friendly | This term describes a system that is easy to use without prior training. It should be intuitive and easy to understand where to input, edit, and retrieve information. The capabilities of the system should also be obvious to a layman. |
| Interface / UI | An interface or user-interface (sometimes shortened to “UI”) describes the collection of UI components that allow the user to interact with the system. |
| Tablet PC / “tablet” | A portable computer that uses touch and pen-based computing as the primary method of data entry. |
| Pen-Based Computing | This refers to any interface that can use a stylus (a digital handwriting tool) as a form of data entry. With pen-based computing, users can check off boxes, make handwritten notes with digital ink, and use handwritten words to communicate with the system (i.e. logging in, creating documents, etc.). |
| Digital Ink | Digital ink is an effect created with a special pen, a stylus, and components in a Tablet PC’s screen that allows a system to digitally represent handwriting in its natural form. |
| System/Application | A technological system is an application that takes in an input, manipulates it as needed, and produces an appropriate output or result. For example, when digitizing a document, the system would take the document as an input, convert it to a digital form, and store it in its database. |
| On-Screen Keyboard | A digital keyboard that digitally appears on the screen and uses touch technology to register keystrokes. |
| Permissions | Access details in the system that permit or prohibit certain accounts from interacting with information. |
| Account | Designated entities that contains information about registered users that grants them access to the system. |
| Forms | A screen that contains a variety of fields or spaces to input data. A form is used to create a record. |
| Record | A basic data structure in a system that contains stored information. |
| UI Component | A visual component, like an image, text label, button, or input field, that comprises the user interface. |
| Palette | A tablet screen that lets you see thumbnails of all the documents available to choose and access. |
| Standard Reference | A repository that contains all relevant information for a topic. |
| Auto-Completion | A feature that will suggest available options as the user is inputting an option. For example, if a user inputs “ace”, the system may suggest an auto-complete to “acetaminophen” |
| Import | Add existing resources or documents to the system, either from external sources (i.e. physical images) or internal sources (stored image files). |
| Scanner | A device that scans physical documents and images and converts them into digital data, usually as a PDF |
| PDF | A PDF, or “portable document format”, is a type of file that contains an exact digital representation of a document, and can be shared across a variety of devices. |
| Repository | A central location where data is stored and managed. |
| Tagged | Digitally attaching information, like metadata, to a document or other digital file. |
| Metadata | A set of data that contains information about a document or image. This usually includes information about the document’s creation and contents. |
| ID | An ID usually refers to a unique identifier that allows the system to uniquely identify and retrieve accounts, documents, and other resources from the repository. |
| Clinically-Important nuggets of information | In the case of iCLINIC, this information will include name, Patient ID, height, weight, BedID, and Treatment Area. This information will be made readily available to clinicians so they can seamlessly access it. |
| Geographical Unit View | This is a view that sorts listings by their physical presence in a space. In the case of iCLINIC, patient lists in Geographical Unit View will be sorted by Treatment Area (i.e. pediatrics, cardio, etc.) |

# iCLINIC System Actors

|  |  |
| --- | --- |
| **Actor** | **Description** |
| User | A “User” account will never be created. Instead, it is a representation of the common functionalities between the Worker and Administrator. A User can do anything that was not restricted to a worker or administrator in the requirements. This includes managing documents, viewing patient lists, and logging in. |
| Worker | A Worker is a doctor or nurse and can do anything a User can do, plus manage patient records and assign patients to themselves. |
| Administrator | The Administrator account is shipped with the system and can do everything a User can do plus add, edit, and remove Workers from the system. |

# iCLINIC System Use cases

## LogIn

Participating Actors: Initiated by User

Entry Conditions: User must already be registered

Flow of Events:

1. User navigates to the “Log In” page
   1. iCLINIC presents a list of all registered usernames
2. The User selects their name from the list
   1. iCLINIC presents a box to enter their password
3. The User enters their password
   1. iCLINIC receives the form and initializes the application or continues to the InvalidPassword use case

Exit Condition:

1. The User gains access to the appropriate iCLINIC functionality, OR
2. The User fails to authenticate themselves

Quality Condition:

1. The User should be able to log in either with the digital pen or an on-screen keyboard

## InvalidPassword

Entry Conditions: This use case extends the LogIn use case. It is initiated by iCLINIC when an incorrect password is entered.

Flow of Events:

1. iCLINIC presents an invalid password message

Exit Condition:

1. The User presses “OK” and is redirected to the beginning of the login process.

## ViewPatients

Participating Actors: Initiated by User

Entry Conditions: User is logged in. This use case is also included by the AssignPatients and ModifyPatientRecord use cases.

Flow of Events:

1. User navigates to the “iCLINIC Board” page
   1. iCLINIC responds by presenting the iCLINIC Board with the active patient lists

Exit Condition:

1. The User views all patient lists

Quality Condition:

1. The patient lists should be presented in Geographical Unit View

## AssignPatients

Participating Actors: Initiated by Worker

Entry Conditions: Worker is logged in

Flow of Events:

1. Worker navigates to “Assign Patients” page.
   1. Include ViewPatients use case.
2. The Worker selects patients to be assigned and confirms their selections
   1. iCLINIC assigns the patient to the Worker.

Exit Conditions:

1. The Worker assigns a patient to themselves OR
2. The Worker navigates away without assigning a patient

Quality Conditions:

1. The patient listings should be presented in Geographical Unit View

## ViewAssignedPatients

Participating Actors: Initiated by Worker

Entry Conditions: Worker must be logged in

Flow of Events:

1. The Worker selects the “My Board” page
   1. iCLINIC presents a list of the Worker’s assigned patients.

Exit Conditions:

1. The Worker is presented with a list of their assigned patients,

Quality Conditions:

1. Assigned patient listings complete with clinically-important nuggets of information that are important for patient care

## ModifyPatientRecord

Participating Actors: Initiated by Worker

Entry Conditions: Worker must be logged in

Flow of Events:

1. The Worker navigates to the “Modify Patient Record” page
   1. Include ViewPatients use case.
2. The Worker selects the patient whose record they wish to view
   1. The Worker will be presented with the patient record and the option to edit any value
3. The Worker selects fields and changes their value as desired
4. The Worker modifies Treatment Records and Documents
   1. iCLINIC presents the record’s documents in the Palette view
   2. The Worker selects any documents they wish to remove
5. The Worker adds Treatment Records and Documents to the record.
   1. Present documents via ViewDocuments use case.
   2. The Worker selects any Documents and Treatment Records they wish to add
6. The Worker confirms the changes
   1. iCLINIC updates the value of the record in the repository

Exit Conditions:

1. The Worker changed the patient’s record as desired, OR
2. The Worker selects a record, navigates away and does not edit it, OR
3. The Worker does not select a record and navigates away

Quality Conditions:

1. The Worker should be able to enter text input either using the pen and “digital ink”, or with the on-screen keyboard
2. Documents should be viewed in a Palette display, which allows the Worker to easily view many documents on one page
3. Each property in the patient record will include an ID, name, address, date of birth, height, weight, blood group, bed ID, and Treatment Area, as well as associated treatment records and documents

## CreatePatientRecord

Participating Actors: Initiated by Worker

Entry Conditions: Worker must be logged in

Flow of Events:

1. The Worker navigates to the “Create Patient Record” screen
   1. iCLINIC presents a blank patient record which includes fields for all values
2. The Worker inputs the relevant information into the fields
3. The Worker attaches relevant documents and Treatment Records to the record
   1. Include the ViewDocuments use case.
   2. The Worker selects any document or Treatment Record they wish to add
4. The Worker confirms creation
   1. iCLINIC adds the patient record to the repository

Exit Condition:

1. The patient record is created

Quality Conditions:

1. The user should be able to enter text input either using the pen and “digital ink”, or with the on-screen keyboard
2. The patient record should include fields for ID, name, address, date of birth, height, weight, blood group, bed ID, and Treatment Area, as well as associated treatment records and documents

## ViewDocuments

Participating Actors: Initiated by User

Entry Conditions: User must be logged in. This use case is also included by the ModifyPatientRecord, CreatePatientRecord, and EditDocument use cases.

Flow of Events:

1. The User navigates to the “View Documents” screen
   1. iCLINIC presents all stored documents
2. The User selects the document
   1. iCLINIC presents the document

Exit Condition:

1. The User views the document they wish to view

Quality Requirements:

1. All stored documents must be presented in a Palette view, which allows the User to view many documents on one screen

## EditDocument

Participating Actors: Initiated by User

Entry Conditions: User must be logged in

Flow of Events:

1. The User navigates to the “Edit Document” screen
   1. Include the ViewDocuments use case
2. The User selects the fields they wish to modify and inputs the new value
3. The User updates the document’s brief description
4. The User confirms the changes
   1. iCLINIC edits the patient ID, modification date, user ID of modifier, and brief description in the document metadata, and then updates the document in the repository

Exit Condition:

1. The User updates the document

Quality Requirements:

1. While the User is entering text, iCLINIC will reference the standard reference and suggest an auto-complete of any generic or brand drug name

## CreateNewDocument

Participating Actors: Initiated by User

Entry Conditions: User must be logged in

Flow of Events:

1. The User navigates to the “Create New Document” screen
   1. iCLINIC presents the option to create a treatment record, drug order, prescription, or other document
2. The User selects their desired document type
   1. iCLINIC presents a template for the document types
3. The User inputs relevant information into each field
   1. iCLINIC displays the updated value
4. The User adds a brief description of the document
5. The User confirms the changes
   1. iCLINIC adds, if relevant, the patient ID, Date of creation, and brief description to the document’s metadata, and then adds the document to the repository

Exit Condition:

1. The User creates the document successfully and the new document is stored

Quality Requirements:

1. While the User is entering text, iCLINIC will reference the standard reference and suggest an auto-complete of any generic or brand drug name

## ImportDocument

Participating Actors: Initiated by User

Entry Conditions: User must be logged in

Flow of Events:

1. The User navigates to the “Import Document” page
2. The User selects an image from the Tablet PC
   1. iCLINIC converts the selected document to PDF
3. The User enters a brief description of the document
4. The User confirms the import
   1. iCLINIC adds the ID, the patient ID, Date of creation, and brief description to the document’s metadata, and then adds the document to the repository

Exit Condition:

1. The imported document is digitized and added to the repository

## ScanDocument

Participating Actors: Initiated by User

Entry Conditions: User must be logged in

Flow of Events:

1. The User navigates to the “Scan Document” page
2. The User scans a physical document to import
   1. iCLINIC converts the selected document to a PDF
3. The User enters a brief description of the document
4. The User confirms the import
   1. iCLINIC adds the ID, the patient ID, Date of creation, and brief description to the document’s metadata, and then adds the document to the repository

Exit Condition:

1. The User successfully scans a document

## AddAccount

Participating Actors: Initiated by Administrator

Entry Conditions: Administrator must be logged in

Flow of Events:

1. Administrator navigates to the “Add Account” page
   1. iCLINIC presents a form that includes an input for a username and password
2. Administrator enters in the requested information
3. Administrator confirms Worker account creation
   1. iCLINIC adds Worker account to repository

Exit Condition:

1. New account is created

## EditAccounts

Participating Actors: Initiated by Administrator

Entry Conditions: The Administrator must be logged in

Flow of Events:

1. The Administrator navigates to the “Edit Accounts” page
   1. iCLINIC presents a list of all registered accounts
2. The Administrator selects an account
   1. iCLINIC presents the account’s username and password
3. The Administrator inputs changes to the fields
4. The Administrator confirms the value changes
   1. iCLINIC stores the updates in the repository

Exit Conditions:

1. The account is edited with any updated values, OR
2. The Administrator navigates away from the page and doesn’t select any accounts

## RemoveAccounts

Participating Actors: Initiated by Administrator

Entry Conditions: The Administrator must be logged in

Flow of Events:

1. The Administrator navigates to the “Remove Accounts” page
   1. iCLINIC presents a list of all registered accounts
2. The Administrator selects an account to remove and confirms the removal
   1. iCLINIC removes the account from the repository

Exit Conditions:

1. The account is removed from the repository, OR
2. The Administrator navigates away from the page and doesn’t remove any accounts

# iCLINIC System Use Case Diagram

## Use Case Diagram

