Offline DocuMentor

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Team Member Information

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Client Information

DocuMentor

DocuMentor serves at-home healthcare providers with scheduling and billing. Customers are small businesses located, at present, in Indiana. These small businesses employ caregivers who visit clients and perform healthcare, rehabilitation, errands, and other services.

Business Requirements

- BR1:
  - DocuMentor needs to allow employees to clock in and clock out while offline.
- BR2:
  - DocuMentor needs to allow employees to fill out visit documents while offline.
- BR3:
  - DocuMentor should look like our online web app so that the users are familiar with the simple design.
- BR4:
  - DocuMentor should only permit caregiver functions, not administrator functions.

Use Cases

- Actors
  - Caregiver
    - care for patients in the patient's home
    - caregiver uses an array of different personal devices (phone, tablet, laptop)
    - work in areas with, and or without internet service
- UC1: Sign in
  - Business requirement: BR3
  - Flow: Caregiver enters their email and password and is permitted to DocuMentor app.
- UC2: Type in/ select active client
  - Business requirement: BR2
  - Flow: Caregiver types in their current patient's name.
- UC3: Express clock in
  - Business requirement: BR1
  - Flow: Caregiver can enter in/select their client's name, service performed, and location, then express clock in. After caregiver presses clock in button they are prompted with a summary screen (service, caregiver, time clocked in, blank notes block)

Use Cases Cont.

- UC4: Express clock out
  - Business requirement: BR1
  - Flow: Caregiver presses 'enter note' and can type in an overall note for the visit. Then they are presented with 'clock out' button. They press 'clock out' and are taken back to home screen.
- UC5: Modify note
  - Business requirement: BR2
  - Flow: Caregiver can retype their note then press 'modify note' for the new note to be saved. This option is only visible to the client within two hours of clocking out.
- UC6: Add tasks
  - Business requirement: BR2
  - Flow: Caregiver can select a task (Hygiene- bed/sponge bath, Dress - Assist w dressing ....) from a drop down menu to be added to a list of tasks.
- UC7: Add goals
  - Business requirement: BR2
  - Flow: Caregiver can select a goal from a drop down menu. Once they select a goal, they are prompted to enter their strategy used, select an outcome (successful, successful with assistance, unsuccessful), enter a note, then save the outcome.

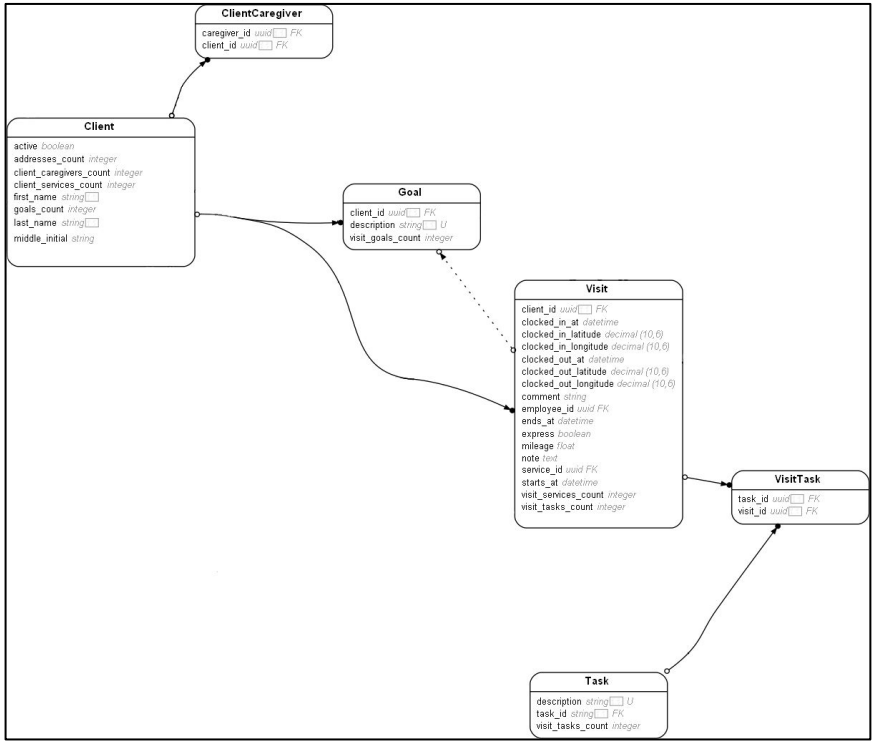
Functional Requirements

- FR1: If the caregiver does not have internet access, the system shall save their clock-in and clock-out times and locations.
  - Business Requirements: BR1
  - Priority: HIGH
- FR2: If the caregiver does not have internet access, the system shall display their list of tasks for their patient and allow them to mark them complete.
  - Business Requirements: BR2
  - Priority: HIGH
- FR3: Once the caregiver connects to the internet, the system shall upload their saved clock-in and clock-out times and locations to the online web app.
  - Business Requirements: BR1
  - Priority: HIGH
- FR4: If the caregiver needs to take notes, the system shall save them and upload them once they connect to the internet.
  - Business Requirements: BR2
  - Priority: LOW

Non-functional Requirements

- NR1: The offline web app shall be at least 95 percent available 24/7.
  - Business Requirements: BR2
  - Priority: HIGH
- NR2: Data shall be saved in an average of 5 seconds after the caregiver presses a submit button.
  - Business Requirements: BR1, BR2
  - Priority: MEDIUM
- NR3: Data shall be uploaded in less than 1 minute once the caregiver connects to the internet.
  - Business Requirements: BR1, BR2
  - Priority: MEDIUM
- NR4: A trained user shall be able to clock-in and clock-out in an average of 20 seconds, 95 percent of the time, after 10 minutes of orientation time.
  - Business Requirements: BR1
  - Priority: LOW
- NR5: The application must use the AWS platform.
  - Business Requirements: BR3
  - Priority: HIGH
- NR6: The application must be developed using Ruby on Rails or React.
  - Business Requirements: BR3
  - Priority: HIGH
- NR7: The application must look like the pre-existing web app.
  - Business Requirements: BR3
  - Priority: MEDIUM
- NR8: The application must provide the following functions while offline: clock-in & clock-out, select patient, track location when clocking in and out, view tasks and goals, and add a note
  - Business Requirements: BR4
  - Priority: HIGH

Domain Model

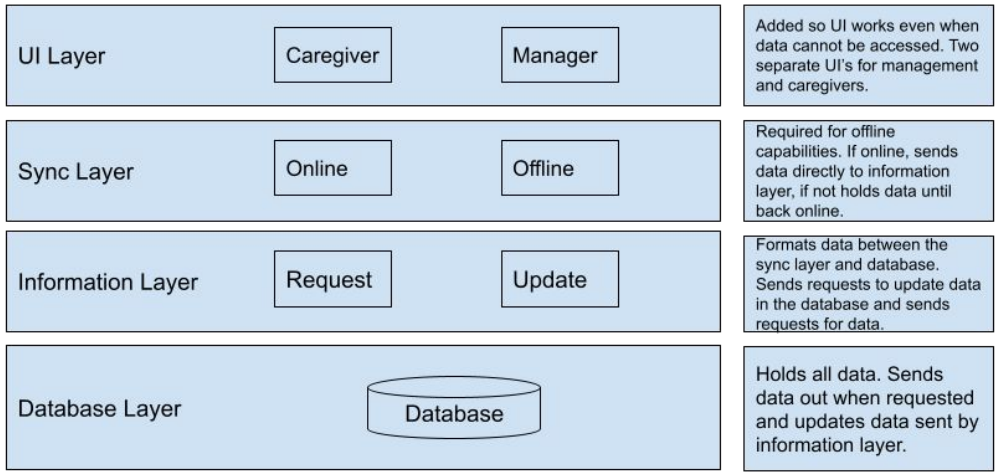


- **Client**: The client is the patient that is being cared for. The application provides their name, their goals, and the caregiver's tasks and services for the visit.
- **Client Caregiver**: This class represents the user of our application, the caregivers. They provide their information, and then they select the client they are caring for.
- **Goal**: Goals are set by the caregiver for the client to accomplish before their next visit.
- **Task**: Tasks are what the caregiver needs to get done during their visit. There are 22 possible tasks, so each task has its own name and ID to differentiate it from the other tasks.
- **Visit**: The visit information includes when and where the caregiver clocked in and out, the appointment time, any comments provided by an admin, notes provided by the caregiver before clocking out,
- **VisitTask**: This class tells the system which tasks were accomplished during which visits with the client.

Tech Stack

- Amazon Web Service (AWS)
  - https://aws.amazon.com/
  - AWS is selected because the client uses it to sync all of their online data, which we will need to do for the caregivers once they connect to the internet.
- React
  - https://reactjs.org/
  - React is selected because the client has been using it for their web app already, and they want the offline web app to be built using the same frameworks.
- Ruby on Rails
  - https://rubyonrails.org/
  - Ruby on Rails is selected because the client has been using it for their web app already, and they want the offline web app to be built using the same frameworks.

Architecture



Prototype

Video Link

http://youtu.be/VLnAd-Ql8C8?hd=1

Prototype Link

https://live.yourdocumentor.com/

First Iteration Features

High Priority

- FR1:
  - If the caregiver does not have internet access, the system shall save their clock-in and clock-out times and locations will be saved.
- NR6:
  - The application must be developed using Ruby on Rails or React.

Medium Priority

- FR2:
  - If the caregiver does not have internet access, the system shall display their list of tasks for their patient and allow them to mark them complete.
- NR8:
  - The application must provide all pre-existing caregiver functions while offline.

Low Priority

- NR2:
  - Data shall be saved in an average of 5 seconds after the caregiver presses a submit button.

Feedback

Mentor

- Design Changes
  - Actor description (use cases): actor description should note what type of devices caregivers are using (especially if client wants to go with a mobile app)
- Clarifying Questions for Client
  - “should we be building an entirely new application or should we just extend your current app?”
  - “what types of devices do caregiver’s use?”
  - “how do you currently get caregiver’s location?”
- General advice
  - Inspect the web app to see when and what api’s are being called
  - Research state in React

Client

- Design Changes
  - use cases - clarified that caregivers can only modify note w/in 2 hours of clocking out, the drop down list of services and tasks is static data, caregivers must be able to sign in while offline
  - First iteration main priority: clocking in and out
  - Domain model: Got access to client’s domain model and made few adjustments to model the offline version
- Answers to Clarifying Questions
  - build off of current app
  - 95% of caregivers use phones, tablets are rarely used
  - currently utilize google maps api to retrieve caregiver location

Something Interesting