ClientCentral

Team 6

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**Software Requirements Specification**

**Document**

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# 1 Purpose

No matter how many new medical graduates there are, we are perpetually in a deficit as it pertains to workers in the medical field. Because of this, like many other businesses, doctor’s offices rely heavily on scheduling to ensure every patient is met. While urgent needs may take precedence in scheduling, generally speaking, most of the medical field, outside of emergency rooms, cannot function without scheduling appointments. There simply are not enough doctors and staff to sustain a revolving door business model. Furthermore, the medical field has many complexities that require the involvement of a specialist, which furthers the need for proper scheduling.

As of today, many doctor’s offices still rely on pen-and-paper scheduling, or extremely outdated systems. Both of these options pose major security risks, issues of double booking, as well as no way to reliably track clients who continually miss their appointments. The Health Insurance Portability and Accountability Act of 1996 (HIPAA) creates mandates around the privacy of an individual’s medical information. This furthers the stakes, creating an absolute necessity for a new, secure, scheduling system. Beyond that, a new system will create an easier and faster scheduling experience, making both patients and staff happier and more confident in the process. By creating a web-based scheduling software that is both safe and accessible, we will be able to move one step closer to ensuring that every person receives the medical attention, from a professional, that they deserve.

# 2 Scope

The name of this software is ClientCentral. The goal of this software is to be an easy-to-use website for health clinics that promotes accessibility and convenience for patients, healthcare providers, and caregivers alike. We want to make the software simple and easy to use so that multiple clinics use it to communicate with their patients. This way there will be a new standard for multiple clinics and the patients and caregivers will not be burdened with having to create multiple logins and learn new software if they use multiple clinics. This software will act as a platform for patients of health clinics to be able to log in and securely access all of their medical appointments with ease. Doctors or other healthcare providers will have access to a list of their patients, along with their email addresses, and have the ability to book appointments for them. Authorized caregivers will also be able to log in and access the patient’s information securely so that the patient doesn’t have to do it themselves. The patients and caregivers, whoever is on the account, will also be able to set up appointments, and access patient information in case it is needed. The hope is that this software is adopted by most clinics so that patients and caregivers have an easy, centralized way of accessing their healthcare appointments.

# 3 User characteristics

Identifying the potential users of the product. Describe general characteristics of the intended groups of users (stakeholders) of the product, especially focusing on characteristics that may influence usability, such as educational level, experience, disabilities, and technical expertise.

## 3.1 Key users

Medical providers, including medical staff, are key users of this product. They will play the role of the admin, with the ability to manage their clients and (have staff or themselves manage) appointment scheduling.

* User role responsibilities: Medical providers will have the ability to set appointment availability. This user will be able to add and update information to their patient's medical profile, including appointment creation.
* Subject matter experience: This user will be the expert on customer relations management in healthcare. They will know how this tool will be used in their daily business operations.
* Technological experience: This user needs to have an intermediate level of understanding of how to operate online tools. They should be able to follow the directions of forms and are familiar with CRM systems.
* Other user characteristics: The user should be comfortable with technology. The user should have post-secondary education level and beyond with full professional proficiency in English. The tool is for US residents and adults. A medical license is also required.

## 3.2 Secondary users

Patients/Clients are the secondary users- that want to schedule an appointment with a medical provider and view details of their appointment.

* User role responsibilities: Will have the ability to schedule an appointment, fill out a medical form, and view their medical history. Responsible for filling out accurate medical information.
* Subject matter experience: This user will be a journeyman and not have much knowledge of how the business uses the tool. However, this user will see this tool as an appointment scheduler and appointment reviewer. The patient is aware when they need an appointment  
  and the doctor they need to visit for the proper treatment, whether for follow-up,  
  wellness visit, or sick visit.
* Technological experience: This user is a journeyman. This user should be comfortable with filling out online forms. They should be aware of the information that’s inputted into the system.
* Other user characteristics: Users should be at least 16 years old and older to have an account. It is best to have at least a high school education. Users can have professional working proficiency in English. They can have intermediate comfortability with online tools. If they use Facebook, then they can operate it easily.

## 3.3 Unimportant users

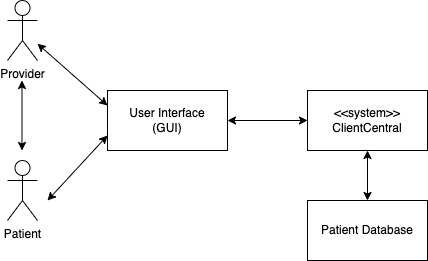
Patient/Caretaker

* User role responsibilities: accessing patient medical appointment information on the patient’s behalf.
* Subject matter experience: This user will be a journeyman-level experience with their assigned patient. They have direct access to the patient’s information and account. They should be aware of when they need an appointment and the doctor they need to visit for the proper treatment, whether for follow-up, wellness visit, or sick visit.
* Technological experience This user can be a novice in technological experience. They will be able to book an appointment for a patient. They should have experience navigating a basic account portal.
* Other user characteristics: Must have a working proficiency level in English. They should be adults and US residents. They should also have a high school level of education. They should be comfortable with using technology on a basic level.

# 4 Product perspective

## 4.1 System Context

The ClientCentral system is the basis of the operation of the overall system to be developed. It provides the controls needed to have full functionality, such as appointment booking, providers checking schedules, updating patient profiles, etc. The ClientCentral system will retrieve and update information in the database which holds patient information. Users (patients and providers) interact with the system through its GUI, which will vary depending on the type of user. The general structure of the system is shown below:



## 4.2 User interfaces

1. The system should allow for the display of text and image formats
2. A menu should be provided with main sections to aid navigation of the system
3. Pop-up windows should be used if it is more logical to use them instead of navigating to a new page
4. Error messages should be clear, with the option for more detail
5. Ensure that information fits on the screen, and is resized to fit if necessary

## 4.3 Software interfaces

* The system must be able to run on macOS X, Windows 8 or later, IOS, and Android.

## 4.4 Deployment requirements

No additional hardware is necessary to run this system, as long as a computer with a modern operating system is available. If the organization does not have an existing database server, one will be necessary to run the program. Tables should be installed on the server before using this software, but they do not need to be populated.

# 

# 5 Assumptions and Dependencies

* Resources
  + Team members will be available to test the system throughout development
  + Team members will have consistent access to their development platforms
  + There will be adequate time available to each team member to complete weekly tasks
* Scope
  + The scope of the project will not change from its currently agreed-upon scope statement
* Schedule
  + Meetings will be conducted to review progress with other team members every Wednesday at 7 P.M. unless another time is agreed upon
  + If individual meetings are needed, team members can schedule them independently
  + Team members will complete their agreed work on time and meet all deadlines to the best of their ability
* Technology
  + The project will be written in HTML, CSS, PHP, and MySQL
  + The Atom IDE will be used to allow for pair programming
* Methodology
  + The team will follow the waterfall methodology
  + At each weekly meeting, the team will decide on weekly goals and agree upon tasks for each team member/group of team members to complete, as well as any issues blocking progress

# 6 Specific requirements

* Apache server software v2
* Chrome 106.+ FireFox 104+
* XAMPP server software

## 6.1 System Functional Requirements

* Allow users to register a new account
  + Indicate whether they are a patient or a provider
* Patient accounts can be updated by providers with health information
* Users can edit personal information in their accounts
  + Name
  + Email
* Patients can schedule an appointment by selecting an available date on the calendar
  + Upcoming appointments should be displayed in the user profile
* Providers can view certain information in patient profiles:
  + Name
  + Upcoming appointments

## 6.2 Logical Database Requirements

There should be entities for patient and provider, and there should be a relationship between the two representing the doctor who sees the patient.

## 6.3 Software System Attributes

### 6.3.1 Usability

* The website and any attached applications need to be fast enough to maintain an acceptable level of convenience for the users.
* The system should be simple enough for anyone to use regardless of experience, and tips should be provided where necessary

### 6.3.2 Performance

* Page load time should be less than 3 seconds
* Because it is a small project, the program should be expected to handle 1-5 simultaneous users
* 95% of users should be expected to have a maximum of 100 mb of text data associated with them
* 90% of transactions should complete within 1.5 seconds

### 6.3.3 Reliability/Dependability

* The application should remain stable on 99% of sessions or more
* Every interaction should have a reaction
  + If an item can be interacted with, the user should know that an action is executing on interaction
* The website should be responsive so that it looks good on both mobile and desktop.

### 6.3.4 Security

* Patient information should be kept private, only authorized providers can view medical information
* User passwords should be encrypted with a hash
* Enforce type checking on certain sensitive variables

### 6.3.5 Maintainability

* The front-end site code should be simple, neat, and easy to understand so that future maintenance or changes to the site are not difficult.
* Comments throughout code should be made so that every part of the site and back-end code can be understood in the future.