

Software Requirements Specification

VeniApps System

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Team Group X

<https://github.com/rmurray1/veniapp.git>

The Veni VA Checkin System

Advanced Software Engineering Project

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Software Requirements Specifications Document

Revision History

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04-Feb-2015	1.0	RM	Initial Release
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1. Introduction

1.1 Purpose

The purpose of this Software Requirements Specification (SRS) document is to provide a detailed description of the functionalities of the Veni Check-in system. This document will cover each of the system's intended features, as well as offer preliminary examples of the software application's User Interface (UI). Additionally, this document will also cover hardware, software, and various other technical dependencies.

1.2 Scope

The Veni System is composed of the following:

- (1) A client-side application which will run on Android or IOS smartphone*
- (2) A server-side application which implements the Veni System business logic and broker communication between the mobile client and Veteran Affairs (VA) Veterans Health Information Systems and Technology (VistA) Electronic Health Record System (EHR)*
- (3) The Veni System will allow a Veteran to manage his/her VA appointments via a mobile application and check-in electronically*
- (4) The Veni System will leverage open source technologies to reduce the cost of ownership to the VA and lower the complexity to implementation*

1.3 Definitions, Acronyms, and Abbreviations.

Terminology associated with this document is defined in Appendix A. A glossary contains a list of terms and respective definition.

1.4 Overview

This document is intended for all users that participate in the VA Patient check-in process or supervise those individuals. For a more descriptive look for a developer, please review section 3.

2. The Overall Description

The Veni System consists of a smartphone client and server-side components. Both parts are equally important in the development of the overall system. The server-side components are responsible for accessing the respective VistA System and provide access to data from the veteran's smartphone. Because of the significant importance of both systems both aspects are detailed in this document.

2.1 Product Perspective

The product shall support the following:

- *Sending and receiving VA appointment information to and from a central source*
- *Geo location services for identifying VAMC locations*

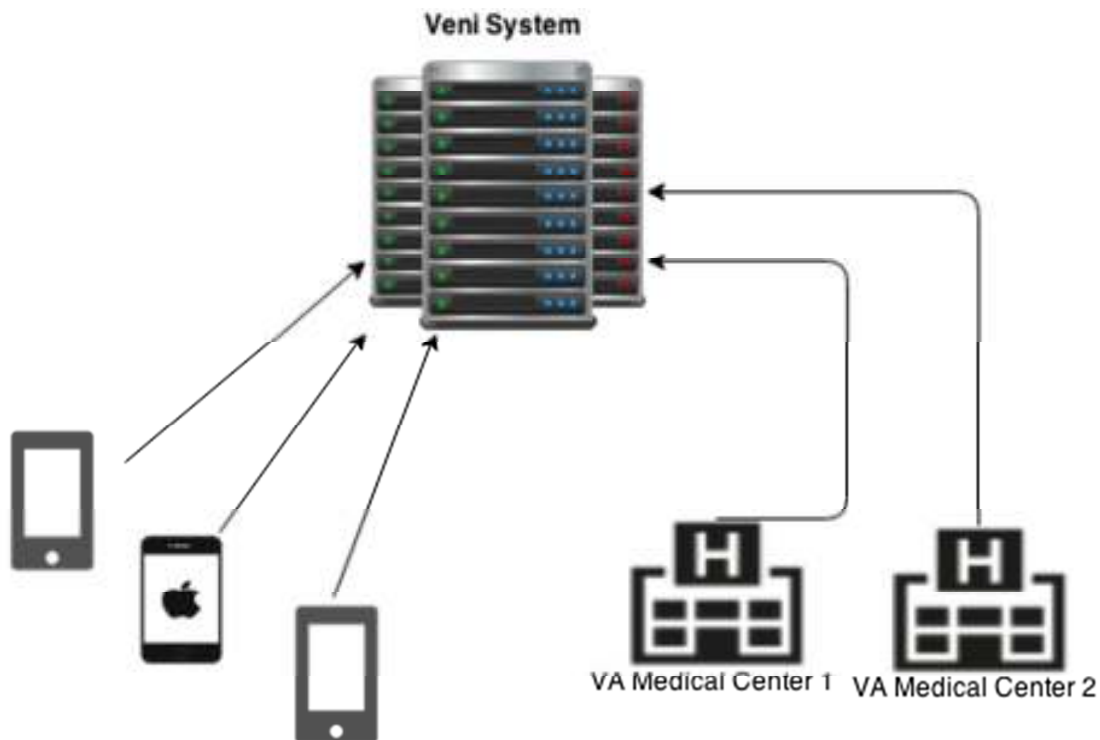


Figure 1.

2.1.2 Software Interfaces

Specify the use of other required software products and interfaces with other application systems. For each required software product, include:

- (1) VistA RPCBroker
- (2) Version 1.1
- (3) Source:

[http://www.va.gov/vdl/documents/Infrastructure/Remote_Proc_Call_Broker\(RPC\)/xwb_1_1_dq.pdf](http://www.va.gov/vdl/documents/Infrastructure/Remote_Proc_Call_Broker(RPC)/xwb_1_1_dq.pdf)

2.3 User Characteristics

The Veteran will be the principle user of the Veni System smartphone application.

VA clinical staff in charge of the VA check-in process will be familiar with the smartphone application.

VA Office of Information and Technology (OI&T) will be the principle administrator of the Veni System server application.

2.4 User Documentation

The final deliverable will include a software document folder(SDF). The SDF will contain tutorials and user manuals for the Veni System smartphone client and Veni System server application. The deliverable shall be sent to the customer in the form of a zip file. An electronic download will be available to the customer.

3. Hardware Specification

3.1. Hardware

- a. Smartphone with Android or IOS Operating System*
- b. Cloud Server System to host VENI System Server, System Database and Communication layer.*

4. External Interface Requirements

4. 1. User Interfaces

Smartphone interface, IOS and Android

4. 2. Hardware Interfaces

Smartphone location services

4. 3. Software Interfaces

Smartphone calendar

4. 4. Communication Protocols and Interfaces

Google Map API

<https://developers.google.com/maps/>

5. System Features

5.1. VETERAN REGISTRATION AND WELCOME

5.1.1. Description

When the Veni System smartphone application is run for the first time, the user is presented with an initial registration/welcome screen. The screen will prompt the user for his/her email address, Veteran ID number, and which VA medical center he/she attends.

5.1.2. Action/result

- 1) The veteran starts the Veni App on his/her phone the first time*
- 2) The Veni App asks for personal information*
- 3) The Veni App establishes the veteran's credentials*
- 4) The Veni App asks for information about which VA health care facilities the veteran frequents*
- 5) The veteran is registered for the system*

5.1.3. Functional Requirements

VSU-01: The user must enter a valid email.

The user must provide a valid email address. The application will verify that the user's input is consistent with the format ([xxxxx@xxxx.xxxx](#)).

VSU-02: The Application shall accept VA Benefits card identification to identify a veteran in the VA system

VSSC-03: The application shall have capability to exchange appointment registration information with the VA system.

5.1.4. NFR

NFR-01 User must be a recipient of VA benefits

NFR-02 User must be a registered at a participating VA hospital.

NFR-03 User information from the VA Vet identification card can be used to identify the veteran as a recipient of VA benefits at the participating VA hospital.

5.2. DOWNLOAD APPOINTMENTS

5.2.1. Description

The veteran will be able to download his/her appointments list to the Veni appointment list.

5.2.2. Action/result

- 1) *The Veni App asks which VA health care facilities the veteran frequents*
- 2) *The veteran is registered for the system*
- 3) *The veteran's appointment list is downloaded to the smartphone*

5.2.3. Functional Requirements

VSSC-04: The application must have capability to authenticate veteran's identification with the VA system.

VSSC-05: The application shall display the received veteran's appointment list.

VSSC-06: The application shall save the veteran's appointment list in Smartphone calendar.

5.2.4. NFR

NFR-01 VENI system must follow HIPPA rules to protect user data privacy.

NFR-02 VENI system must confirm the veteran information is available at the VA facility.

5.3. PROVIDE DIRECTION TO VA APPOINTMENT FACILITIES

5.3.1. Description

The veteran will be able to get direction to his/her appointment facility

5.3.2. Action/result

- 1) *The Veni App provides the appointment and the direction map link to the VA health care facility the veteran*
- 2) *The veteran is provided with a map and direction guide to the facility by clicking the link*

5.3.3. Functional Requirements

VSSC-07: The application shall display the VA facility address where the veteran's appointment is scheduled

VSSC-08: The application shall display the map and direction to the VA facility using Google map API

5.3.4. NFR

NFR-01 VENI system app shall have access to smartphone location information.

5.4. Check-in at VA APPOINTMENT FACILITIES

5.4.1. Description

The veteran will be able to check in to his/her appointment at the VA facility

5.4.2. Action/result

- 1) The Veni App checks the appointment and the VA health care facility proximity.*
- 2) The veteran is provided with an option to check in for his/her appointment when the phone is near the the facility and the time to appointment check-in is available.*

5.4.3. Functional Requirements

VSSC-08: The application shall display the VA facility address and veteran's appointment time and provide option to check-in for the scheduled appointment

VSSC-08: The application shall display the response of the check-in information from the VA system to the veteran.

VSSC-09: The application shall provide information to the veteran to check-in manually at the VA facility if automated check-in process failed for any reason.

5.4.4. NFR

NFR-01 VENI system shall have access to smartphone location information.

5.5. Check for APPOINTMENT matching

5.5.1. Description

The veteran will be able to check if his/her appointment at the VA facility is still on schedule or it has been rescheduled.

5.5.2. Action/result

- 1) The Veni App checks the appointment at the VA health care facility and provides a feedback regarding the status of the appointment.*
- 2) The veteran is provided with an option to download his/her new rescheduled appointment.*
- 3) The Veni App provides a confirmation if all the appointments are still on schedule.*

5.5.3. Functional Requirements

VSSC-08: The application shall display the VA facility address and veteran's appointment time and provide option to check the status for the scheduled appointment

VSSC-08: The application shall display the response of the status check information from the VA system to the veteran.

VSSC-09: The application shall provide information to the veteran to update his/her calendar with new update of the appointment

VSSC-10: The application shall provide a confirmation to the veteran if all the appointments are still on schedule.

5.5.4. NFR

NFR-01 VENI system must follow HIPPA rules to protect user data privacy.

6. Non Functional Requirements Information

- NFR1 (Portability) The VENI system will support porting to multiple platforms:
 - a) IOS , b) Android
- NFR2 (Quality) The VENI system will comply with the VENI Quality Manual for quality software development of mobile applications.
- NFR3 (Security) The VENI system will ensure PHI data is protected from unauthorized or malicious use.
- NFR4 (Security) The VENI system will ensure PHI data is correctly transmitted and displayed with proper disclaimers.
- NFR5 (Maintainability) The VENI system development team will be widely conversant in the application target environment.
- NFR6 (Maintainability) The VENI system development team will be widely conversant in the application programming language.
- NFR7 (Maintainability) The VENI system development team will be widely conversant in the application development environment.
- NFR8 (Extensibility) The VENI system will support changes for adding new features at major version upgrades.
- NFR9 (Enhanceability) The VENI system will support changes which enhance the existing features.
- NFR10 (Usability) The VENI system will provide help documentation for the users and admins.
- NFR11 (Timing) The VENI system will facilitate information transmission and display in a timely manner.
- NFR12 (Usability) The VENI system will use smartphone's internet connection to download the application data and updates and enhancements.

Appendix A

User Interface (UI)

Veteran Affairs (VA)

Veterans Health Information Systems and Technology (VistA)

Electronic Health Record System (EHR)

Office of Information & Technology (OI&T)