**Software Requirements Specification**

**VeniApps System**

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**Location of electronic version of file**

**Team Group X**

[**https://github.com/rmurray1/veniapp.git**](https://github.com/rmurray1/veniapp.git)

***The Veni VA Checkin System***

Advanced Software Engineering Project

SE 6387.M01



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# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Version | Changed By | Description |
| 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 a 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 are 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

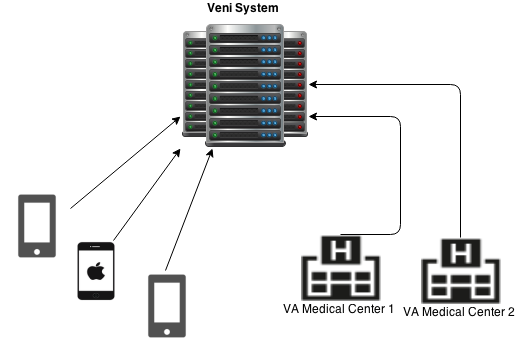
*The Veni System consist of a smartphone client and server-side componets. Both parts are equal important in the development of the overall system. The server-sdide component is responsible for access the respective VistA System and provide access to data to the smartphone. Because of the significant 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 a central source*
* *Geo location services for identifying VAMC locations*

**

*Figure 1.*

### 2.1.2 Hardware Interfaces

### 2.1.3 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\_dg.pdf*](http://www.va.gov/vdl/documents/Infrastructure/Remote_Proc_Call_Broker_(RPC)/xwb_1_1_dg.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 Component 1

### 3.1.1. Functionality

### 3.1.2. Operational Requirements

### 3.1.3. QoS Requirements

### 3.1.4. Parametric Requirements

### 3.1.5. Design Requirements

# 4. External Interface Requirements

### 4. 1. User Interfaces

### 4. 2. Hardware Interfaces

### 4. 3. Software Interfaces

### 4. 4. Communication Protocols and Interfaces

# 5. System Features

## 5.1. VETERAN REGISTRATION AND WELCOME

### 5.1.1. Description

*When the 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

*Valid email requirements*

*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).*

### 5.1.4. NFR

*User must be a receiptant of VA benefits*

## 5.2. Download appointments

### 5.2.1. Description

*The veteran will be able to download his/her appointment into 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

*Valid email requirements*

*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).*

### 5.2.4. NFR

# Non Functional Requirements Information

# 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)*

**Outline for SRS Section 3**

**Organized by mode: Version 1**

3. Specific Requirements

3.1 External interface requirements

1. User interfaces
2. Hardware interfaces
3. Software interfaces
4. Communications interfaces
5. Functional requirements

3.2.1 Mode 1

3.2.1.1 Functional requirement 1.1

.....

3.2.1.*n* Functional requirement 1.*n*

1. Mode 2

.....

3.2.*m* Mode *m*

3.2.*m*.1 Functional requirement *m*.1

.....

3.2.*m.n* Functional requirement *m.n*

3.3 Performance Requirements

3.4 Design Constraints

3.5 Software system attributes

3.6 Other requirements

**Outline for SRS Section 3**

**Organized by mode: Version 2**

3. Specific Requirements

3.1 Functional Requirements

1. Mode 1

3.1.1.1 External interfaces

3.1.1.1 User interfaces

3.1.1.2 Hardware interfaces

3.1.1.3 Software interfaces

3.1.1.4 Communications interfaces

3.1.1.2 Functional Requirement

3.1.1.2.1 Functional requirement 1

.....

3.1.1.2.*n* Functional requirement *n*

3.1.1.3 Performance

3.1.2 Mode 2

.....

3.1.*m* Mode *m*

1. Design constraints
2. Software system attributes
3. Other requirements

**Outline for SRS Section 3**

**Organized by user class (i.e. different types of users ->System Adminstrators, Managers, Clerks, etc.)**

3. Specific Requirements

3.1 External interface requirements

1. User interfaces
2. Hardware interfaces
3. Software interfaces
4. Communications interfaces
5. Functional requirements

3.2.1 User class 1

3.2.1.1 Functional requirement 1.1

.....

3.2.1.*n* Functional requirement 1.*n*

1. User class 2

.....

3.2.*m* User class *m*

3.2.*m*.1 Functional requirement *m*.1

.....

3.2.*m.n* Functional requirement *m.n*

3.3 Performance Requirements

3.4 Design Constraints

3.5 Software system attributes

3.6 Other requirements

**Outline for SRS Section 3**

**Organized by object (Good if you did an object-oriented analysis as part of your requirements)**

3 Specific Requirements

3.1 External interface requirements

1. User interfaces
2. Hardware interfaces
3. Software interfaces
4. Communications interfaces
5. Classes/Objects

3.2.1 Class/Object 1

3.2.1.1 Attributes (direct or inherited)

1. Attribute 1

.....

3.2.1.1.*n* Attribute *n*

1. Functions (services, methods, direct or inherited)

3.2.1.2.1 Functional requirement 1.1

.....

3.2.1.2.*m* Functional requirement 1.*m*

3.2.1.3 Messages (communications received or sent)

3.2.2 Class/Object 2

.....

3.2.*p* Class/Object *p*

3.3 Performance Requirements

3.4 Design Constraints

3.5 Software system attributes

3.6 Other requirements

**Outline for SRS Section 3**

**Organized by feature (Good when there are clearly delimited feature sets.**

3 Specific Requirements

3.1 External interface requirements

1. User interfaces
2. Hardware interfaces
3. Software interfaces
4. Communications interfaces
5. System features

3.2.1 System Feature 1

3.2.1.1 Introduction/Purpose of feature

3.2.1.2 Stimulus/Response sequence

3.2.1.3 Associated functional requirements

3.2.1.3.1 Functional requirement 1

.....

3.2.1.3.*n* Functional requirement *n*

3.2.2 System Feature 2

.....

3.2.*m* System Feature *m*

.....

3.3 Performance Requirements

3.4 Design Constraints

3.5 Software system attributes

3.6 Other requirements

**Outline for SRS Section 3**

**Organized by stimulus (Good for event driven systems where the events form logical groupings)**

3 Specific Requirements

3.1 External interface requirements

1. User interfaces
2. Hardware interfaces
3. Software interfaces
4. Communications interfaces
5. Functional requirements

3.2.1 Stimulus 1

3.2.1.1 Functional requirement 1.1

.....

3.2.1.*n* Functional requirement 1.*n*

3.2.2 Stimulus 2

.....

3.2.*m* Stimulus *m*

3.2.*m*.1 Functional requirement *m*.1

.....

3.2.*m.n* Functional requirement *m.n*

3.3 Performance Requirements

3.4 Design Constraints

3.5 Software system attributes

3.6 Other requirements

**Outline for SRS Section 3**

**Organized by response (Good for event driven systems where the responses form logical groupings)**

3 Specific Requirements

3.1 External interface requirements

1. User interfaces
2. Hardware interfaces
3. Software interfaces
4. Communications interfaces
5. Functional requirements

3.2.1 Response 1

3.2.1.1 Functional requirement 1.1

.....

3.2.1.*n* Functional requirement 1.*n*

3.2.2 Response 2

.....

3.2.*m* Response *m*

3.2.*m*.1 Functional requirement *m*.1

.....

3.2.*m.n* Functional requirement *m.n*

3.3 Performance Requirements

3.4 Design Constraints

3.5 Software system attributes

3.6 Other requirements

**Outline for SRS Section 3**

**Organized by functional hierarchy (Good if you have done structured analysis as part of your design.)**

3 Specific Requirements

3.1 External interface requirements

1. User interfaces
2. Hardware interfaces
3. Software interfaces
4. Communications interfaces
5. Functional requirements

3.2.1 Information flows

3.2.1.1 Data flow diagram 1

1. Data entities
2. Pertinent processes
3. Topology

3.2.1.2 Data flow diagram 2

1. Data entities
2. Pertinent processes
3. Topology

.....

3.2.1.*n* Data flow diagram *n*

3.2.1.*n*.1 Data entities

3.2.1.*n*.2 Pertinent processes

3.2.1.*n*.3 Topology

3.2.2 Process descriptions

1. Process 1
2. Input data entities
3. Algorithm or formula of process
4. Affected data entities

3.2.2.2 Process 2

3.2.2.2.1 Input data entities

3.2.2.2.2 Algorithm or formula of process

3.2.2.2.3 Affected data entities

.….

3.2.2.*m* Process *m*

3.2.2.*m*.1 Input data entities

3.2.2.*m*.2 Algorithm or formula of process

3.2.2.*m*.3 Affected data entities

3.2.3 Data construct specifications

3.2.3.1 Construct 1

3.2.3.1.1 Record type

3.2.3.1.2 Constituent fields

3.2.3.2 Construct 2

3.2.3.2.1 Record type

3.2.3.2.2 Constituent fields

…..

3.2.3.*p* Construct *p*

3.2.3.*p*.1 Record type

3.2.3.*p*.2 Constituent fields

3.2.4 Data dictionary

3.2.4.1 Data element 1

3.2.4.1.1 Name

3.2.4.1.2 Representation

3.2.4.1.3 Units/Format

3.2.4.1.4 Precision/Accuracy

3.2.4.1.5 Range

3.2.4.2 Data element 2

3.2.4.2.1 Name

3.2.4.2.2 Representation

3.2.4.2.3 Units/Format

3.2.4.2.4 Precision/Accuracy

3.2.4.2.5 Range

…..

3.2.4.*q* Data element *q*

3.2.4.*q*.1 Name

3.2.4.*q*.2 Representation

3.2.4.*q*.3 Units/Format

3.2.4.*q*.4 Precision/Accuracy

3.2.4.*q*.5 Range

3.3 Performance Requirements

3.4 Design Constraints

3.5 Software system attributes

3.6 Other requirements

**Outline for SRS Section 3**

**Showing multiple organizations (Can’t decide? Then glob it all together)**

3 Specific Requirements

3.1 External interface requirements

1. User interfaces
2. Hardware interfaces
3. Software interfaces
4. Communications interfaces
5. Functional requirements

3.2.1 User class 1

3.2.1.1 Feature 1.1

3.2.1.1.1 Introduction/Purpose of feature

3.2.1.1.2 Stimulus/Response sequence

3.2.1.1.3 Associated functional requirements

3.2.1.2 Feature 1.2

3.2.1.2.1 Introduction/Purpose of feature

3.2.1.2.2 Stimulus/Response sequence

3.2.1.2.3 Associated functional requirements

…..

3.2.1.*m* Feature 1.*m*

3.2.1.*m*.1 Introduction/Purpose of feature

3.2.1.*m*.2 Stimulus/Response sequence

3.2.1.*m*.3 Associated functional requirements

3.2.2 User class 2

.....

3.2.*n* User class *n*

.....

3.3 Performance Requirements

3.4 Design Constraints

3.5 Software system attributes

3.6 Other requirements

**Outline for SRS Section 3**

**Organized by Use Case (Good when following UML development)**

3. Specific Requirements

3.1 External Actor Descriptions

3.1.1 Human Actors

3.1.2 Hardware Actors

3.1.3 Software System Actors

3.2 Use Case Descriptions

3.2.1 Use Case 1

3.2.2 Use Case 2

3.2.n Use Case n

3.3 Performance Requirements

3.4 Design Constraints

3.5 Software system attributes

3.6 Other requirements