**Software Requirements**

**Specification**

**VaqPack**

Graduate-to-Professional

Aid Pack

Version 1.0

November 5th, 2015

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Fall 2015

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**1. Introduction**

**1.1 Purpose**

The purpose of the Software Requirements Specification is to provide a detailed description of the VaqPack Graduate to Professional Aid Pack application. The intention of the SRS is to articulate the purpose and features of the application, along with its user and external interfaces, constraints, dependencies, functionality, and attributes. This artifact provides the guidelines for the design and implementation of the software, and clarifies the description of the software for the customer. Therefore, the intended audience of this document includes the client, users, and developers.

**1.2 Scope**

The software application described throughout this SRS document is the VaqPack Graduate to Professional Aid Pack, or simply VaqPack. While this free desktop application can be used within any institution, it is primarily designed for the graduating students of the University of Texas Rio Grande Valley with the purpose of aiding their progression from academia to the professional world.

Using a graphical user interface, registered users of VaqPack can generate a resume, a business card, and cover letters. The information required for the generation of these objects is collected from the user, by means of input forms within a wizard, and then stored in a pre-existing MySQL database. Users can apply themes of their choice to these objects for personal style or look-and-feel. From these objects, the user may generate PDF documents which can be sent to contacts or potential employers via email. Additionally, the user may generate an HTML file from the resume data for use as a web page. Users may retrieve stored data for the purpose of editing or augmenting information, or to send documents to contacts at any given time.

**1.3 Definitions, Acronyms, and Abbreviations**

The following terms, acronyms, and abbreviations are used throughout this document and are presented in the table below by order of appearance.

|  |  |
| --- | --- |
| **Term** | **Definition** |
| SRS | Software Requirement Specification |
| VaqPack | VaqPack Graduate to Professional Aid Pack, in short |
| GUI | Graphical User Interface; provides a visual, interactive means for a software user to manipulate the controls, commands, or features of that software. |
| Wizard | A sequential set of prompts for input, assisting in data collection and organized such that its implementation increases ease of use. |
| Database | A structured collection of data that can be efficiently and conveniently accessed. |
| PDF | Portable Document Format; a popular electronic document file type particularly used with rich-text or styled text. |
| HTML | HyperText Markup Language; the web standard language used in the delivery of online content, interpreted and rendered by web browsers. |

**1.4 References**

JavaFX - <http://docs.oracle.com/javase/8/javase-clienttechnologies.htm>

MySQL - <http://dev.mysql.com/downloads/mysql/>

**1.5 Overview**

The remaining content of this SRS is organized in 5 sections: General Description, Specific Requirements, Analysis Models, Change Management Process, and the Appendices. The General Description section aims to make the requirements for the VaqPack application more easily understood from a high-level point of view, especially from the perspective of typical end-users. However, the Specific Requirements will define and describe the details of these requirements with the technical information needed by the developers. The Analysis Models section lists all of the models used in developing the specific requirements that are outlined in the previous section. Since the first version of VaqPack is currently being constructed, and since many requirements still need to be met, this section is subject to much change and many additions. The Change Management Process section outlines the procedures that must be followed when such changes occur throughout the development of VaqPack, including the updates to this SRS document. The Appendices include conceptual documents such as the initially provided high-level requirements and any conceptual diagrams or documents used by the developers. The documents in the Appendix may or may not be used in requirements definitions, but this is clearly specified for each document.

**2.** **General Description**

*This section of the SRS should describe the general factors that affect 'the product and its requirements. It should be made clear that this section does not state specific requirements; it only makes those requirements easier to understand.*

**2.1 Product Perspective**

*This subsection of the SRS puts the product into perspective with other related products or*

*projects. (See the IEEE Guide to SRS for more details).*

**2.2 Product Functions**

*This subsection of the SRS should provide a summary of the functions that the software will perform.*

**2.3 User Characteristics**

*This subsection of the SRS should describe those general characteristics of the eventual users of the product that will affect the specific requirements. (See the IEEE Guide to SRS for more details).*

**2.4 General Constraints**

*This subsection of the SRS should provide a general description of any other items that will*

*limit the developer’s options for designing the system. (See the IEEE Guide to SRS for a partial list of possible general constraints).*

**2.5 Assumptions and Dependencies**

*This subsection of the SRS should list each of the factors that affect the requirements stated in the SRS. These factors are not design constraints on the software but are, rather, any changes to them that can affect the requirements in the SRS. For example, an assumption might be that a specific operating system will be available on the hardware designated for the software product. If, in fact, the operating system is not available, the SRS would then have to change accordingly.*

**3.** **Specific Requirements**

*This will be the largest and most important section of the SRS. The customer requirements will be embodied within Section 2, but this section will give the D-requirements that are used to guide the project’s software design, implementation, and testing.*

*Each requirement in this section should be:*

* *Correct*
* *Traceable (both forward and backward to prior/future artifacts)*
* *Unambiguous*
* *Verifiable (i.e., testable)*
* *Prioritized (with respect to importance and/or stability)*
* *Complete*
* *Consistent*
* *Uniquely identifiable (usually via numbering like 3.4.5.6)*

*Attention should be paid to the carefuly organize the requirements presented in this section so that they may easily accessed and understood. Furthermore, this SRS is not the software design document, therefore one should avoid the tendency to over-constrain (and therefore design) the software project within this SRS.*

**3.1 External Interface Requirements**

**3.1.1 User Interfaces**

**3.1.2 Hardware Interfaces**

**3.1.3 Software Interfaces**

**3.1.4 Communications Interfaces**

**3.2 Functional Requirements**

*This section describes specific features of the software project. If desired, some requirements may be specified in the use-case format and listed in the Use Cases Section.*

**3.2.1 <Functional Requirement or Feature #1>**

3.2.1.1 Introduction

3.2.1.2 Inputs

3.2.1.3 Processing

3.2.1.4 Outputs

3.2.1.5 Error Handling

**3.2.2 <Functional Requirement or Feature #2>**

…

**3.3 Use Cases**

**3.3.1 Use Case #1**

**3.3.2 Use Case #2**

…

**3.4 Classes / Objects**

**3.4.1 <Class / Object #1>**

3.4.1.1 Attributes

3.4.1.2 Functions

<Reference to functional requirements and/or use cases>

**3.4.2 <Class / Object #2>**

…

**3.5 Non-Functional Requirements**

*Non-functional requirements may exist for the following attributes. Often these requirements must be achieved at a system-wide level rather than at a unit level. State the requirements in the following sections in measurable terms (e.g., 95% of transaction shall be processed in less than a second, system downtime may not exceed 1 minute per day, > 30 day MTBF value, etc).*

**3.5.1 Performance**

**3.5.2 Reliability**

**3.5.3 Availability**

**3.5.4 Security**

**3.5.5 Maintainability**

**3.5.6 Portability**

**3.6 Inverse Requirements**

*State any \*useful\* inverse requirements.*

**3.7 Design Constraints**

*Specify design constrains imposed by other standards, company policies, hardware limitation, etc. that will impact this software project.*

**3.8 Logical Database Requirements**

*Will a database be used? If so, what logical requirements exist for data formats, storage capabilities, data retention, data integrity, etc.*

**3.9 Other Requirements**

*Catchall section for any additional requirements.*

**4.** **Analysis Models**

*List all analysis models used in developing specific requirements previously given in this SRS. Each model should include an introduction and a narrative description. Furthermore, each model should be traceable the SRS’s requirements.*

**4.1 Sequence Diagrams**

**4.3 Data Flow Diagrams (DFD)**

**4.2 State-Transition Diagrams (STD)**

**5.** **Change Management Process**

*Identify and describe the process that will be used to update the SRS, as needed, when project scope or requirements change. Who can submit changes and by what means, and how will these changes be approved.*

**A.** **Appendices**

*Appendices may be used to provide additional (and hopefully helpful) information. If present, the SRS should explicitly state whether the information contained within an appendix is to be considered as a part of the SRS’s overall set of requirements.*

*Example Appendices could include (initial) conceptual documents for the software project, marketing materials, minutes of meetings with the customer(s), etc.*

**A.1 Appendix 1**

**A.2 Appendix 2**