Software Requirements Specification

1. Contents

2. Introduction

2.1 Purpose and user characteristics

This software solution is intended for use by XX XX, [redacted] This process involves looking up specifications, converting them, and then applying them in equations. The XX [redacted] (referred to in this document as the "software" or "solution") is an information system that will make each step of the [redacted] The software will store a large repository of editable and updatable [redacted] Unlike the current manual system of searching the internet and attempting to [redacted] will automate calculations and provide only the data relevant to the issues at hand.

Users of the software will be split into immediate users (members of XX XX), and extended users ([redacted] the software from XX XX). Immediate users are guaranteed to have a high level of computer skills and will be in constant contact with the developer of the solution, who will be acting as technical support. [redacted] taking advantage of all functional requirements, [redacted] Extended users are also likely to have a high level of technical competency, [redacted] They will not necessarily utilize every function of the system, however, some parts of the application will be customizable to their needs. These two groups will again be split into two sub-groups, [redacted]

3. Scope

3.1 Items within scope

The scope of the software solution includes three tasks – storing component specifications, converting measurements, [redacted]

Firstly, data on the technical specifications of components commonly used in XX will need to be [redacted] components will include the specifications detailed in table 2.1.1 below. Additionally, users require the ability to add new components to the database, [redacted]

Component	specifications
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Table 2.1. 1

Secondly, the conversion of measurements is a necessary function of the system. [redacted], and all measurement units detailed in table 2.1.2.

Category	Measurement
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Table 2.1. 2

Lastly, the software will be required to solve several [redacted] are detailed in table 2.1.3 below.

Inputs	Equation
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Table 2.1. 3

3.2 Items outside the scope

Several functions and features will not be available within the first release of the software due to time constraints. [redacted]

3.3 Operating environment

The software will largely exist and be used within in a [redacted] The software will be running on either a stationary PC or laptop, running Windows 8 or 10. [redacted] input method will be with a physical mouse and keyboard, allowing for smaller UI elements that would otherwise be difficult to select.

Occasionally, the software will be operated in a [redacted] In this case, the software will be used less frequently, [redacted]

Additionally, the software will sometimes be utilized from off campus, within a [redacted] or similar environment. [redacted]

3.4 Application Architecture

This software solution does not require any connections to other devices over the internet or locally, making a rich client architecture ideal. Rich client applications [redacted], thus improving efficiency by saving the client time and money.

4. Functional requirements

No.	Requirement	Notes
FR01	Store [redacted] data	[redacted]
FR02	Add new [redacted]	[redacted]
FR03	Edit existing [redacted] data	[redacted]
FR04	Sort [redacted] data	This is a simple change in the display order depending on a variable specified by the user. [redacted]
FR05	Search [redacted] data	This will match elements within the components specifications [redacted]
FR06	Convert between length units	Length units include millimetre, centimetre, meter, inch, and foot.
FR09	[redacted]	[redacted]
FR10	Convert between [redacted] units	[redacted]
FR11	[redacted]	[redacted]
FR12	[redacted]	[redacted]
FR13	[redacted]	[redacted]
FR14	[redacted]	[redacted]
FR15	Validate inputs.	Particularly when users enter data for calculation, [redacted]
FR16	Provide useful error messages.	In the event that the software does catch and error, an understandable and useful error message should be provided.

Table 3. 1

5. Non-functional requirements

No.	Requirement	Notes
NFR01	Usability – [redacted]	[redacted]
NFR02	Reliability – Support easy updates on [redacted]	[redacted]
NFR03	Portability –Usable in multiple environments.	[redacted]
NFR04	Robustness – Software should validate any inputs.	[redacted]
NFR05	Maintainability – [redacted]	[redacted]
NFR06	Attractiveness – [redacted]	XX XX [redacted]
NFR07	Attractiveness & Portability – [redacted]	Possible new users include other XX teams.

Table 4. 1

6. Constraints

Time – The largest constraint on the production of this project [redacted]

Technical – In order to fulfil the expected portability requirements as defined in [redacted]

Technical – Due to limited storage space [redacted]

Money – [redacted]

Social – [redacted]

7. Appendix

7.1 Data collection

Collection Method	Justification
Interviews – [redacted]	Interviews provide richer data than that of alternative collection methods, as any unclear answers can be immediately explained and further understood. [redacted]
Observations – [redacted] additional, important information can be noted and incorporated into the final write-up.	Observations will provide an unbiased view of what the system actually achieves. While interviews, surveys and other collection [redacted]
Surveys – [redacted]	Interviews and observations require physical access [redacted]

7.2 Context diagram of current, manual system

Examples Removed

7.3 Data flow diagram of current, manual system

Examples removed

7.4 Use case diagram of current, manual system

Examples removed