**Requirements Specification Document**

**<Project Name>**

**<Designer Organization>**

**<date created>**

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## Revision History

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| --- | --- | --- | --- |
| Name | Date | Reason for Changes | Version |
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|  |  |  |  |

## 1 Introduction

### 1.1 Purpose

<*Identify the product whose software requirements are specified in this document, including the revision or release number. Describe the scope of the product that is covered by this RS, particularly if this RS describes only part of the system or a single subsystem.*>

### 1.2 Project Scope

<*Provide a short description of the software being specified and its purpose, including relevant benefits, objectives, and goals. Relate the software to corporate goals or business strategies.*>

### 1.3 Glossary of Terms

<*Define all the terms necessary to properly interpret the RS, including acronyms and abbreviations.*>

### 1.4 References

<*List any other documents or Web addresses to which this RS refers. These may include user interface style guides, contracts, standards, system requirements specifications or use case documents. Provide enough information so that the reader could access a copy of each reference, including title, author, version number, date, and source or location.*>

### 1.5 Overview

<*Provide an overview of the sections and contents of the document*>

## 2 Overall Description

### 2.1 Product Perspective

*<Describe the context and origin of the product being specified in this RS. For example, state whether this product is a follow-on member of a product family, a replacement for certain existing systems, or a new, self-contained product. If the RS defines a component of a larger system, relate the requirements of the larger system to the functionality of this software and identify interfaces between the two. A simple diagram that shows the major components of the overall system, subsystem interconnections, and external interfaces can be helpful but not required.>*

### 2.2 Product Features

<*Summarize the major features the product contains or the significant functions that it performs or lets the user perform. Details will be provided in Section 3, so only a high level summary is needed here. Organize the functions to make them understandable to any reader of the RS.*>

### 2.3 User Classes and Characteristics

<*Identify the various user classes that you anticipate will use this product. User classes may be differentiated based on frequency of use, subset of product functions used, technical expertise, security or privilege levels, educational level, or experience. Describe the characteristics of each user class. Certain requirements may pertain only to certain user classes. Distinguish the favored user classes from those who are less important to satisfy.*>

### 2.4 Operating Environment

<*Describe the environment in which the software will operate, including the hardware platform, operating system and versions, and any other software components or applications with which it must peacefully coexist.*>

### 2.5 Design and Implementation Constraints

<*Describe any items or issues that will limit the options available to the developers. These might include: corporate or regulatory policies; hardware limitations (timing requirements, memory requirements); interfaces to other applications; specific technologies, tools, and databases to be used; parallel operations; language requirements; communications protocols; security considerations; design conventions or programming standards (for example, if the customer’s organization will be responsible for maintaining the delivered software).*>

### 2.6 Assumptions and dependencies

<*List any assumed factors (as opposed to known facts) that could affect the requirements stated in the RS. These could include third-party or commercial components that you plan to use, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors, such as software components that you intend to reuse from another project.*>

## 3 System Features

*<This template illustrates organizing the functional requirements for the product by system features, the major services provided by the product. You may prefer to organize this section by use case, mode of operation, user class, object class, functional hierarchy, or combinations of these, whatever makes the most logical sense for your product.>*

### 3.1 System Feature 1

<*Don’t really say “System Feature 1.” State the feature name in just a few words.*>

#### 3.1.1 Description and Priority

<*Provide a short description of the feature and indicate whether it is of High, Medium, or Low priority.*>

#### 3.1.2 Functional Requirements

<*Where applicable* - *Itemize the detailed functional requirements associated with this feature. These are the software capabilities that must be present in order for the user to carry out the services provided by the feature, or to execute related use case(s). Include how the product should respond to anticipated error conditions or invalid inputs. Requirements should be concise, complete, unambiguous, verifiable, and necessary. Use “TBD” as a placeholder to indicate when necessary information is not yet available.*>

*<Each requirement should be uniquely identified with a sequence number or a meaningful tag of some kind. These could be requirements that the clients provided directly or were defined by the designer group as a result of rendering the feature.>*

*<Each requirement should also include information a(1) bout Backward Traceability (the rationale for the requirements and the source – RFP and which section in it, client meeting and which notes from that meeting, etc.. and (2) Forward Traceability (how the requirement can be verified by the users)>*

REQ-1:

REQ-2:

#### 3.1.3 Use Case(s) associated with the Feature or Functional Requirements

<*This is the use case specification. For each Use Case*, *list the dialog elements in the use case that elaborates or is related to this feature or one of its functional requirements, i.e. sequences of user actions and system responses that stimulate the behavior defined for this feature/functional requirement*>

### 3.2 System Feature 2 (and so on)

## 3 System Features

### 3.1 Search function

#### 3.1.1 Description and Priority

The search function should allow users who know what they want to search for specific items. As a large portion of the user-base is expected to be returning customers, this is considered an important part of the app and is given high priority.

#### 3.1.2 Functional Requirements

* The search function should be immediately accessible upon signing into the Mobile Ordering System.
* The search function should accept a variety of inputs, including item number, brand name, keywords (eg: ‘glossy’), desired item features (eg: weather-resistant), and item names (eg: ladder, roller handles).
* Failure to recognize a search term should produce a message indicating that the term was not recognized, and suggest a list of popular products.

### 3.2 Product Recommendation System

#### 3.2.1 Description and Priority

The product recommendation feature should elicit the user’s needs, and recommend an item based on the information gathered. This is a high priority feature of the system as per BSPC request, and is expected to parallel the elicitation system used by associates in-store.

#### 3.2.2 Functional Requirements

* The item recommendation feature should give the user the opportunity to define their paint needs (eg: outdoor/indoor?) with respect to a variety of categories, and be presented with a recommendation upon completion.
* The item recommendation feature should be displayed prominently on the landing page of the mobile ordering system - with the expectation that first-time customers will naturally begin by using it - but the item recommendation feature should also be easily bypassed by returning customers.
* In situations where multiple items may fit a user’s needs, the recommendation page should present a top choice and alternatives, and explain the differences between each.

### 3.3 Color Matching

#### 3.3.1 Description and Priority

The color matching feature could utilize a user’s phone camera to photograph a surface next to a color swatch for the purposes of color matching a paint. Color matching is considered a “nice-to-have” feature that may be outside of the scope of this project, and is a low priority.

#### 3.3.2 Functional Requirements

* The color-matching feature must work with a wide variety of phones, with cameras/flashes of differing specifications
* It absolutely must match the photographed color accurately. If accurate matching proves impossible or unreliable, it is preferable that this feature not be offered.
* It can be assumed the the user of this feature has acquired a color swatch from the store at a previous visit.

### 3.4 Order History

#### 3.4.1 Description and Priority

Returning customers should be able to easily view their past orders, and use them as a basis for creating new orders. As a large portion of the user base will be repeat business in the form of contractors, this is given high priority.

* A link to view past orders should be available immediately upon signing into the Mobile Ordering System.
* A past order must be easily duplicated, or re-submitted with minor edits to save time for repeat customers who have recurring paint needs.
* For new customers, this feature should be clearly disabled, or not visible at all.

### 3.5 Products Catalog

#### 3.5.1 Description and Priority

This feature allows the user to browse items offered by the store, and view information specific to each item examined. This is a mid level priority feature.

#### 3.5.2 Functional Requirements

* The item catalog should include all items provided by the paint store.
* The item catalog should be easy to browse, and include a filtering system to allow a user to narrow the list of items they see listed.
* As an optional “nice-to-have” enhancement, the store’s real-time inventory could be accessed by the item catalog, allowing users to check current availability of the item(s) they are browsing.
* A user should be able to easily add an item from the item catalog to an existing order, and/or begin a new order containing the selected item.
* The item catalog should be maintained/edited/updated by store manager/owner.

### 3.6 Featured Products Section

#### 3.6.1 Description and Priority

This feature would allow the store to market items that are on-sale or featured in some way or another. Given that the app is intended to be a functional tool more than a promotional tool, this feature is considered “nice-to-have” and awarded low priority.

#### 3.6.2 Functional Requirements

* Allow the store owner/manager to promote certain item through the Mobile Ordering System.
* Noticeable space must be allocated on the Mobile Ordering System landing page to draw the user’s attention.

### 3.7 Wait time estimator

#### 3.7.1 Description and Priority

Upon placing an order, the user should be presented with an estimate on when the order will be ready for pickup. This is a medium priority.

#### 3.7.2 Functional Requirements

* After an order is placed, the Mobile Ordering Service should (conservatively) produce an estimate as to when the order will be ready for pickup.
* The criteria for determining wait time is yet to be determined, but may be based on order size, existence of other orders currently being handled, and/or a response from an associate at the store.

## 4 External Interface Requirements

### 4.1 User Interfaces

*<Describe the logical characteristics of each interface between the software product and the users. This may include sample screen images, any GUI standards or product family style guides that are to be followed, screen layout constraints, standard buttons and functions (e.g., help) that will appear on every screen, keyboard shortcuts, error message display standards, and so on. Define the software components for which a user interface is needed.>*

### 4.2 Hardware Interfaces

*<Describe the logical and physical characteristics of each interface between the software product and the hardware components of the system. This may include the supported device types, the nature of the data and control interactions between the software and the hardware, and communication protocols to be used.>*

### 4.3 Software Interfaces

*<Describe the connections between this product and other specific software components (name and version), including databases, operating systems, tools, libraries, and integrated commercial components. Identify the data items or messages coming into the system and going out and describe the purpose of each. Describe the services needed and the nature of communications. Identify data that will be shared across software components.>*

### 4.4 Communications Interfaces

*<Describe the requirements associated with any communications functions required by this product, including e-mail, web browser, network server communications protocols, electronic forms, and so on.>*

## 5 Other Non Functional Requirements

### 5.1 Performance Requirements

*<If there are performance requirements for the product under various circumstances, state them here and explain their rationale, to help the developers understand the intent and make suitable design choices. Specify the timing relationships for real time systems. Make such requirements as specific as possible. You may need to state performance requirements for individual functional requirements or features.>*

### 5.2 Safety Requirements

*<Specify those requirements that are concerned with possible loss, damage, or harm that could result from the use of the product. Define any safeguards or actions that must be taken, as well as actions that must be prevented. Refer to any external policies or regulations that state safety issues that affect the product’s design or use. Define any safety certifications that must be satisfied.>*

### 5.3 Security Requirements

*<Specify any requirements regarding security or privacy issues surrounding use of the product or protection of the data used or created by the product. Define any user identity authentication requirements. Refer to any external policies or regulations containing security issues that affect the product. Define any security or privacy certifications that must be satisfied.>*

### 5.4 Software Quality Attributes

*<Specify any additional quality characteristics for the product that will be important to either the customers or the developers. Some to consider are: adaptability, availability, correctness, flexibility, interoperability, maintainability, portability, reliability, reusability, robustness, testability, and usability. Write these to be specific, quantitative, and verifiable when possible. At the least, clarify the relative preferences for various attributes, such as ease of use over ease of learning.>*

## 6 Other Requirements

*<Define any other requirements not covered elsewhere in the RS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>*

## 7 Analysis Models (Use Case Model, Entity relationship diagrams, Data Flow Diagrams, Glossary)

*<For each analysis model include a short description explaining its elements and relationships, and how they might relate to other artifacts (requirements, use cases) or models described in other parts of the document>*

## Appendix: Issues List

*<This is a dynamic list of the open requirements issues that remain to be resolved, including TBDs, pending decisions, information that is needed, conflicts awaiting resolution, and the like.>*