Ice Cream Manager [ICM]

Software Requirements Specification Document

Version No. v0.1

Project Document Revision History

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# 1.0 Introduction

This section provides an overview of the entire requirement document. This document describes all data, functional and behavioral requirements for software.

## 1.1 Goals and Objectives

Overall goals and software objectives are described.

## 1.2 Statement of Scope

A description of the software is presented. Major inputs, processing functionality and outputs are described without regard to implementation detail.

## 1.3 Software Context

The software is placed in a business or product line context. Strategic issues relevant to context are discussed. The intent is for the reader to understand the 'big picture'.

## 1.4 Major Constraints

Any business or product line constraints that will impact the manner in which the software is to be specified, designed, implemented or tested are noted here.

# 2.0 Usage Scenario

This section provides a usage scenario for the software. It organized information collected during requirements elicitation into use-cases.

## 2.1 User Profiles

The profiles of all user categories are described here.

## 2.2 Use-Cases

LIST of all use-cases for the software are presented.

## 2.3 Special Usage Considerations

Special requirements associated with the use of the software are presented.

# 3.0 Data Model and Description

This section describes information domain for the software

## 3.1 Data Description

Data objects that will be managed/manipulated by the software are described in this section.

### 3.1.1 Data Objects

For each data object in 3.1 describe their major attributes.

### 3.1.2 Relationships

Relationships among data objects are described using CRC cards. No attempt is made to provide detail at this stage.

### 3.1.3 Complete Data Model

An UML Class model for the software is developed

### 3.1.4 Data Dictionary

A reference to the data dictionary is provided. The dictionary is maintained in electronic form.

# 4.0 Functional Model and Description

Description of major software functions along with UML Use Case, sequence, and communication diagrams.

## 4.1 Use Cases

A detailed description of each software function is presented by completing a use case template.

Cross reference this document with file name of use case summary document

LIST all of the use cases cross-listed with the file names of actual document

## 4.2 Software Interface Description

The software interface(s)to the outside world is(are) described.

### 4.2.1 External Machine Interfaces

Interfaces to other machines (computers or devices) are described.

### 4.2.2 External System Interfaces

Interfaces to other systems, products or networks are described.

### 4.2.3 Human Interface

An overview of any human interfaces to be designed for the software is presented.

## 4.3 Sequence Diagrams

Used to model the class interactions needed for the use cases.

## 4.4 Communication Diagrams

Used to model the message passing structure of the system functions.

# 5.0 Behavioral Model and Description

A description of the behavior of the software is presented.

## 5.1 Description for Software Behavior

A detailed description of major events and states is presented in this section.

### 5.1.1 Events

A listing of events (control, items) that will cause behavioral change within the system is presented.

### 5.1.2 States

A listing of states (modes of behavior) that will result as a consequence of events is presented.

## 5.2 State Transition Diagrams

Depict the manner in which the software reacts to external events.

# 6.0 Restrictions, Limitations, and Constraints

Special issues which impact the specification, design, or implementation of the software are noted here.

# 7.0 Validation Criteria

The approach to software validation is described.

## 7.1 Classes of Tests

The types of tests to be conducted are specified, including as much detail as is possible at this stage. Emphasis here is on black- box testing.

## 7.2 Expected Software Response

The expected results from testing are specified.

## 7.3 Performance Bounds

Special performance requirements are specified.

# 8.0 Appendices

Presents information that supplements the Requirements Specification

## 8.1 System Traceability Matrix

A matrix that traces stated software requirements back to the system specification.

## 8.2 Product Strategies

If the specification is developed for a product, a description of relevant product strategy is presented here.

## 8.3 Analysis Metrics to be Used

A description of all analysis metrics to be used during the analysis activity is noted here.

## 8.4 Supplementary Information (as required)

# 8.5 Software Requirements Specification Review and Signoff

Review and Signoff of the Software Requirements Specification Document.

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