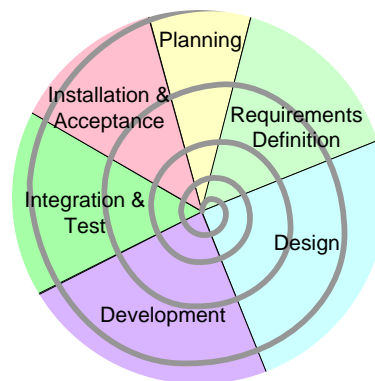


Software Requirements Document

BOTS Core Functions Component

Prepared For: Highland Office Supply
Prepared By: John Zoltai
Digital Publications LLC

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TABLE OF CONTENTS

INTRODUCTION	5
PURPOSE	5
SCOPE	5
REFERENCES	6
REQUIREMENTS	7
REQUIREMENT IDENTIFIERS.....	7
LOGICAL DATABASE DESCRIPTION & ENTITY DESCRIPTIONS	7
CORE APPLICATION FUNCTIONS	8
ANALYSIS LISTINGS	12

GLOSSARY OF PROJECT-SPECIFIC TERMS	
Glossary of Software Engineering Terms	A standard Glossary of Software Engineering Terms is maintained online. Terms specific to this project are maintained below.
Glossary of Project-Specific Terms	A common Glossary of Project-Specific Terms is maintained on the project Web site.

INTRODUCTION

This is the Software Requirements Document (SRD) for the Core Features (CORE) component of the Basic Order Tracking System (BOTS) database application.

PURPOSE

The purpose of this SRD is to expand upon the goals described in the BOTS-CORE Component Iteration Plan (CIP). The requirements document is an intermediate step; it describes the functionality of the component in sufficient detail to support a formal design effort.

SCOPE

In technical terms, the requirements described in this document are called system definition requirements. The development methodology for this project places system definition requirements as a middle tier between high-level requirements and design requirements, as shown here:

Requirements Class	DB Requirement Class Artifacts	
	Processing Focus	Storage Focus
High-Level Requirements (Goals) [SPMP, CIP]	Use Cases User Community Desc Shell Capabilities	Operational Data Area Desc Reference Data Area Desc
System Definition Req's (Req's) [SRD LDD]	Core Functions Requirements Component Functional Reqts Performance Requirements	Logical ERD Entity Descriptions
Design Requirements (Elements) [SDD, PDD]	Menus Forms Operations Queries & Reports	Physical ERD Data Dictionary Access Control Hierarchy
	Business Rules	

A [description of the above requirements classes and subclasses](#) is available at the software engineering process repository for this project.

REFERENCES

The following standards were used as guides to develop this requirements document. The standards were reviewed and this content tailored to the specific needs of this project.

- IEEE 830-1988: Standard for Software Requirements Specifications
- IEEE 1012-1988: Standard for Software Validation and Verification Plans
- SEI/CMMI: RD, REQM Process Areas

REQUIREMENTS

REQUIREMENT IDENTIFIERS

To facilitate traceability between high-level requirements, system definition requirements, and system design requirements, this development methodology mandates requirement identifiers in the following format:

High-level requirements, or component goals, are defined in the Component Iteration Plan (CIP) and identified with the letters CG, a sequential number, a hyphen, and the component acronym (BOTS). For example, the first goal for this component is identified in the CIP as **CG1-BOTS**. This indicates that this is the first high-level requirement, or goal for the BOTS-CORE component.

The letter R, a sequential number, a hyphen, and the parent goal that this requirement satisfies, in whole or in part, identify system definition requirements, also referred to simply as “requirements.” For example, the third requirement for a typical project could be identified as **R3-CG2**. This indicates that this is the third system definition requirement, and is traced to the second high-level requirement for the component.

LOGICAL DATABASE DESCRIPTION & ENTITY DESCRIPTIONS

R1-CG1

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The BOTS-CORE design shall be based on the logical Entity Relationship Diagram (ERD) and related entity descriptions included in the Logical Database Description available at:

<http://www.shellmethod.com/projs/BOTS/architecture/core/BOTS-CORE-LDD.pdf>

The LDD is maintained separately due to its focus on the structure and utilization of the entities associated with BOTS.

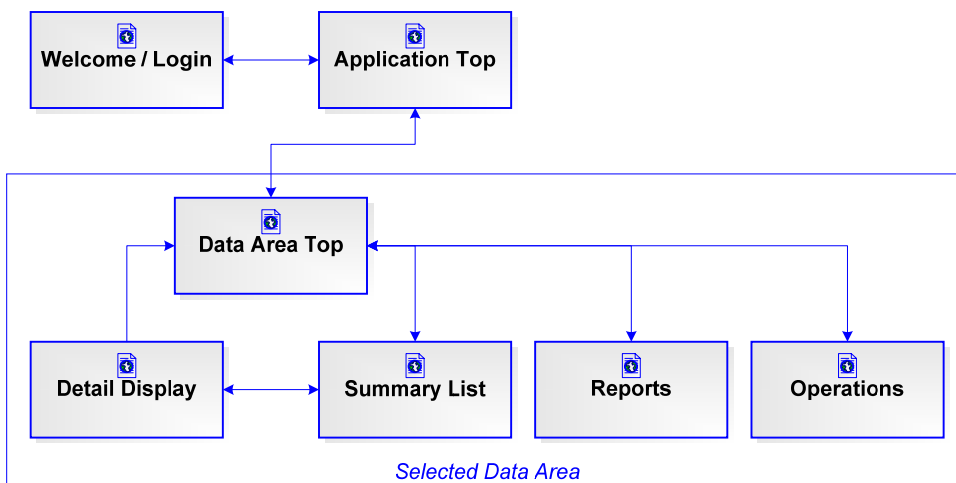
CORE APPLICATION FUNCTIONS

FLOW OF CONTROL

R2-CG1

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The flow of control for this application begins at the application homepage, where the user is presented with basic information about the application and the opportunity to log on to the system. Once the user has successfully logged on, the top level of the application is presented. Here, the user may select which data area they wish to work with.



Selecting a data area link takes the user into the standard flow of control as shown in the above illustration. The actions to be taken on each of these areas are described in the paragraphs below.

WELCOME & LOG IN

R3-CG1

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The welcome & log in screen presents basic information about the application, including title and version, and gives the user an opportunity to log onto the system.

APPLICATION TOP

R4-CG2

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When the user has successfully logged on to the application, the application top page is presented. This page provides links to and descriptive text for all the operational and reference data areas.

DATA AREA TOP

R5-CG3

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When the user enters a specific data area, a data area top page is presented that allows the user to choose to perform a predefined search, develop an ad hoc search, or add new records, as described below. The data area top page also provides links to separate reporting and operations pages.

QUERY MANAGEMENT

PREDEFINED SEARCH

R5a-CG4

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A list of predefined searches that are relevant to the specific data area may be presented to the user if any exist. Predefined searches either have built-in query criteria or can display a screen allowing the user to enter query criteria that are specific to the predefined search.

AD HOC SEARCH

R5b-CG4

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Ad hoc searches can take one of two forms. The most commonly used form is the simple search, where the user selects from a list of available data fields and enters the desired value. The second form is a complex search, where the user may enter a variety of criteria in a controlled fashion.

ADDING NEW RECORDS

R5c-CG6

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If the user chooses to add new records, the detail display form is presented in add record mode. After the user has filled in the new data and submitted the form, a new, blank form is presented in add record mode. This process continues until the user cancels submission of the last form.

SUMMARY LISTING

R6-CG5

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After filling in the search criteria and initiating the search, or adding a series of new records, the user is presented with a summary listing of records that match the search criteria, or the newly entered records. This listing may consist of as few as zero records if appropriate. The listing itself consists of a subset of fields from the appropriate data area. These fields are selected to enable the user to easily discriminate between different records and identify specific records. The design document for this project describes the fields used to populate the summary listing for each data area.

DETAIL DISPLAY

R7-CG6

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When the user clicks on a record in the summary listing, the detail display for the appropriate record is presented. If the user has appropriate permissions, appropriate fields will be made available for modification. Otherwise, the user will be allowed to view the appropriate data. After making modifications and submitting the record, the user is

returned to the summary listing. The user may also cancel submission to return to the summary listing. If the user does not have permissions to perform modifications, the only option available is to cancel and return to the summary listing.

REPORTS

R8-CG7

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When the user follows the reporting link from the data area top page to the reports page, a listing of predefined reports is made available to the user, along with a link to the ad hoc query and reporting tool.

PREDEFINED REPORTS

R8a-CG7

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When the user executes a predefined report, the system may optionally present a criteria entry screen to allow the user to specify various report parameters. In other cases, all of the report parameters are predefined, and the system proceeds directly to report generation.

AD HOC REPORTING

R8b-CG7

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Ad hoc report generation, where the user specifies not only the report criteria, but also the structure and formatting of the report itself, is a complex problem that has been solved by dedicated, third party query and reporting tools. When the user clicks on the link for ad hoc reporting, the system launches the selected third party query and reporting tool.

OPERATIONS

R9-CG8

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When the user follows the operations link from the data area top page to the operations page, a listing of pertinent predefined operations is made available to the user. When the user executes an operation, the system may optionally present a criteria entry screen to allow the user to specify various operation parameters. In other cases, all of the operation parameters are predefined, and the system immediately begins processing.

SECURITY

R10-CG2

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The system will restrict access to BOTS data to specified sets of authorized users.

USER IDENTIFICATION

R10a-CG2

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Once a user has successfully logged on, the system retains the unique user ID for reference as necessary.

USER COMMUNITY

R10b-CG2

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An authorized user must be a member of one or more of the major user classes as defined in the physical database description.

NETWORK COMMUNICATIONS

R10c-CG2

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The BOTS system will be operated on a Local Area Network (LAN) within a single physical location. As such, it is not necessary to encrypt network communications between end-users and the database application servers.

ANALYSIS LISTINGS

The following listings are automatically maintained by the word processor for this document. They are of use only to systems analysts when verifying requirements traceability across documents and tracking project size.

R1-CG1
R2-CG1
R3-CG1
R4-CG2
R5-CG3
R5A-CG4
R5B-CG4
R5C-CG6
R6-CG5
R7-CG6
R8-CG7
R8A-CG7
R8B-CG7
R9-CG8
R10-CG2
R10A-CG2
R10B-CG2
R10C-CG2

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