TEAM BEANS

Supplementary Specification Document

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July 6, 2022

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1 Introduction

1.1 Purpose

The purpose of this document is to define the requirements of the GreenBox Audiobook Lending System. This Supplementary Specification captures the requirements of the GBALS which are not readily captured in the use cases of the use-case model. The Supplementary Specifications and the use-case model together form a complete set of requirements for the system.

1.2 Scope

This Supplementary Specification applies to the GreenBox Audiobook Lending System which is a pilot project developed as part of the Main Public Library System. A client-server system to interface will be developed. The GreenBox Audiobook Lending System will enable customers to use the web interface to reserve an available book online and pick up at a specific kiosk location. It also allows customers to make changes to their reservations and requests. This specification defines the non-functional requirements of the system, such as usability, reliability, performance, and supportability as well as functional requirements that are common across the use cases described in the Use Case Document.

1.3 Definitions, Acronyms, Abbreviations

Term	Definition
GBALS	GreenBox Audiobook Lending System
GNU GPL	GNU General Public License
IEEE	Institute of Electrical and Electronics Engineers
RUP	Rational Unified Process
API	Application Programming Interface

Table 1.3 Terminology with Definition

1.4 Overview

- The supplementary specification document is composed of the following sections.
- The Functional Requirements will describe requirements that are supplementary to the requirements depicted in the Use Case Documents. This section can be empty or will be replenished with more details as the Use Case Document has covered all the functional requirements.
- The Business Rules section includes the operations, definitions and constraints that apply to the GBALS.

- The Reliability section describes reliability requirements that includes availability, mean time between failures, maintenance measures, accuracy, maximum bugs, and defect rate.
- The Performance section describes the performance characteristics of the system.
- The Supportability section defines any requirements that will enhance the supportability or maintainability of the system being built.
- The Design Constraints indicate any design constraints on the GBALS such as programming languages, software process requirements, and architectural and design constraints.
- The Documentation & Help System Requirements describe the requirements for online user documentation and help systems requirements.
- The Purchased Components describes any purchased components to be used with the system. The GBALS will work with multiple existing systems managed by the Main Library System.
- The Communication Interface section describes the interface requirements of the GBALS.
- Requirements for user, hardware, software, and communication interfaces are defined.
- The Licensing Requirements, Legal, Copyright, and Other Notices sections describe any necessary legal disclaimers, and copyright notices.
- The Applicable Standards section describes, by reference, any standards applicable to the system being described.

1.5 References

Applicable references are:

GreenBox Audiobook Lending System Problem Statement rev, 8-2020, JMD.

TeamBeans Requirements Documentation, TeamBeans, 2022, Johns Hopkins University

2 Functional Requirements

None.

3 Business Rules

- Accounts must be set up at the library or via the library website, not at a kiosk. All outstanding fines must be paid before an account may be set up.
- Customer information is stored on the main library system, not within the kiosks.

- The maximum time period for a reservation shall be three days from the date of the reservation's creation.
- The time period for a customer to return a book without a fine shall be two weeks.
- QR codes shall be used to mark audiobooks. Audiobooks must be inserted into the kiosk in a way that enables code reading.
- Inventory distribution will be handled by an external system beyond the scope of the GreenBox system.
- Late book fine computation shall be handled by an external system beyond the scope of the GreenBox system.

4 Usability

None.

5 Reliability

- Kiosks shall be available 24/7/365, except for re-stocking and maintenance.
- Kiosks shall not be available to customers when maintenance or re-stocking is being performed.

6 Performance

None.

7 Supportability

- The library's administrative branch will manage and support the kiosks.
- Kiosks shall be periodically serviced by maintenance personnel.

8 Design Constraints

None.

9 Documentation & Help System Requirements

- Online support concerning administration processes and user tutorials will be available.
- README files and release notes will be delivered to the customer in each release.
- User guides and Administration guides are to be provided per customer request.
- Customer support email will receive any customer feedback and questions.

10 Purchased Components

- All software used to develop the GBALS will comply to the software license agreement. This section will be determined with more details later.

11 User Interfaces

- The GBALS will be accessed through a web-based interface.
- The GBALS website is part of the Main Library website where users must first log into the library website and navigate to GBALS. Therefore, user authentication through a secure user interface is external to the GBALS to be designed.
- The GBALS will announce error messages indicating the occurrence of unexpected system operation to the users with an error web page stating the cause of the error.
- The GBALS web interface will conform to the most used resolutions across mobile, desktop, and tablet which: 1920×1080 (8.89%)

12 Hardware Interfaces

- The GBALS will interact only with the provided web server and database server. Any additional system interaction will be handled by the operating system and any other supporting software systems.

13 Software Interfaces

- The GBALS will access customer information kept on the Main Library System through a standardized API.
- The GBALS will provide a standardized API so that third-party programs and existing systems supported by the Main Library System may access information programmatically from the GBALS system.

14 Communication Interfaces

- The GBALS will be designed with an open-source, server-side web-application framework that provides systems for HTTP and HTTPS interactions with the web server.

15 Licensing Requirements

- Open-source Agreement: GNU GPL

16 Legal, Copyright, Other Notices

- By using the GreenBox Audiobook Lending System, users are accepting that they are bound by the disclaimers, terms and conditions set forth below:

- The product will be part of open source under GNU GPL (GNU General Public License). Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.
- Distribution of any portion of the software is not allowed. All copyright, trademark, and patent notices that are present in the software must be followed.

17 Applicable Standards

- All documentation should meet IEEE, RUP standards, and web standards.

18 Reference

- Gamble, S. “Course Registration System Supplementary Specification.” Example: Supplementary Specification, 19 Feb. 1999, https://csis.pace.edu/~marchese/SE616_New/Samples/Example%20%20Supplementary%20Specification.htm.
- Hedberg, Thomas, et al. “Software Requirements Specification to Distribute Manufacturing Data.” National Institute of Standards and Technology, Dec. 2017.
- Knezevic, Bojan, et al. “Synergy Distributed Meeting Scheduler.” 3 Dec. 2008.