**Goodreads® Clone App**

**Technical Scope – Requirements Specification**

**0.1**

Prepared By:



Proprietary and Confidential

*Copyright 2021 by Goodreads*

*All Rights Reserved.*

Contents

[Scope 5](#_Toc59957626)

[1 Project Overview 6](#_Toc59957627)

[1.1 Project Description 6](#_Toc59957628)

[1.2 Business Objectives 6](#_Toc59957629)

[1.3 Scope 6](#_Toc59957630)

[1.4 Assumptions and Dependencies 7](#_Toc59957631)

[2 Functional Requirements 8](#_Toc59957632)

[2.1 AUTHORS MODULE 8](#_Toc59957633)

[2.1.1 Publishing Companies 8](#_Toc59957634)

[2.1.2 Authors 8](#_Toc59957635)

[2.2 BOOKS MODULE 10](#_Toc59957641)

[2.2.1 Books 10](#_Toc59957642)

[2.2.2 Book Reviews 10](#_Toc59957643)

[2.3 USERS MODULE 11](#_Toc59957646)

[2.3.1 Users 11](#_Toc59957647)

[2.3.2 Normal Users 11](#_Toc59957648)

[2.3.3 Editors 11](#_Toc59957649)

[2.3.4 Administrators 12](#_Toc59957650)

[2.3.5 Bookshelves 12](#_Toc59957651)

[2.3.7 Favorite Books 12](#_Toc59957653)

[2.4 Performance Requirement 13](#_Toc59957654)

[2.4.1 Accuracy and Validity 13](#_Toc59957655)

[2.4.2 Timing and Capacity 13](#_Toc59957656)

[2.4.3 Failure Contingencies 13](#_Toc59957657)

[2.5 Security Requirement 13](#_Toc59957658)

[3 Implementation 14](#_Toc59957659)

[3.1 Authors Module 14](#_Toc59957660)

[3.1.1 Authors (GCA\_PUBLISHING\_COMPANIES) 14](#_Toc59957661)

[3.1.2 Authors (GCA\_AUTHORS) 15](#_Toc59957662)

[3.1.4 Authors (GCA\_COUNTRIES) 17](#_Toc59957664)

[3.1.5 Authors (GCA\_CITIES) 17](#_Toc59957665)

[3.1.7 Authors (GCA\_AUTHOR\_FOLLOWERS) 19](#_Toc59957667)

[3.2 Books Module 19](#_Toc59957668)

[3.2.1 Books (GCA\_BOOKS) 19](#_Toc59957669)

[3.2.2 Books (GCA\_BOOK\_REVIEWS) 20](#_Toc59957670)

[3.2.3 Books (GCA\_BOOK\_AUTHORS) 21](#_Toc59957671)

[3.3 Users Module 22](#_Toc59957673)

[3.3.1 Users (GCA\_USERS) 22](#_Toc59957674)

[3.3.2 Users (GCA\_BOOKSHELVES) 23](#_Toc59957675)

[3.3.3 Users (GCA\_BOOKSHELF\_BOOKS) 23](#_Toc59957676)

[3.3.4 Users (GCA\_FAVORITE\_BOOKS) 24](#_Toc59957677)

[4 Risk 26](#_Toc59957678)

[5 Acceptance Criteria 27](#_Toc59957679)

[5.1 Milestones 27](#_Toc59957680)

[5.2 Criteria 27](#_Toc59957681)

[6 Document Approvals 28](#_Toc59957682)

[7 Appendix 29](#_Toc59957683)

Document History

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Version** | **Date**  **(dd/mm/yyyy)** | **Summary of Changes** | **Updated By** | **Department** |
| 0.1 | 05/05/2021 | First Creation | Emily Hersh | IT |

###### Scope

Identification

This document shall be referred to hereafter as the technical scope document of the **Goodreads® Clone App.**

Purpose

The purpose of this document is to capture customer requirement and obtain the stakeholders approval for these requirements.

Document Overview

This document targets the business requirements where main functionalities and scope are defined. This constructs the guidelines for upcoming events and efforts.

Definitions, Acronyms and Abbreviations

The list below contains the definitions, acronyms and abbreviations existing in the document:

|  |  |
| --- | --- |
| **Acronym** | **Explanation** |
| GCA | Goodreads Clone App |
| ERD | EMA Entity Relationship Diagram |
| CRUD | Create, Read, Update, and Delete |
| UN/LOCODE | United Nations Code for Trade and Transport Locations |

# Project Overview

## Project Description

The purpose of this document is to provide information to the XYZ Executive Committee sufficient to allow their endorsement of the development, maintenance, hosting, and use of the Goodreads Clone App. This system allows Users to view books, create bookshelves/ favourites and follow Authors, while being a medium in which Authors can display their books. This document explains the high-level technical and functional requirements, and provides information about the roles and responsibilities needed to support such a system, including the obligations of XYZ and the obligations of Goodreads. The document also includes a cost estimate for developing and maintaining this type of system for XYZ members.

## Business Objectives

Goodreads Clone App aims to achieve the following business objectives:

* Our goal is to improve quality of service, provide user-friendly advanced technology, and lower costs for XYZ Corporation by working to increase efficiency.
* Create a positive user experience that translates to the bottom line for shareholders.
* Provide built in capabilities that incentivize authors and publishing companies to allow viewing of their works.

## Scope

The Technical Scope Document outlines the functional, performance, security and other system requirements identified by the Goodreads IT Department as the proposed information system solution for XYZ Corporation. It provides the stakeholders with an understanding of your overall capabilities, interest and competitiveness as the top provider for literature viewing services.

The Goodreads Clone App will:

* House online profiles of Authors and Books as well as User profiles and ‘bookshelves’.
* House an automated billing and payment system for Premium Goodreads users.
* Allow secure access by users to create and maintain their profiles and playlists.
* Allow users to manage (add, change, delete) bookshelves and books for maintenance within their profile.
* Allow users to create favorites and bookshelves.
* Provide a built-in algorithm to recommend new books and authors based on user preferences and viewing history.

## Assumptions and Dependencies

* The address (Countries, Cities, etc) will follow the United Nations Code for Trade and Transport Locations **UN/LOCODE** standard.
* Impending changes to data privacy laws in the EU GDPR Act may impact database design.

# Functional Requirements

## AUTHOR MODULE

This module allows defining and viewing authors and publishing companies.

### Publishing Companies

A publishing company is a company that publishes books in collaboration with authors.

A publishing company has the following info:

* Name
* ID
* Head Company ID
* Image
* About
* Contact Person Name
* Contact Person Email
* Country Code
* City Code
* HQ Address
* HQ Phone Number
* Company Creation Date

A publishing company can have sub-companies.

### Authors

An author is an individual.

An author has the following info:

* Name
* ID
* Company ID
* Image
* About
* Author Genre
* Manager Name
* Manager Email
* Manager Phone Number
* Home Country Code
* Home City Code
* Current Country Code (The current country in which the author lives)
* Current City Code (The current country in which the author lives)
* Address (The current address of the author)
* Birth Date
* Activity Start Date (The date in which the author started his/her literary activity)

## BOOKS MODULE

The books module allows defining and viewing books.

### Books

A book is published for an artist.

A book has the following info:

* Name
* About
* ISBN
* Page Count
* ID
* Cover Image
* Average Rating
* File URL
* Creation Date

### Book Reviews

A book review is published for a book by a user.

A book review has the following info:

* ID
* User ID
* Book ID
* Average Rating
* User Rating
* User Review
* Creation Date

## USERS MODULE

The Users module allows defining and viewing users and playlists

### Users

A user has the following info:

* User Type
* ID
* First Name
* Last Name
* Avatar
* Birth Date
* Email
* Phone Number
* Country Code
* City Code
* Address
* Creation Date

A user has three types:

* Normal User
* Editor
* Administrator

### Normal Users

Normal users are allowed to do the following:

* Login to the system
* Look at books
* Add books to favourites
* Mange his created bookshelves (create, edit, delete, add books)
* Follow authors

### Editors

Editors are allowed to all allowed actions for normal users and in addition the following:

* Manage his created authors (create, edit, delete, add books)
* Manage his created books (create, edit, delete)
* Manage his created publishing companies (create, edit, delete, add books, and authors).

### Administrators

Administrators are allowed to all allowed actions for editors and in addition the following:

* Manage all created authors (create, edit, delete, add books)
* Manage all created books (create, edit, delete)
* Manage all created publishing companies (create, edit, delete, add books, and authors)

### Bookshelves

A bookshelf is a list of books that the user creates in order to view the books later.

A bookshelf has the following info:

* Name
* ID
* Type
* Description
* Creator User ID
* Creation Date

## Performance Requirement

### Timing and Capacity

The system is intended to be available online 24 hours per day, 365 days per year with the exception of scheduled and pre-notified system maintenance downtimes, if needed. Data will become immediately available for use, with a system response time of less than two seconds. Goodreads will ensure that system resources are adequate for appropriate response times and overall software functionality. The system will be built and tested on Goodreads hardware and software. The cost of an ISP/hosting provider is estimated to be approximately $1,200 annually. The cost of this will be paid by Goodreads.

## Specificity Requirement

### Accuracy and Validity

The system will employ numerous data quality assurance techniques, including but not limited to:

• Input masks

• Drop down lists with standard responses

• Record data completeness requirements

• Basic data logic warnings

### Failure Contingencies

The system is critical. Temporary inaccessibility, even up to several hours, will create a substantial burden on any user. The host site for the system will be chosen so as to include data backup capabilities and protocols. Goodreads will maintain a copy of the code on the network, which has daily backup protocols. It is expected that with the use of an IPS/hosting provider that downtime will be minimal or non-existent.

## Security Requirement

The Goodreads Clone App will deal with confidential user data such as billing information and location data. Additionally we must include compliance with data protection laws like GDPR. Within the app there will be specific restrictions based on user type (see 2.3.1 for full details). This is how we will achieve our comprehensive security component:

* Auto-backups: Any lost information can cause damage, so we will ensure automatic backups to take place.
* Data security: User information is highly sensitive, so we will make sure the databases with private details are stored safely and securely.
* Storage devices or cloud: Auto-backups would enable downloading data to hard drives or the cloud so that users can access account on multiple devices simultaneously.
* Data encryption: Security can be managed by encrypting all sensitive customer information so that it could only be accessed with a key.

# Implementation

## Authors Module

### Publishing Companies (GCA\_PUBLISHING\_COMPANIES)

This table displays the GCA\_PRODUCTION\_COMPANIES attribute.

3.2.1.1: Table Description

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COLUMN NAME** | **DATA**  **TYPE** | **NULLABLE** | **DESCRIPTION** | **VALUES**  **DESCRIPTION** |
| ID | NUMBER | NO | Unique Identifier could signal sub company. |  |
| NAME | VARCHAR2 | NO | Publishing Company Name |  |
| GCA\_HEAD\_COMPANY\_ID | NUMBER | YES | Unique Identifier for the head company. |  |
| IMAGE | BLOB | YES | Image of Company |  |
| ABOUT | VARCHAR2 | YES | Description of Company |  |
| CONTACT\_PERSON\_NAME | VARCHAR2 | NO | The name of the contact person |  |
| CONTACT\_PERSON\_EMAIL | VARCHAR2 | YES | Contact Person email |  |
| GCA\_COUNTRY\_CODE | VARCHAR2 | NO | UN/LOCODE |  |
| GCA\_CITY\_CODE | VARCHAR2 | NO | UN/LOCODE Composite City code |  |
| HQ\_ADDRESS | VARCHAR2 | YES | Where HQ is located (address) |  |
| HQ\_PHONE\_NUMBER | NUMBER | YES | Contact Phone Number |  |
| CREATED\_BY | VARCHAR2 | NO | Entry Author |  |
| CREATION\_DATE | DATE | NO | Entry Date |  |
| MODIFIED\_BY | VARCHAR2 | YES | The person the entry was modified by |  |
| MODIFICATION\_DATE | DATE | YES | The date the entry was modified. |  |

3.2.1.2: Constraint Description

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint Name** | **Constraint Type** | **Columns** | **Description** |
| GCA\_PUB\_COMPANIES \_ID\_PK | PRIMARY KEY | ID | Provides database with a unique identifier |
| GCA\_PUB\_COMPANIES \_MANAGER\_ID\_FK | FOREIGN KEY | GCA\_MANAGER  \_ID | Connects GCA\_PUBLISHING\_COMPANIES to GCA\_AUTHORS |
| GCA\_PUB\_COMPANIES \_HEAD\_COMPANY\_ID\_FK | FOREIGN KEY | GCA\_HEAD\_COMPANY\_ID | Creates a subcompany connection within the entity. |
| GCA\_PUB\_COMPANIES \_COUNTRY\_CODE\_FK | FOREIGN KEY | GCA\_COUNTRY\_CODE | Connects GCA\_PUBLISHING\_COMPANIES to to GCA\_COUNTRIES. |
| GCA\_PUB\_COMPANIES \_CITY\_CODE\_FK | FOREIGN KEY | GCA\_CITY\_CODE | Connects GCA\_PUBLISHING\_COMPANIES to with GCA\_CITIES. |

### Authors (GCA\_AUTHORS)

This table displays the GCA\_AUTHORS attribute.

3.2.2.2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COLUMN NAME** | **DATA**  **TYPE** | **NULLABLE** | **DESCRIPTION** | **VALUES**  **DESCRIPTION** |
| ID | NUMBER | NO | Unique Identifier for GCA\_ARTISTS |  |
| GCA\_ COMPANY\_ID | NUMBER | NO | Identifier for the authors publishing company |  |
| NAME | VARCHAR2 | NO | Name of author |  |
| IMAGE | BLOB | YES | Image of author |  |
| ABOUT | VARCHAR2 | NO | Description of author |  |
| AUTHOR\_GENRE | VARCHAR2 | NO | Primary book genre |  |
| PUB\_CONTACT\_PERSON\_NAME | VARCHAR2 | YES | Manager’s Name |  |
| PUB\_CONTACT\_PERSON \_EMAIL | VARCHAR2 | YES | Manager’s Email |  |
| PUB\_CONTACT\_ \_PHONE\_NUMBER | NUMBER | YES | Manager Phone Number |  |
| HOME\_COUNTRY | VARCHAR2 | NO | Authors home country |  |
| GCA\_HOME\_COUNTRY\_CODE | VARCHAR2 | NO | UN/LOCODE |  |
| GCA\_HOME\_CITY\_CODE | NUMBER | NO | UN/LOCODE Composite City code |  |
| ADDRESS | VARCHAR2 | NO | Address where author can be contacted at |  |
| BIRTH\_DATE | DATE | YES | Birth date of author |  |
| ACTIVITY\_START\_DATE | DATE | NO | Date from which the author became active in the literary industry |  |
| CREATED\_BY | VARCHAR2 | NO | Entry Author |  |
| CREATION\_DATE | DATE | NO | Entry Date |  |
| MODIFIED\_BY | VARCHAR2 | YES | The person the entry was modified by |  |
| MODIFICATION\_DATE | DATE | YES | The date the entry was modified. |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint Name** | **Constraint Type** | **Columns** | **Description** |
| GCA\_ARTISTS\_ ID\_PK | PRIMARY KEY | ID | Provides database with a unique identifier |
| GCA\_ARTISTS\_ CO\_ID\_FK | FOREIGN KEY | GCA\_COMPANY\_ID | Connects GCA\_ATHORS with GCA\_PUBLISHING\_COMPANIES |
| GCA\_ARTISTS\_ COUNTRY\_CODE\_FK | FOREIGN KEY | GCA\_COUNTRY\_CODE | Connects GCA\_ATHORS to GCA\_COUNTRIES. |
| GCA\_ARTISTS\_CITY\_CODE\_FK | FOREIGN KEY | GCA\_CITY\_CODE | Connects GCA\_ATHORS with GCA\_CITIES. |

**3.2.1.2: Constraint Description**

### 

### Author Followers (GCA\_AUTHOR\_FOLLOWERS)

This table displays the GCA\_AUTHOR\_FOLLOWERS attribute.

3.2.1.1: Table Description

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COLUMN NAME** | **DATA**  **TYPE** | **NULLABLE** | **DESCRIPTION** | **VALUES**  **DESCRIPTION** |
| ID | NUMBER | NO | Unique Identifier for followers of an authors |  |
| GCA\_USER\_ID | NUMBER | NO | ID of User |  |
| GCA\_ARTIST\_ID | NUMBER | NO | ID of Author |  |
| CREATED\_BY | VARCHAR2 | NO | Entry Author |  |
| CREATION\_DATE | DATE | NO | Entry Date |  |

3.2.1.2: Constraint Description

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint Name** | **Constraint Type** | **Columns** | **Description** |
| GCA\_ATHOR\_FOL\_ID\_PK | PRIMARY KEY | ID | Provides database with a unique identifier |
| GCA\_ATHOR \_FOL\_USER\_ID\_FK | FOREIGN KEY | GCA\_ USER\_ID | Connects GCA\_ATHOR\_FOLLOWERS with GCA\_USERS |
| GCA\_ATHOR\_FOL\_ARTIST\_ID\_FK | FOREIGN KEY | GCA\_ARTIST\_ID | Connects GCA\_ATHOR\_FOLLOWERS with GCA\_ATHORS |

### Countries (GCA\_COUNTRIES)

This table displays the GCA\_COUNTRIES attribute

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COLUMN NAME** | **DATA**  **TYPE** | **NULLABLE** | **DESCRIPTION** | **VALUES**  **DESCRIPTION** |
| CODE | NUMBER | NO | Unique Identifier for country (UN/LOCODE) |  |
| NAME | VARCHAR2 | NO | Name of the Country |  |
| CREATED\_BY | VARCHAR2 | NO | Entry Author |  |
| CREATION\_DATE | DATE | NO | Entry Date |  |
| MODIFIED\_BY | VARCHAR2 | YES | The person the entry was modified by |  |
| MODIFICATION\_DATE | DATE | YES | The date the entry was modified. |  |

3.2.1.2: Constraint Description

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint Name** | **Constraint Type** | **Columns** | **Description** |
| GCA\_COUNTRIES\_CODE\_PK | PRIMARY KEY | CODE | Unique Identifier for Countries |

### Cities (GCA\_CITIES)

This table displays the GCA\_CITIES attribute

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COLUMN NAME** | **DATA**  **TYPE** | **NULLABLE** | **DESCRIPTION** | **VALUES**  **DESCRIPTION** |
| GCA\_COUNTRY\_CODE | NUMBER | NO | Unique Identifier for Countries (using UN/LOCODE) |  |
| CODE | NUMBER | NO | Unique identifier for Cities |  |
| NAME | VARCHAR2 | NO | Name of City |  |
| CREATED\_BY | VARCHAR2 | NO | Entry Author |  |
| CREATION\_DATE | DATE | NO | Entry Date |  |
| MODIFIED\_BY | VARCHAR2 | YES | The person the entry was modified by |  |
| MODIFICATION\_DATE | DATE | YES | The date the entry was modified. |  |

3.2.1.2: Constraint Description

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint Name** | **Constraint Type** | **Columns** | **Description** |
| GCA\_CITIES\_CODE\_PK | PRIMARY KEY | CODE, GCA\_COUNTRY\_CODE | Unique Identifier for Cities |
| GCA\_CITIES\_COUNTRY\_CODE\_FK | FOREIGN KEY/ PK | GCA\_COUNTRY\_CODE | Part of the composite, connect GCA\_COUNTRIES and GCA\_CITIES. |

## Books Module

### Books (GCA\_BOOKS)

This table displays the GCA\_BOOKS attribute.

3.2.1.1: Table Description

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COLUMN NAME** | **DATA**  **TYPE** | **NULLABLE** | **DESCRIPTION** | **VALUES**  **DESCRIPTION** |
| ID | NUMBER | NO | Unique Identifier for books |  |
| NAME | VARCHAR2 | NO | Name of book |  |
| ABOUT | VARCHAR2 | YES | Description of book |  |
| ISBN | VARCHAR2 | NO | ISBN of book |  |
| PAGE\_COUNT | NUMBER | NO | Page count of book |  |
| FILE\_URL | VARCHAR2 | NO | URL of book |  |
| COVER\_IMAGE | BLOB | YES | Image of book |  |
| RATING\_ID | NUMBER | YES | Unique identifier for book rating. |  |
| AVG\_RATING | NUMBER | YES | Average user rating of book |  |
| CREATED\_BY | VARCHAR2 | NO | Entry Author |  |
| CREATION\_DATE | DATE | NO | Entry Date |  |
| MODIFIED\_BY | VARCHAR2 | YES | The person the entry was modified by |  |
| MODIFICATION\_DATE | DATE | YES | The date the entry was modified. |  |

3.2.1.2: Constraint Description

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint Name** | **Constraint Type** | **Columns** | **Description** |
| GCA\_BOOK\_ID\_PK | PRIMARY KEY | ID | Provides database with a unique identifier |
| GCA\_BOOKS\_RATING\_ID\_FK | FOREIGN KEY | GCA\_RATING\_ID | Connects GCA\_BOOKS with GCA\_BOOK\_REVIEWS |

### Book Reviews (GCA\_BOOK\_REVIEWS)

This table displays the GCA\_BOOK\_REVIEWS attribute

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COLUMN NAME** | **DATA**  **TYPE** | **NULLABLE** | **DESCRIPTION** | **VALUES**  **DESCRIPTION** |
| ID | NUMBER | NO | Unique Identifier for band history |  |
| GCA\_USER\_ID | NUMBER | NO | The ID of the user |  |
| GCA\_BOOK\_ID | NUMBER | NO | The ID of the book |  |
| AVG\_RATING | NUMBER | NO | Average rating of book |  |
| USER\_RATING | NUMBER | NO | Individual user rating |  |
| CREATED\_BY | VARCHAR2 | NO | Entry Author |  |
| CREATION\_DATE | DATE | NO | Entry Date |  |
| MODIFIED\_BY | VARCHAR2 | YES | The person the entry was modified by |  |
| MODIFICATION\_DATE | DATE | YES | The date the entry was modified. |  |

3.2.1.2: Constraint Description

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint Name** | **Constraint Type** | **Columns** | **Description** |
| GCA\_BOOK\_REVIEWS\_ID\_PK | PRIMARY KEY | ID | Unique Identifier for GCA\_BOOK\_REVIEWS |
| GCA\_BOOK\_REVIEWS\_ID\_FK | FOREIGN KEY | GCA\_BOOK\_ID | Connects GCA\_BOOK\_REVIEWS with GCA\_BOOKS |
| GCA\_BOOK\_REVIEWS\_ID\_FK | FOREIGN KEY | GCA\_USER\_ID | Connects GCA\_BOOK\_REVIEWS with GCA\_USERS |

### Book Authors (GCA\_BOOK\_AUTHORS)

This table displays the GCA\_BOOK\_AUTHORS attribute

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COLUMN NAME** | **DATA**  **TYPE** | **NULLABLE** | **DESCRIPTION** | **VALUES**  **DESCRIPTION** |
| ID | NUMBER | NO | Unique Identifier for book authors |  |
| GCA\_BOOK\_ID | NUMBER | NO | The ID of the Book |  |
| GCA\_AUTHOR\_ID | NUMBER | NO | The ID of the Author |  |
| CREATED\_BY | VARCHAR2 | NO | Entry Author |  |
| CREATION\_DATE | DATE | NO | Entry Date |  |
| MODIFIED\_BY | VARCHAR2 | YES | The person the entry was modified by |  |
| MODIFICATION\_DATE | DATE | YES | The date the entry was modified. |  |

3.2.1.2: Constraint Description

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint Name** | **Constraint Type** | **Columns** | **Description** |
| GCA\_BOOK\_AUTHOR\_ID\_PK | PRIMARY KEY | ID | Unique Identifier for Band History |
| GCA\_BOOK\_AUTHOR \_AUTHOR\_ID\_FK | FOREIGN KEY | GCA\_BOOK\_ID | Connects GCA\_BOOK\_AUTHORS with GCA\_BOOKS |
| GCA\_BOOK\_AUTHOR \_AUTHOR\_ID\_FK | FOREIGN KEY | GCA\_AUTHOR\_ID | Connects GCA\_BOOK\_AUTHORS with GCA\_AUTHORS |

## Users Module

### Users (GCA\_USERS)

This table displays the GCA\_USERS attribute.\

3.2.1.1: Table Description

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COLUMN NAME** | **DATA**  **TYPE** | **NULLABLE** | **DESCRIPTION** | **VALUES**  **DESCRIPTION** |
| ID | NUMBER | NO | Unique Identifier for Users |  |
| USER\_TYPE | VARCHAR2 | NO | Type of User | Normal, Editor, Administrator |
| FIRST\_NAME | VARCHAR2 | NO | First name of user |  |
| LAST\_NAME | VARCHAR2 | NO | Last name of user |  |
| AVATAR | BLOB | YES | User Profile picture |  |
| BIRTHDATE | DATE | YES | Birthdate of user |  |
| EMAIL | VARCHAR2 | YES | Users email |  |
| PHONE\_NUMBER | NUMBER | YES | Users phone number |  |
| GCA\_COUNTRY\_CODE | NUMBER | NO | Country Code for User |  |
| GCA\_CITY\_CODE | NUMBER | NO | City Code for User |  |
| ADDRESS | VARCHAR2 | YES | Address of user |  |
| CREATED\_BY | VARCHAR2 | NO | Entry Author |  |
| CREATION\_DATE | DATE | NO | Entry Date |  |
| MODIFIED\_BY | VARCHAR2 | YES | The person the entry was modified by |  |
| MODIFICATION\_DATE | DATE | YES | The date the entry was modified. |  |

3.2.1.2: Constraint Description

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint Name** | **Constraint Type** | **Columns** | **Description** |
| GCA\_USERS\_ID\_PK | PRIMARY KEY | ID | Provides database with a unique identifier |
| GCA\_USERS \_COUNTRY\_CODE\_FK | FOREIGN KEY | GCA\_COUNTRY\_CODE | Connects GCA\_USERS with GCA\_COUNTRIES |
| GCA\_USERS \_CITY\_CODE\_FK | FOREIGN KEY | GCA\_CITY\_CODE | Connects GCA\_USERS with GCA\_CITIES |

### Favorite Books (GCA\_FAVORITE\_BOOKS)

This table displays the GCA\_FAVORITE\_BOOKS attribute.

3.2.1.1: Table Description

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COLUMN NAME** | **DATA**  **TYPE** | **NULLABLE** | **DESCRIPTION** | **VALUES**  **DESCRIPTION** |
| ID | NUMBER | NO | Unique Identifier for favorite albums |  |
| GCA\_USER\_ID | NUMBER | NO | ID of user |  |
| GCA\_BOOK\_ID | NUMBER | NO | ID of book |  |
| CREATED\_BY | VARCHAR2 | NO | Entry Author |  |
| CREATION\_DATE | DATE | NO | Entry Date |  |

3.2.1.2: Constraint Description

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint Name** | **Constraint Type** | **Columns** | **Description** |
| GCA\_FAVORITE\_BOOKS\_ID\_PK | PRIMARY KEY | ID | Provides database with a unique identifier |
| GCA\_FAVORITE\_BOOKS \_BOOK\_ID\_FK | FOREIGN KEY | GCA\_BOOK\_ID | Connects GCA\_FAVORITE\_BOOKS with GCA\_BOOKS |
| GCA\_FAVORITE\_BOOKS \_USER\_ID\_FK | FOREIGN KEY | GCA\_USER\_ID | Connects GCA\_FAVORITE\_BOOKS with GCA\_USER |

### Bookshelves (GCA\_BOOKSHELVES)

This table displays the GCA\_PLAYLISTS attribute.

3.2.1.1: Table Description

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COLUMN NAME** | **DATA**  **TYPE** | **NULLABLE** | **DESCRIPTION** | **VALUES**  **DESCRIPTION** |
| ID | NUMBER | NO | Unique Identifier for bookshelves |  |
| NAME | VARCHAR2 | NO | Name of bookshelf |  |
| TYPE | VARCHAR2 | NO | Type of bookshelf |  |
| DESCRIPTION | VARCHAR2 | YES | Bookshelf Description |  |
| GCA\_CREATION\_USER\_ID | NUMBER | NO | User Id of bookshelf owner |  |
| CREATED\_BY | VARCHAR2 | NO | Entry Author |  |
| CREATION\_DATE | DATE | NO | Entry Date |  |
| MODIFIED\_BY | VARCHAR2 | YES | The person the entry was modified by |  |
| MODIFICATION\_DATE | DATE | YES | The date the entry was modified. |  |

3.2.1.2: Constraint Description

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint Name** | **Constraint Type** | **Columns** | **Description** |
| GCA\_BOOKSHELVES\_ID\_PK | PRIMARY KEY | ID | Provides database with a unique identifier |
| GCA\_BOOKSHELVES\_CREATION\_USER\_ID | FOREIGN KEY | GCA\_CREATION\_USER\_ID | Connects GCA\_USERS with GCA\_BOOKSHELVES |

### Bookshelf Books (GCA\_BOOKSHELF\_BOOKS)

This table displays the GCA\_BOOKSHELF\_BOOKS attribute.

3.2.1.1: Table Description

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COLUMN NAME** | **DATA**  **TYPE** | **NULLABLE** | **DESCRIPTION** | **VALUES**  **DESCRIPTION** |
| ID | NUMBER | NO | Unique Identifier for bookshelf books |  |
| GCA\_BOOK\_ID | NUMBER | NO | Book ID |  |
| GCA\_BOOKSHELF\_ID | NUMBER | NO | Bookshelf ID |  |
| CREATED\_BY | VARCHAR2 | NO | Entry Author |  |
| CREATION\_DATE | DATE | NO | Entry Date |  |

3.2.1.2: Constraint Description

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint Name** | **Constraint Type** | **Columns** | **Description** |
| GCA\_BOOKSHELF\_BOOKS\_ID\_PK | PRIMARY KEY | ID | Provides database with a unique identifier |
| GCA\_BOOKSHELF\_BOOKS \_B\_ID\_FK | FOREIGN KEY | GCA\_BOOK\_ID | Connects GCA\_BOOKSHELF\_BOOKS with GCA\_BOOKS |
| GCA\_BOOKSHELF\_BOOKS \_BS\_ID\_FK | FOREIGN KEY | GCA\_BOOKSHELF\_ID | Connects GCA\_BOOKSHELF\_BOOKS with GCA\_BOOKSHELVES |



# Risk

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Risk Name** | **Description** | **Likelihood** | | **Impact** | **Mitigation Action** |
| Requirements’ Changes | The requirement is often changed to meet important business objectives but drastically affects the risk of late product delivery. | High | Late  Delivery | | Have a good relationship with stakeholders with a clear line of communication |
| Adding requirements in late phases | This requirement is added after “freezing” previous requirements, this affects product delivery. | Medium | Late  Delivery | | Have a good relationship with stakeholders with a clear line of communication |
| Unrealistic time and cost estimates | Because of complex meaning and underlying connotation, developers often underestimate efforts in this requirement. | Medium | Customer Satisfaction | | Research past projects |
| Real time performance shortfalls | There is a high likelihood to get post production performance issues from the customer | High | Customer Satisfaction | | Implement performance testing |

In software

development organizations technical risks can be described as

possibility of undesirable events which ultimately affect

software engineers and software development organizations.

These risks usually accompany various process or product

design decisions and can affect processes and product artifacts.

In software

development organizations technical risks can be described as

possibility of undesirable events which ultimately affect

software engineers and software development organizations.

These risks usually accompany various process or product

design decisions and can affect processes and product artifacts.

In software

development organizations technical risks can be described as

possibility of undesirable events which ultimately affect

software engineers and software development organizations.

These risks usually accompany various process or product

design decisions and can affect processes and product artifacts.

In software

development organizations technical risks can be described as

possibility of undesirable events which ultimately affect

software engineers and software development organizations.

These risks usually accompany various process or product

design decisions and can affect processes and product artifacts.

# Acceptance Criteria

## Milestones

* Database table ready.
* Packages ready.
* UI ready.

## Criteria

The following functions should be in-place:

* Functional Criteria
* The Authors module should be ready.
* The Books module should be ready.
* The Users module should be ready.
* Non-Functional Criteria
* The system should be secured using system defined Security roles.
* Requirements Status Criteria
* 100% of all the requirements must be developed and must be tested thoroughly.
* 100% of all the requirements must be covered comprehensively.
* 100% of all the requirements related work items (Bug, Test Cases, Tasks, and Risks) must be closed and passed properly.
* Performance Criteria
* The system should have stable performance without any degradation under any circumstances.
* Average response time for any page should not exceed 5 seconds.
* UAT Results Criteria
* The system should pass the UAT activities with customer approval.

# Document Approvals

|  |  |  |  |
| --- | --- | --- | --- |
| Approver name | Title | Signature | Date  (dd/mm/yyyy) |
| John Doe | Project Manager |  |  |
| Steve Smith | Project Owner |  |  |

# Appendix

|  |  |
| --- | --- |
| ***Section No*** | ***Requirement ID*** |
|  |  |