

# Library Management System

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## Introduction

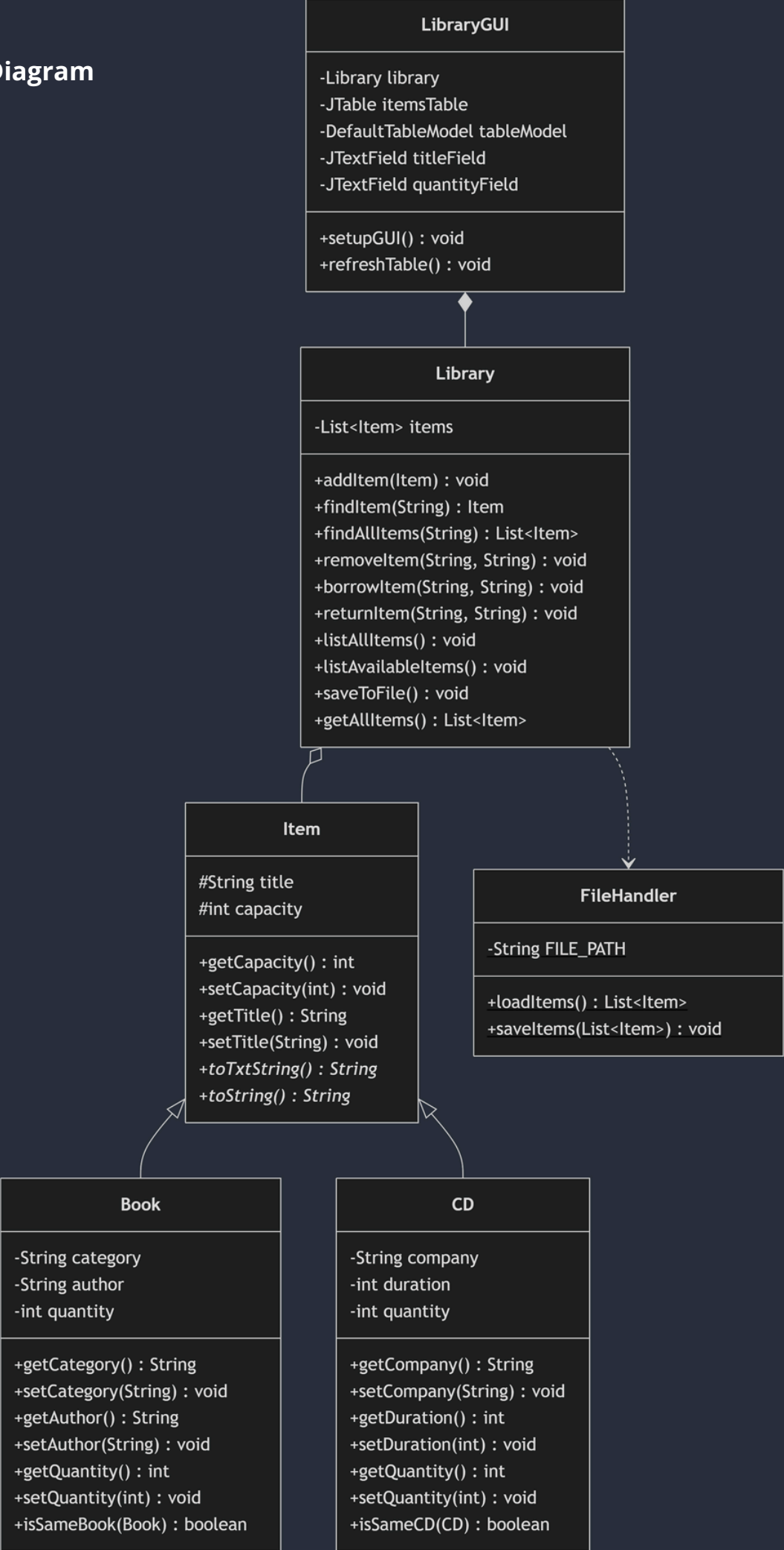
The Library Management System is a Java-based desktop application that provides a comprehensive solution for managing books and CDs in a library setting.

This system features a graphical user interface, making it easy for librarians to manage their collection efficiently.

## Key Features

- Manage both Books and CDs in a single system
  - Track item availability and capacity
  - Borrow and return functionality
  - Persistent storage using text files
  - User-friendly graphical interface
  - Real-time updates of library inventory
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Class Diagram



# Usage Guide

## Starting the Application:

1. Ensure you have Java installed on your system
2. Run the LibraryGUI class to start the application
3. The main window will display with three main sections:
  - Library Items View (left panel)
  - Add Items Panel (top right)
  - Borrow/Return Panel (bottom right)

## Adding New Items:

1. Select item type (Book or CD) using radio buttons
2. Fill in the required fields:
  - For Books: Title, Category, Author, Quantity
  - For CDs: Title, Company, Duration (mins), Quantity
3. Click "Add Item" to save

## Deleting Items:

1. Enter the title and author/company of the item
2. Click "Delete Item" to remove it from the library
3. Use "Delete All Items" to clear the entire library (use with caution)

## Borrowing and Returning Items:

1. In the bottom right panel, select either "Borrow" or "Return"
  2. Enter the required information:
    - Title of the item
    - Author (for books) or Company (for CDs)
  3. Click "Submit" to process the transaction
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