**Java Sprint 1 Documentation**

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**#1 Documentation:**

The Library Management System is a Java application designed to manage a library’s collection of books, authors, and patrons. It allows users to add, edit, and delete books, authors, and patrons, as well as search for books by title, author, or ISBN.

Classes and Their Functions:

**LibraryManagementSystem:** This class serves as the main entry point for the application. It initializes the library and provides methods to interact with it.

**Library:** This class represents the library entity and manages the collection of books, authors, and patrons. It provides methods to add, edit, delete, and display books, authors, and patrons.

**Book:** Represents a book entity with attributes such as title, author, ISBN, publisher, and number of copies available.

**Author:** Represents an author entity with attributes such as name and birthdate.

**Patron:** Represents a patron entity with attributes such as name, address, and phone number.

How to Start/Access the Application

To start the Library Management System:

Compile the source code using javac.

Run the LibraryManagementSystem class with the java command.

**#2 Development Documentation**

Javadocs:

Javadocs have been provided for all classes and methods.

Source Code Directory Structure:

- src/

- LibraryManagementSystem.java

- Library.java

- Book.java

- Author.java

- Patron.java

**Build Process:**

* Compile the project using javac.
* No additional dependencies are required at compile time.
* Development Standards

**3. Deployment Documentation:**

Installation:

Download the compiled .class files or the JAR file.

Ensure that Java Runtime Environment (JRE) is installed on the target system.

Run the application using the Java command.

Configuration:

No specific configuration is required for deployment.

Troubleshooting

Ensure that the Java environment variables are properly set.

Check for any runtime errors or exceptions in the terminal/console output.