

# Class Diagram

## Library Management System

### Library

- items: List<LibraryItem>

- authors: List<Author>

- patrons: List<Patron>

+ addItem(item: LibraryItem): void

+ removeItem(item: LibraryItem): void

+ addAuthor(author: Author): void

+ removeAuthor(author: Author): void

+ addPatron(patron: Patron): void

+ removePatron(patron: Patron): void

### Author

- name: String

- dateOfBirth: Date

- itemsWritten: List<LibraryItem>

+ addItemWritten(item: LibraryItem): void

+ removeItemWritten(item: LibraryItem): void

## LibraryItem

- id: String

- title: String

- author: Author

- ISBN: String

- publisher: String

- numCopies: int

+ borrowItem(patron: Patron): void

+ returnItem(patron: Patron): void

## Patron

- name: String

- address: String

- phoneNum: String

- borrowedItems: List<LibraryItem>

+ borrowItem(item: LibraryItem): void

+ returnItem(item: LibraryItem): void

## Periodical

<<inherits LibraryItem>>

- type: String

Book
<<inherits LibraryItem>>
- type: String

Student
<<inherits Patron>>

Employee
<<inherits Patron>>