Jasmine Latendresse(40011419) and Airi Chow(40003396)
SOEN 387 - A3
Fall 2019
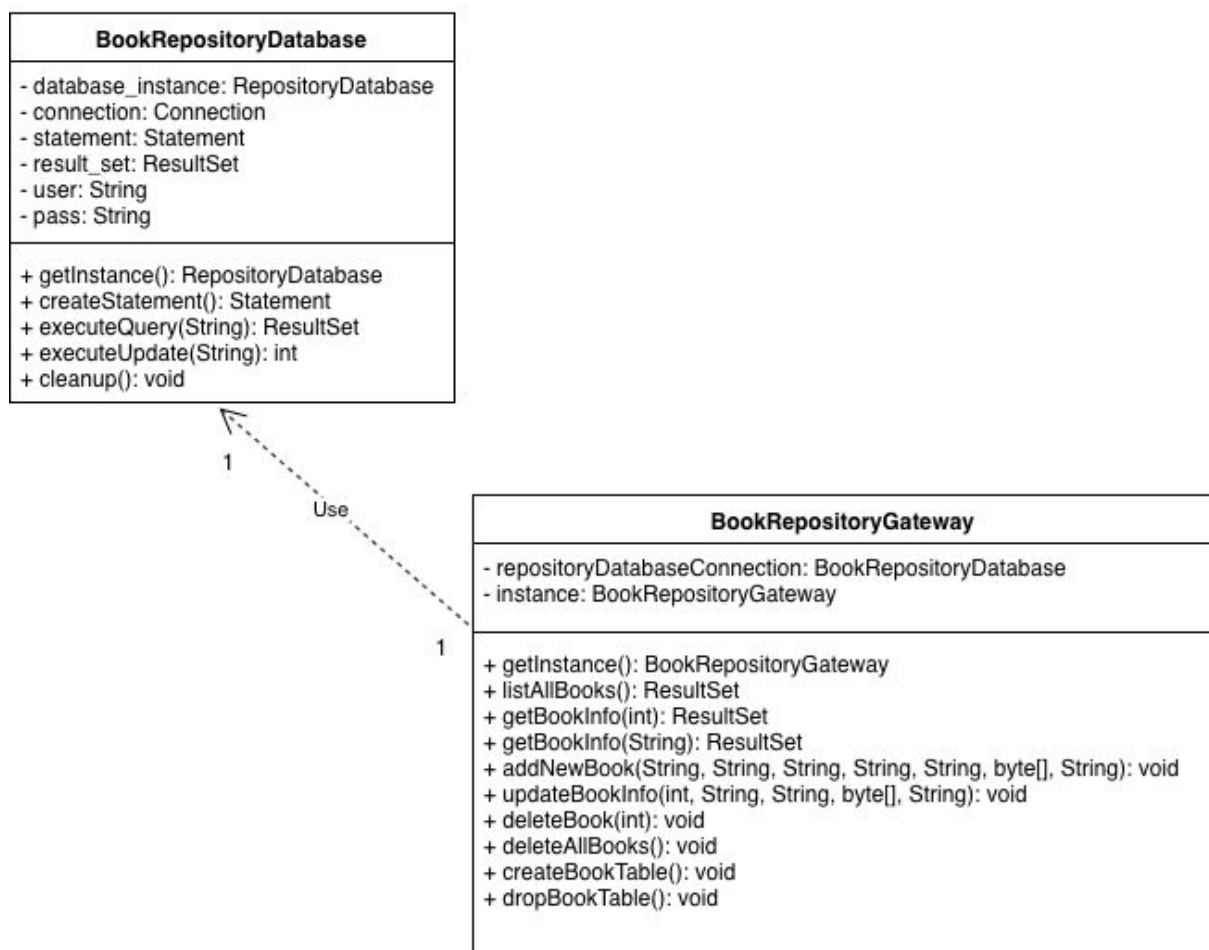
<p align="center">**Assignment 3**</p>
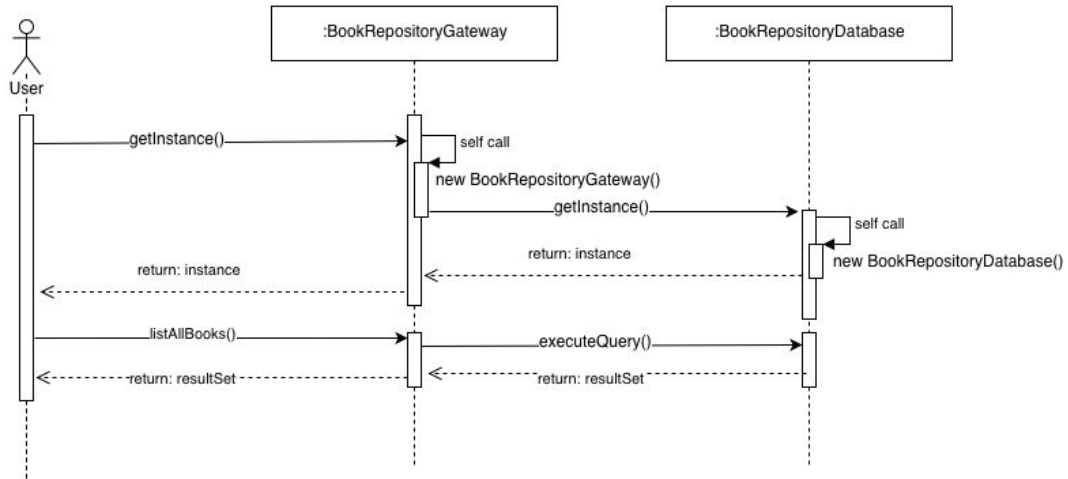
Part E: The System Model

Data Access Layer:

[Class Diagram]

Data Access Layer (DAL) - System Class Diagram

[Sequence Diagram - "List All Books" Scenario]

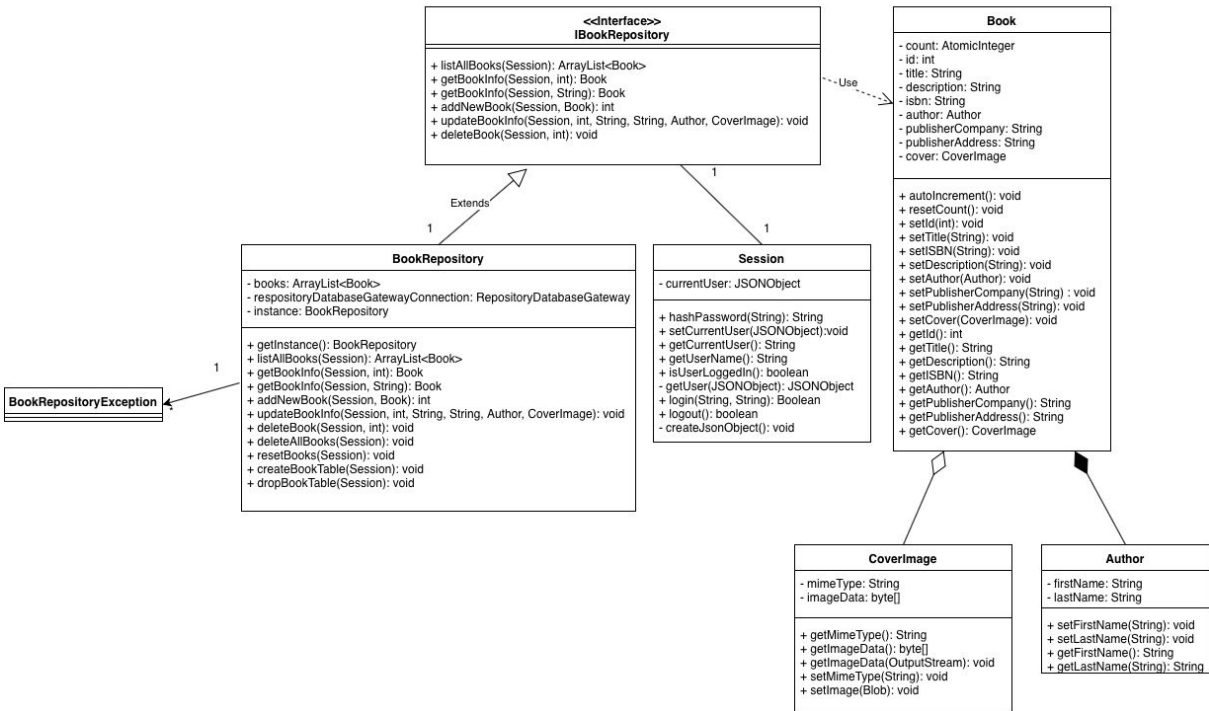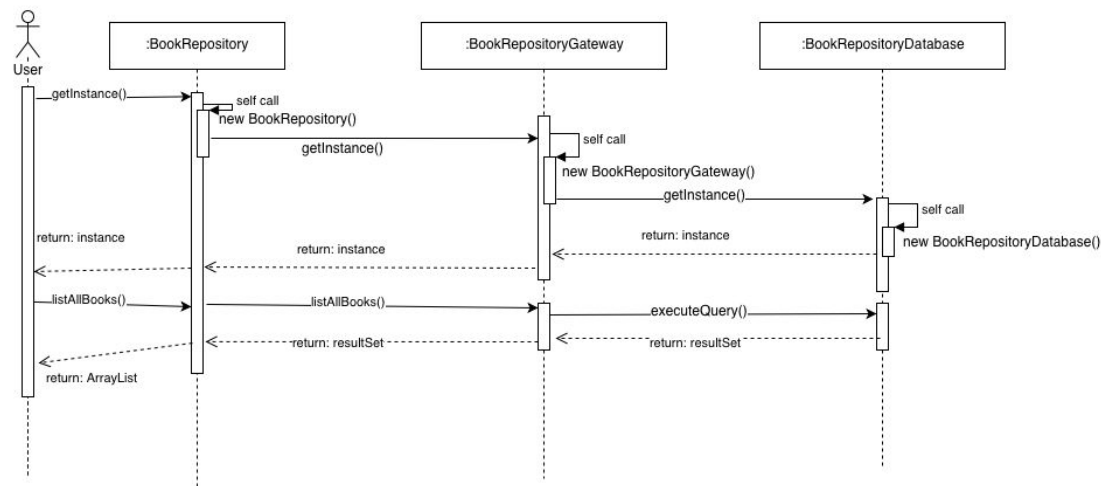Sequence Diagram "List All Books Scenario"

Repository Core Layer:
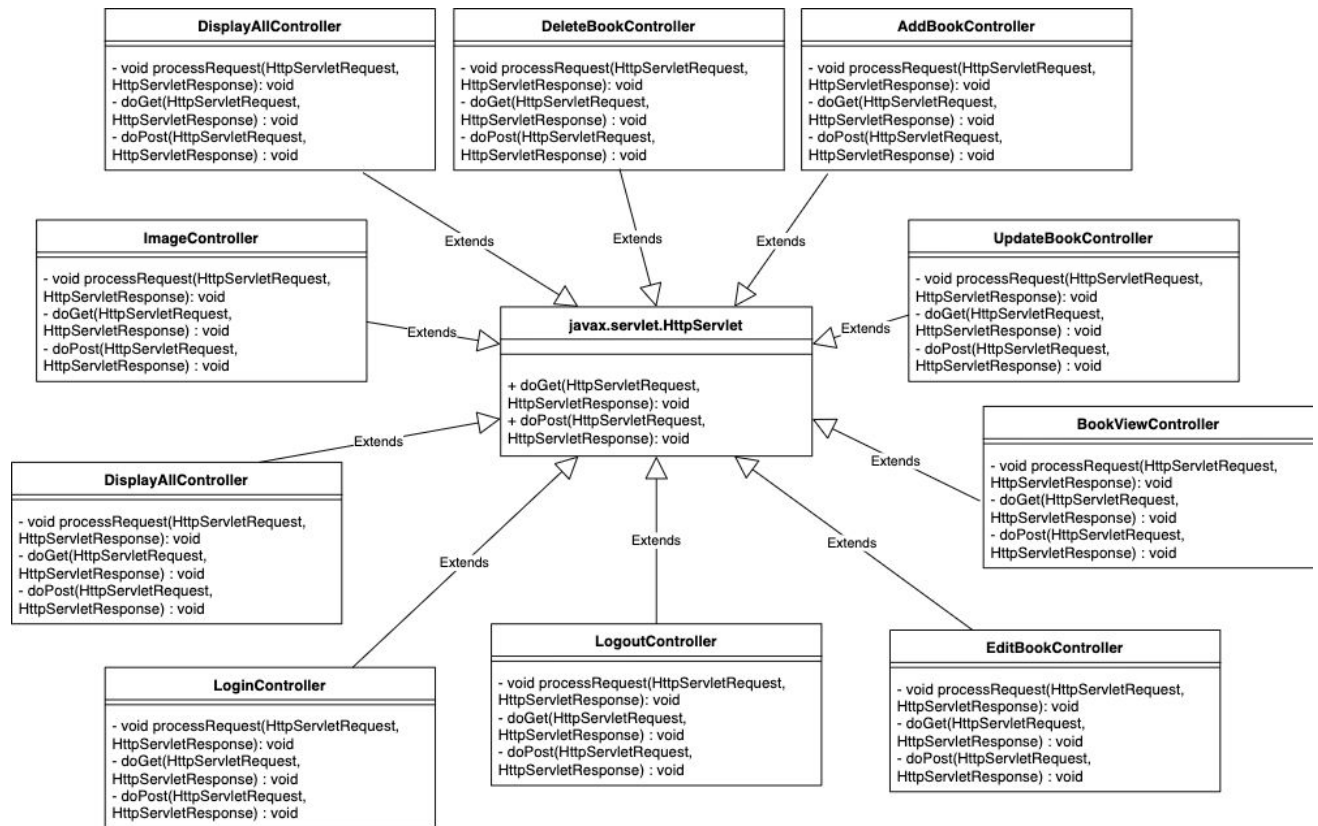
[Class Diagram]

Repository Core Layer - System Class Diagram

«Interface» IBookRepository

+ listAllBooks(Session): ArrayList<Book>
+ getBookInfo(Session, int): Book
+ getBookInfo(Session, String): Book
+ addNewBook(Session, Book): int
+ updateBookInfo(Session, int, String, String, Author, CoverImage): void
+ deleteBook(Session, int): void

--Use-->

Book

- count: AtomicInteger
- id: int
- title: String
- description: String
- isbn: String
- author: Author
- publisherCompany: String
- publisherAddress: String
- cover: CoverImage

+ autoIncrement(): void
+ resetCount(): void
+ setId(int): void
+ setTitle(String): void
+ setISBN(String): void
+ setDescription(String): void
+ setAuthor(Author): void
+ setPublisherCompany(String) : void
+ setPublisherAddress(String): void
+ setCover(CoverImage): void
+ getId(): int
+ getTitle(): String
+ getDescription(): String
+ getISBN(): String
+ getAuthor(): Author
+ getPublisherCompany(): String
+ getPublisherAddress(): String
+ getCover(): CoverImage

Extends

BookRepository

- books: ArrayList<Book>
- resposioryDatabaseGatewayConnection: RepositoryDatabaseGateway
- instance: BookRepository

+ getInstance(): BookRepository
+ listAllBooks(Session): ArrayList<Book>
+ getBookInfo(Session, int): Book
+ getBookInfo(Session, String): Book
+ addNewBook(Session, Book): int
+ updateBookInfo(Session, int, String, String, Author, CoverImage): void
+ deleteBook(Session, int): void
+ deleteAllBooks(Session): void
+ resetBooks(Session): void
+ createBookTable(Session): void
+ dropBookTable(Session): void

BookRepositoryException

Session

- currentUser: JSONObject

+ hashPassword(String): String
+ setCurrentUser(JSONObject):void
+ getCurrentUser(): String
+ getUserName(): String
+ isUserLoggedIn: boolean
+ getUser(JSONObject): JSONObject
+ login(String, String): Boolean
+ logout(): boolean
- createJsonObject(): void

CoverImage

- mimeType: String
- imageData: byte[]

+ getMimeType(): String
+ getImageData(): byte[]
+ getImageData(OutputStream): void
+ setMimeType(String): void
+ setImage(Blob): void

Author

- firstName: String
- lastName: String

+ setFirstName(String): void
+ setLastName(String): void
+ getFirstName(): String
+ getLastName(String): String

[Sequence Diagram - "List All Books" Scenario]

Sequence Diagram "List All Books Scenario"

Web Presentation Layer:

[Class Diagram]

DisplayAllController

- void processRequest(HttpServletRequest, HttpServletResponse): void
- doGet(HttpServletRequest, HttpServletResponse) : void
- doPost(HttpServletRequest, HttpServletResponse) : void

DeleteBookController

- void processRequest(HttpServletRequest, HttpServletResponse): void
- doGet(HttpServletRequest, HttpServletResponse) : void
- doPost(HttpServletRequest, HttpServletResponse) : void

AddBookController

- void processRequest(HttpServletRequest, HttpServletResponse): void
- doGet(HttpServletRequest, HttpServletResponse) : void
- doPost(HttpServletRequest, HttpServletResponse) : void

ImageController

- void processRequest(HttpServletRequest, HttpServletResponse): void
- doGet(HttpServletRequest, HttpServletResponse) : void
- doPost(HttpServletRequest, HttpServletResponse) : void

UpdateBookController

- void processRequest(HttpServletRequest, HttpServletResponse): void
- doGet(HttpServletRequest, HttpServletResponse) : void
- doPost(HttpServletRequest, HttpServletResponse) : void

javax.servlet.HttpServlet

+ doGet(HttpServletRequest, HttpServletResponse): void
+ doPost(HttpServletRequest, HttpServletResponse): void

DisplayAllController

- void processRequest(HttpServletRequest, HttpServletResponse): void
- doGet(HttpServletRequest, HttpServletResponse) : void
- doPost(HttpServletRequest, HttpServletResponse) : void

BookViewController

- void processRequest(HttpServletRequest, HttpServletResponse): void
- doGet(HttpServletRequest, HttpServletResponse) : void
- doPost(HttpServletRequest, HttpServletResponse) : void

LoginController

- void processRequest(HttpServletRequest, HttpServletResponse): void
- doGet(HttpServletRequest, HttpServletResponse) : void
- doPost(HttpServletRequest, HttpServletResponse) : void

LogoutController

- void processRequest(HttpServletRequest, HttpServletResponse): void
- doGet(HttpServletRequest, HttpServletResponse) : void
- doPost(HttpServletRequest, HttpServletResponse) : void

EditBookController

- void processRequest(HttpServletRequest, HttpServletResponse): void
- doGet(HttpServletRequest, HttpServletResponse) : void
- doPost(HttpServletRequest, HttpServletResponse) : void
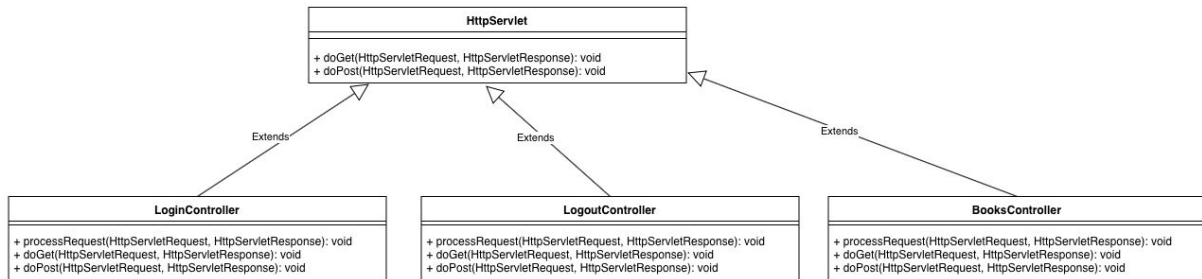
[Sequence Diagram - "Update book" Scenario]

Sequence Diagram "Update book scenario"
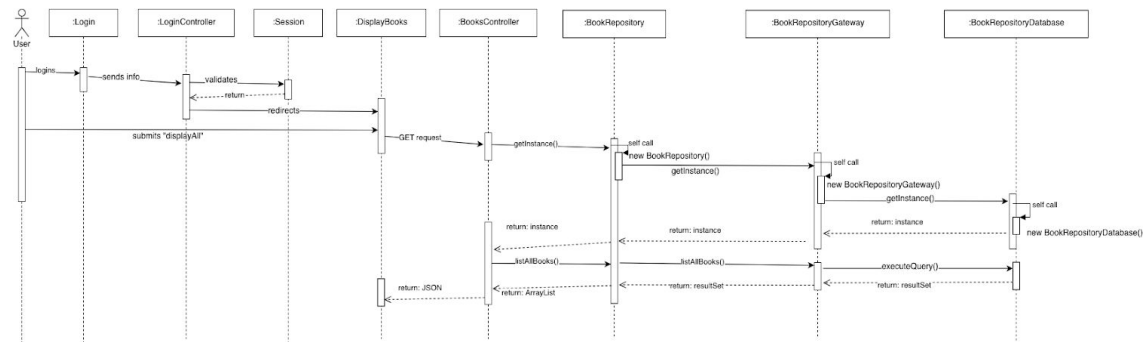
Service Layer:

[Class Diagram]

Service Layer - System Class Diagram
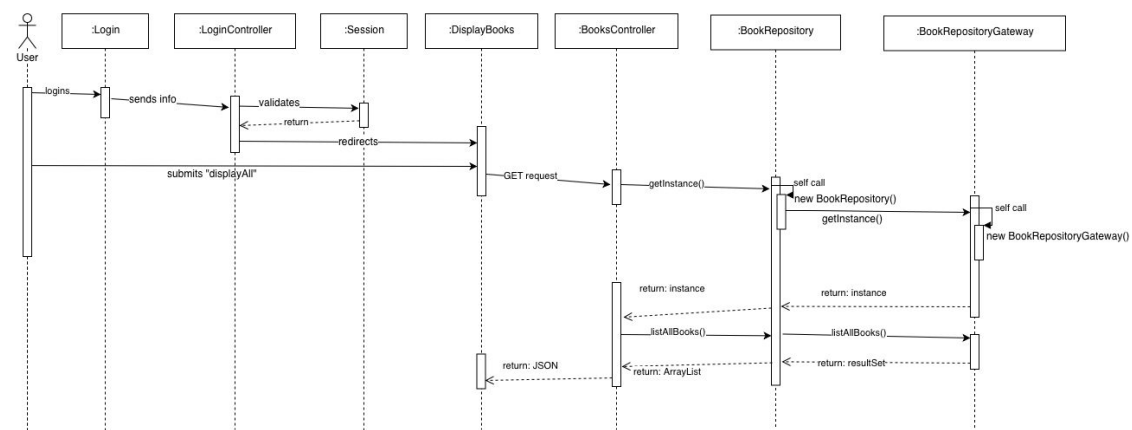

[Sequence Diagram - "List All Books" Scenario]
>> [FULL - Sequence Diagram]

Sequence Diagram "Display All Scenario"

>> [With Top Level Classes of Underneath layer - Sequence Diagram]

Sequence Diagram "Display All Scenario"

(Larger Format:
https://drive.google.com/file/d/1j_U8E5utZn1K80TnNqVlFmJEBpeIpjX3/view)