UML Class Diagram

(Group – 11)

Ceylin Oner

Farid Aljanov

Mehmet Alperen Calıs

Md Mashroor Zilan Snigdho

Department of Statistics, Middle East Technical University

STAT295: Object Oriented Programming

Dr. Aysegul Ozkaya Eren

March 18, 2025

LibraryEvent

-int id
-String title
-String description
-LocalDate date

+LibraryEvent(int id, String title, String description, LocalDate date)
+int getId()
+String getTitle()
+String getDescription()
+LocalDate getDate()
+String libraryEventInfo()

«abstract»
Person

#int id
#String name

+Person(int id, String name)
+int getId()
+String getName()

Librarian

+Librarian(int id, String name)
+void addBook(Library library, Book book)
+void removeBook(Library library, Book book)
+String toString()

manages

Library

-List<Book> books
-List<Member> members

+Library()
+void addBook(Book book)
+void removeBook(Book book)
+Book getBook(int id)
+void addMember(Member member)
+void removeMember(Member member)
+Member getMember(int id)
+List<Book> getBooks()
+List<Member> getMembers()

contains

contains

Member

-String email
-List<Book> borrowedBooks

+Member(int id, String name, String email)
+String getEmail()
+List<Book> getBorrowedBooks()
+void borrowBook(Book book)
+void returnBook(Book book)
+String toString()

«abstract»
LibraryResource

#int id
#String title
#String author

+LibraryResource(int id, String title, String author)
+int getId()
+String getTitle()
+String getAuthor()
+*String toString()*

borrows

hasToPay

Book

-String genre
-int publicationYear
-int copiesAvailable

+Book(int id, String title, String author, String genre, int publicationYear, int copiesAvailable)
+String getGenre()
+int getPublicationYear()
+int getCopiesAvailable()
+void borrowBook()
+void returnBook()
+String toString()

writes

DigitalResource

-String type
-String fileUrl

+DigitalResource(int id, String title, String author, String type, String fileUrl)
+String getType()
+String getFileUrl()
+void accessResource()
+String toString()

makes   takes

Fine

-int memberId
-double amount

+Fine(int memberId, double amount)
+int getMemberId()
+double getAmount()
+void payFine(double payment)
+String toString()

---

belongsTo   receives   isReservedBy   isLoanedIn

Category

-int id
-String name
-String description

+Category(int id, String name, String description)
+int getId()
+String getName()
+String getDescription()
+String categoryDetails()

Review

-int id
-int bookId
-int memberId
-int rating
-String comment

+Review(int id, int bookId, int memberId, int rating, String comment)
+int getId()
+int getBookId()
+int getMemberId()
+int getRating()
+String getComment()
+String reviewDetails()

Reservation

-int id
-int bookId
-int memberId
-LocalDate reservationDate

+Reservation(int id, int bookId, int memberId, LocalDate reservationDate)
+int getId()
+int getBookId()
+int getMemberId()
+LocalDate getReservationDate()
+String reservationInfo()

Loan

-int bookId
-int memberId
-LocalDate borrowDate
-LocalDate returnDate

+Loan(int bookId, int memberId, LocalDate borrowDate, LocalDate returnDate)
+int getBookId()
+int getMemberId()
+LocalDate getBorrowDate()
+LocalDate getReturnDate()
+String loanDetails()