

# **Description**

## 01. Librarian Class

The Librarian class represents the library staff responsible for managing the library's operations, including book inventory and issuing books to users.

## 02. User Class

The User class is the base class for Students and Teachers, encapsulating common attributes and behaviors shared by both user types, such as login credentials and profile information.

#### 03. Student and Teacher Classes

These classes inherit from the User class and define specialized attributes and behaviors unique to each role. For example, Students may have a student ID, while Teachers may have access to teaching materials.

#### 04. Book Class

The Book class represents books available in the library and includes attributes such as title, author, ISBN, and availability status, along with methods for managing book details.

## 05. Article Class

The Article class captures user-contributed articles, storing attributes like title, content, and publication date. It supports operations for adding, editing, and managing articles.

## 06. ArticleRating Class

ArticleRating manages user ratings for articles and establishes connections between users and the articles they have rated, contributing to user feedback and interaction.

# 07. BookRating Class

BookRating class handles user ratings for books, facilitating the rating and review process for library books and enabling user feedback on book quality.

### 08. Teacher Materials Class

TeacherMaterials represents additional teaching materials that teachers can access. It includes attributes for title, content, and availability status, supporting teachers in their educational resources.