

Task: Create a Library Management System

Objective: Build a program to manage a library with books and magazines. The system will allow users to borrow and return items.

Concepts to Learn:

1. **Classes and Objects:** Learn how to use classes to model real-world items and actions.
2. **Inheritance:** Use inheritance to share common features between different types of items (like books and magazines).
3. **Methods:** Define methods to perform actions like borrowing and returning items.

Steps to Complete the Task:

1. **Define Classes:**
 - **LibraryItem:** A base class for common features of library items.
 - **Book:** A class for books, inheriting from LibraryItem.
 - **Magazine:** A class for magazines, inheriting from LibraryItem.
2. **LibraryItem Class:**
 - **Attributes:**
 - `title`: The title of the item.
 - `is_borrowed`: A boolean indicating if the item is borrowed.
 - **Methods:**
 - `borrow()`: Marks the item as borrowed.
 - `return_item()`: Marks the item as returned.
 - `__str__()`: Provides a string representation of the item.
3. **Book Class:**
 - Inherits from `LibraryItem`.
 - **Additional Attributes:**
 - `author`: The author of the book.
 - **Additional Methods (optional):**
 - You might add special methods related to books if needed.
4. **Magazine Class:**
 - Inherits from `LibraryItem`.
 - **Additional Attributes:**
 - `issue_number`: The issue number of the magazine.
 - **Additional Methods (optional):**
 - You might add special methods related to magazines if needed.
5. **Library Class:**
 - **Attributes:**
 - `items`: A list to store all library items (books and magazines).
 - **Methods:**
 - `add_item(item)`: Adds a new item to the library.
 - `borrow_item(title)`: Finds and borrows an item by title.
 - `return_item(title)`: Finds and returns an item by title.
 - `list_items()`: Lists all items and their statuses.