

Library Membership Management System

Part 1: Encapsulation – Book Class

1. Create a `Book` class with:

- Private attributes: `__title` , `__author` , `__is_borrowed`
 - Methods:
 - `get_info()` → prints title and author
 - `borrow()` → sets `__is_borrowed = True`
 - `is_borrowed()` → returns True/False
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Part 2: Inheritance – Types of Books

1. Create a `FictionBook` class inheriting from `Book`

- Add method: `get_genre()` → returns a string like `"Fantasy"` or `"Mystery"`

2. Create a `NonFictionBook` class inheriting from `Book`

- Add method: `get_subject()` → returns a subject like `"Science"` or `"History"`
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Part 3: Member Class

1. Create a `Member` class with:

- Attributes: `name` , `member_id`
 - Method: `get_details()` → prints member's name and ID
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Part 4: Simulation

1. Write a script that:

- Creates one Fiction book: "Harry Potter", author "J.K. Rowling", genre "Fantasy"

- Creates one NonFiction book: "A Brief History of Time", author "Stephen Hawking", subject "Science"
- Creates a member named "Rahul", member ID "M102"
- Shows book info before borrowing
- Marks the fiction book as borrowed
- Prints updated book statuses