

## Library Management System (OOP Edition)

### 1. Tools Used

Python: The core programming language.

Pydroid3: The mobile IDE used for development on Android.

### 2. Features

Object-Oriented Design: Uses Books and Library classes to represent real-world entities.

Data Persistence: Automatically saves book data to books.txt so records aren't lost when the app closes.

Auto-Load System: The program scans for existing files on startup to restore previous library entries.

Structured Data Parsing: Uses comma-separated values (CSV style) to store title and author data efficiently.

Error Handling: Includes basic try-except logic to manage missing files.

### 3. Challenges

The main challenge was converting raw string data from the text file back into Python objects.

Since files only store text, I had to ensure the data was split correctly by commas without leaving extra spaces or newline characters that could break the display.

### 4. Solution

I implemented the .strip().split(',') method during the loading phase. This "cleans" the text line and divides it into two distinct variables (Title and Author), which are then used to re-instantiate the Books class objects and populate the library list.