

Assignment 14 - Packages

Title: Understanding and Using Packages in Java

Problem: Organizing a Library System

You are tasked with creating a basic library management system using **packages** to organize the code. Follow the steps below:

1. Create the Package Structure

- Create a package named `library`. This will contain a base class `LibraryItem`.
- Create two additional packages under `library`:
 - `library.books` for classes related to books.
 - `library.magazines` for classes related to magazines.

2. Base Class: `LibraryItem`

Define a class `LibraryItem` in the `library` package with the following:

- **Fields:** `title` (String), `yearPublished` (int).
- **Method:** `displayInfo()` that prints the title and year of publication.

3. Derived Class 1: `Book`

In the `library.books` package, create a class `Book` that extends `LibraryItem`.

- **Additional Field:** `author` (String).
- **Method:** Override `displayInfo()` to include the author's name.

4. Derived Class 2: `Magazine`

In the `library.magazines` package, create a class `Magazine` that extends `LibraryItem`.

- **Additional Field:** `issueNumber` (String).
- **Method:** Override `displayInfo()` to include the issue number.

5. Driver Class: `LibraryApp`

- Create a class `LibraryApp` in the default package.
 - Import classes from the `library` , `library.books` , and `library.magazines` packages.
 - In the `main` method:
 - Create objects for `Book` and `Magazine` .
 - Call the `displayInfo()` method on each object.
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