Exercise 1) - Easy

You are tasked with creating a simple system to manage and organize a list of books in a small library. Each book has the following attributes: `title` (String), `author` (String), and `yearPublished` (int). Your task is to:

1. Create a `Book` class with the above attributes.
2. Override the `equals` method to compare books based on their `title` and `author`. Two books are considered the same if they have the same title and author, even if their publication years differ.
3. Implement the `Comparable` interface to allow sorting the books by `title` in alphabetical order.
4. Override the `toString` method to provide a readable string representation of a book.
5. In the main method, create an `ArrayList` of `Book` objects. Add at least five books to the list.
6. Sort the list of books using `Collections.sort()` and print the sorted list.
7. Test the `equals` method by checking if two books with the same title and author but different years are considered equal.

Exercise 2) – Easy

In this exercise, you will expand upon the previous book management system by adding functionality to sort the books by the year they were published, in addition to sorting by title. You will:

1. Modify the `Book` class by creating a static method `sortByYear` that uses a custom `Comparator` to sort the list of books by their publication year in ascending order.
2. In the main method, after sorting the books by title, use this new method to sort the books by their publication year.
3. Print the list of books sorted by both title and year.

Exercise 3) – Medium

In this exercise, you will extend the functionality of the book management system by adding the ability to sort books based on multiple criteria and allow for dynamic sorting. Specifically, you will:

1. Modify the `Book` class to include a new `genre` attribute (String).
2. Implement the ability to dynamically sort books based on any combination of attributes: `title`, `yearPublished`, or `genre`.
3. Create a method `sortBooks` that takes an `ArrayList<Book>` and two boolean flags: `sortByTitleFirst` and `sortByGenreFirst`.
    - If `sortByTitleFirst` is true, books should be sorted first by title, then by year.
    - If `sortByGenreFirst` is true, books should be sorted first by genre, then by year.
    - If both flags are false, sort only by year.
4. In the main method, prompt the user (via console input) to choose the sorting method and demonstrate the sorting based on the user's selection.