

## Problem Statement: Author and Book Management System (OOP)

You are tasked with designing an Object-Oriented Programming (OOP) system for managing authors and their published books. Create a class called `Author` that encapsulates the information about an author and their literary works.

1. Author Class: The `Author` class should have the following attributes:
  - `authorName`: A string representing the name of the author.
  - `birthYear`: An integer representing the birth year of the author.
  - `nationality`: A string representing the nationality of the author.
  - The class should have a constructor to initialize these attributes.
  - Implement a method `displayAuthorInfo` that prints the author's information.
2. Book Class: Create a separate class named `Book` with the following attributes:
  - `title`: A string representing the title of the book.
  - `publicationYear`: An integer representing the year the book was published.
  - `genre`: A string representing the genre of the book.
  - The class should have a constructor to initialize these attributes.
  - Implement a method `displayBookInfo` that prints the book's information.
3. Author with Many Books:
  - Modify the `Author` class to include a collection (e.g., a list or array) to store instances of the `Book` class.
    - Implement methods to:
      - Add a new book to the author's collection.
      - Display all books authored by the author.



#### 4. Testing:

- Create instances of the `Author` class and add multiple books for each author.
- Demonstrate the ability to display information about authors and their respective books.

#### 5. Additional Considerations:

- Implement proper encapsulation by using access modifiers for class attributes.
- Ensure that the program is user-friendly and provides clear instructions.
- Test your program with various scenarios to ensure it handles edge cases gracefully.



Welcome to the Author and Book Management System!

Author Information:

Name: J.K. Rowling

Birth Year: 1965

Nationality: British

Adding Books for J.K. Rowling:

1. Enter Book Title: Harry Potter and the Philosopher's Stone  
Enter Publication Year: 1997  
Enter Genre: Fantasy
2. Enter Book Title: Harry Potter and the Chamber of Secrets  
Enter Publication Year: 1998  
Enter Genre: Fantasy
3. Enter Book Title: Harry Potter and the Prisoner of Azkaban  
Enter Publication Year: 1999  
Enter Genre: Fantasy

Displaying Books for J.K. Rowling:

Books Authored by J.K. Rowling:

1. Title: Harry Potter and the Philosopher's Stone, Publication Year: 1997, Genre: Fantasy
2. Title: Harry Potter and the Chamber of Secrets, Publication Year: 1998, Genre: Fantasy
3. Title: Harry Potter and the Prisoner of Azkaban, Publication Year: 1999, Genre: Fantasy

