

Create a program for a basic inventory system that manages two types of products: Books and DVDs. Each product has a title, author (for books) or director (for DVDs), and a unique identification number. Implement a base class `Product` from which `Book` and `DVD` classes are derived.

1. The `Product` class should have the following features:
  - A constructor to initialize the title, author/director, and ID.
  - A pure virtual function `void displayInfo() const` that displays the details of the product. The derived classes must override this function to show their specific information.
  - A static member variable at the `Product` level to keep track of the total number of products created.
2. The `Book` class should include:
  - A constructor to initialize the title, author, and ID.
  - Overriding the `displayInfo` function to show book-specific information.
3. The `DVD` class should include:
  - A constructor to initialize the title, director, and ID.
  - Overriding the `displayInfo` function to display DVD-specific information.
4. Implement a simple inventory system that allows you to add products and display their information.
5. Implement operator overloading for comparing products by their IDs. You should be able to use relational operators (`<`) to compare two products based on their IDs.
6. Display the total number of products created during the program's execution using a static member function at the `Product` level.
7. You should be able to add 5 products, display product information.