CSV FILE HANDLING EXERCISE QUESTIONS

Basic Reading and Writing:

1. **Print Row by Row:** Write a program that reads a CSV file and prints each row (including the header row) to the console.
2. **Extract Specific Columns:** Modify the previous program to extract and print only specific columns (e.g., name, age) from each row.
3. **Write Simple Data:** Create a new CSV file and write a list of lists containing data (e.g., names, scores) as rows.

Intermediate Techniques:

4. **Skip Header Row:** Read a CSV file, skip the header row, and then process the data rows.
5. **Handle Missing Values:** Read a CSV file and handle missing values (e.g., empty cells) by replacing them with default values.
6. **Write with Different Delimiters:** Write data to a CSV file using a delimiter other than the standard comma (e.g., semicolon, tab).

Advanced Functionality:

7. **Update Student Scores in CSV:** A CSV file stores student data like roll number, name, and scores for Physics, Chemistry, and Computer Science. Write a program that reads this file, prompts the user to enter a student's roll number, allows them to choose a subject (Physics, Chemistry, or Computer Science), and then updates the score for that subject for the specified student. Finally, write the updated data back to a new CSV file.
8. **Filter Rows Based on Criteria:** Read a CSV file, filter rows based on specific conditions (e.g., age greater than 30), and write the filtered data to a new file.

Bonus Challenge:

9. **Scenario:** You're managing a customer database stored in a CSV file with columns for customer ID, name, email address, and a "loyalty points" column. You want to reward loyal customers with bonus points.

   Question: Write a program that reads the customer data from a CSV file. Allow the user to enter a minimum loyalty points threshold. The program should then identify customers who have points exceeding the threshold and prompt the user to enter a bonus points value to be added to those customers' points. Finally, write the updated customer data (including the increased loyalty points for qualifying customers) to a new CSV file.

10. **Scenario:** You manage a library's book inventory stored in a CSV file. The file has columns for book ID, title, author, genre, publication year, and "available" (boolean value indicating if the book is available for borrowing).

    Question: Write a program that reads the book inventory data from a CSV file. Allow the user to enter a book title. The program should search for the book in the data and, if found, allow the user to mark it as unavailable (borrowed) or available (returned). Finally, write the updated data (with the modified availability status for the specified book) to a new CSV file.