Description about Plane management program:

This Java code constitutes a plane management program designed to facilitate seat booking and ticket management for a flight. It allows users to buy seats, cancel reservations, find the first available seat, show the seating plan, print ticket information, total sales, and search for a specific ticket.

Key Features:

1. **Seat Booking and Cancellation:**

- Users can buy seats by providing the row letter (A/B/C/D) and seat number (1-14). The program checks seat availability and prompts users to enter their name, surname, and email for ticket creation. The ticket information is then saved to a file.
- Seat cancellations are also supported, with users providing the row letter and seat number to cancel their reservation. The corresponding ticket file is deleted upon cancellation.

2. **Ticket Management:**

- The program maintains an array of sold tickets, allowing for ticket information retrieval and total sales calculation.
- Ticket objects encapsulate details such as the row, seat number, price, and associated passenger information.

3. **Seating Plan Display:**

- Users can view the current seating plan, with occupied seats denoted by "X" and available seats denoted by "O".
- The seating plan differentiates between rows A/D and B/C, each with its own number of seats.

4. **File Handling:**

- Ticket information is saved to individual text files upon purchase, facilitating data storage and retrieval.
- File handling operations are implemented using FileWriter to create and write ticket details to the corresponding files.

Input Validation:

- Input validation is performed to ensure that users enter valid row letters and seat numbers within the specified ranges.
- Exception handling is utilized to handle potential errors such as invalid user inputs and file I/O issues.

Classes and Responsibilities:

- PlaneManagement_program: Contains the main program logic, including the menu interface, seat booking/cancellation, ticket management, seating plan display, and file handling operations.

- Person: Represents a passenger with attributes such as name, surname, and email. Provides methods for retrieving and printing passenger information.

- Ticket: Represents a purchased ticket with details such as row, seat number, price, and associated passenger information. Provides methods for retrieving and printing ticket information and saving ticket details to a file.

Tools and Techniques Used:

- Java Programming: The entire program is written in Java, utilizing object-oriented principles and language features such as classes, objects, arrays, and exception handling.
- File I/O: File handling operations are implemented using FileWriter and IOException to create, write, and delete ticket files.
- Input Validation: Input validation techniques are employed to ensure that users provide valid inputs for row letters and seat numbers, enhancing the robustness and reliability of the program.
- Exception Handling: Try-catch blocks are used to handle potential exceptions such as InputMismatchException and IOException, ensuring graceful error handling and program stability.