1. Develop a flight booking system that allows users to search for flights based on departure and destination cities, departure date, etc. Use lists and tuples to store flight information such as flight number, departure time, and available seats. Implement decision statements and loops to handle user input, display available flights, and manage booking transactions. Utilize functions for different stages of the booking process, such as searching for flights, reserving seats, and generating booking confirmations.

2. Write a function named analyze_sentence that takes a sentence as input and returns a dictionary containing the following information: the total number of words, the total number of characters (excluding spaces), the average word length, and a list of unique words.

3. Create a class called Employee with private attributes __name, __id, and __salary. Implement methods to set and get these attributes. Then, create another class Manager which inherits from Employee. Override the salary method to calculate the manager's salary with an additional bonus. Test these classes by creating instances of both Employee and Manager and demonstrating encapsulation and polymorphism principles.

4. WAP for an inventory management system for a retail store. Utilize classes and inheritance to represent different types of products (e.g., electronics, clothing, groceries) with attributes such as name, price, quantity, etc. Implement methods to add products to the inventory, update quantities, and calculate the total value of the inventory. Ensure encapsulation by using private attributes where appropriate.

5.