Bus reservation system source code with python

Sure, here's a simple example of a bus reservation system implemented in Python:

python

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class Bus:
    def __init__(self, name, total_seats):
        self.name = name
        self.total_seats = total_seats
        self.available_seats = total_seats
        self.reserved_seats = []

    def reserve_seat(self, passenger_name, num_seats):
        if num_seats <= self.available_seats:
            self.reserved_seats.append((passenger_name, num_seats))
            self.available_seats -= num_seats
            print(f"{num_seats} seat(s) reserved for {passenger_name} on bus {self.name}.")
        else:
            print("Not enough available seats.")

    def display_seats(self):
        print(f"Available seats on bus {self.name}: {self.available_seats}/{self.total_seats}")

    def display_reserved_seats(self):
        print(f"Reserved seats on bus {self.name}:")
        for passenger, num_seats in self.reserved_seats:
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            print(f"{passenger}: {num_seats} seat(s)")



class BusReservationSystem:
    def __init__(self):
        self.buses = {}

    def add_bus(self, bus_name, total_seats):
        if bus_name not in self.buses:
            self.buses[bus_name] = Bus(bus_name, total_seats)
            print(f"Bus {bus_name} added with {total_seats} seats.")
        else:
            print(f"Bus {bus_name} already exists.")

    def reserve_seat(self, bus_name, passenger_name, num_seats):
        if bus_name in self.buses:
            self.buses[bus_name].reserve_seat(passenger_name, num_seats)
        else:
            print(f"Bus {bus_name} does not exist.")

    def display_seats(self, bus_name):
        if bus_name in self.buses:
            self.buses[bus_name].display_seats()
        else:
            print(f"Bus {bus_name} does not exist.")
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    def display_reserved_seats(self, bus_name):
        if bus_name in self.buses:
            self.buses[bus_name].display_reserved_seats()
        else:
            print(f"Bus {bus_name} does not exist.")


# Example usage:
reservation_system = BusReservationSystem()

reservation_system.add_bus("Bus A", 50)
reservation_system.add_bus("Bus B", 40)

reservation_system.reserve_seat("Bus A", "John", 2)
reservation_system.reserve_seat("Bus A", "Alice", 3)
reservation_system.reserve_seat("Bus B", "Bob", 5)

reservation_system.display_seats("Bus A")
reservation_system.display_seats("Bus B")

reservation_system.display_reserved_seats("Bus A")
reservation_system.display_reserved_seats("Bus B")"
```

Out put

"Bus Bus A added with 50 seats.

Bus Bus B added with 40 seats.

2 seat(s) reserved for John on bus Bus A.

3 seat(s) reserved for Alice on bus Bus A.

5 seat(s) reserved for Bob on bus Bus B.

Available seats on bus Bus A: 45/50

Available seats on bus Bus B: 35/40

Reserved seats on bus Bus A:

John: 2 seat(s)

Alice: 3 seat(s)

Reserved seats on bus Bus B:

Bob: 5 seat(s)"