import java.util.ArrayList;

import java.util.Date;

import java.util.List;

class Appointment {

private String doctorName;

private Date dateTime;

private String patientName;

public Appointment(String doctorName, Date dateTime, String patientName) {

this.doctorName = doctorName;

this.dateTime = dateTime;

this.patientName = patientName;

}

@Override

public String toString() {

return "Doctor: " + doctorName + ", Date/Time: " + dateTime + ", Patient: " + patientName;

}

}

class Doctor {

private String name;

private List<Date> availableSlots;

public Doctor(String name, List<Date> availableSlots) {

this.name = name;

this.availableSlots = availableSlots;

}

public String getName() {

return name;

}

public List<Date> getAvailableSlots() {

return availableSlots;

}

public boolean bookSlot(Date appointmentTime) {

if (availableSlots.contains(appointmentTime)) {

availableSlots.remove(appointmentTime);

return true;

}

return false;

}

}

public class AppointmentBooking {

public static void main(String[] args) {

List<Date> slots1 = new ArrayList<>();

slots1.add(new Date(2024, 1, 20, 10, 0));

slots1.add(new Date(2024, 1, 20, 11, 0));

Doctor doctor1 = new Doctor("Dr. Smith", slots1);

List<Date> slots2 = new ArrayList<>();

slots2.add(new Date(2024, 1, 21, 10, 0));

slots2.add(new Date(2024, 1, 21, 11, 0));

Doctor doctor2 = new Doctor("Dr. Johnson", slots2);

// Booking an appointment

String patientName = "Alice";

Date appointmentTime = new Date(2024, 1, 20, 10, 0);

if (doctor1.bookSlot(appointmentTime)) {

Appointment appointment = new Appointment(doctor1.getName(), appointmentTime, patientName);

System.out.println("Appointment booked: " + appointment);

} else {

System.out.println("Sorry, this time slot is not available.");

}

}

}