import java.util.Scanner;

import java.util.ArrayList;

import java.text.SimpleDateFormat;

import java.util.Date;

import java.text.ParseException;

class Bus {

private int busno;

private boolean ac;

private int capacity;

Bus(int no, boolean ac, int cap) {

this.busno = no;

this.ac = ac;

this.capacity = cap;

}

public int getbusNo() {

return busno;

}

public int getcapacity() {

return capacity;

}

public void setcapacity(int cap) {

capacity = cap;

}

public boolean getac() {

return ac;

}

public void setac(boolean val) {

ac = val;

}

public void dispalybus() {

System.out.println("Bus No: " + busno + " | AC: " + ac + " | Total Capacity: " + capacity);

}

}

class Booking {

String passengerName;

int busNo;

Date date;

Booking() {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the name of the passenger:");

passengerName = sc.next();

System.out.println("Enter the bus number:");

busNo = sc.nextInt();

System.out.println("Enter the date (yyyy-MM-dd):");

String dateInput = sc.next();

SimpleDateFormat dateFormat = new SimpleDateFormat("yyyy-MM-dd");

try {

date = dateFormat.parse(dateInput);

} catch (ParseException e) {

e.printStackTrace();

}

}

public boolean isAvailable(ArrayList<Booking> bookings, ArrayList<Bus> buses) {

int capacity = 0;

for (Bus bus : buses) {

if (bus.getbusNo() == busNo) {

capacity = bus.getcapacity();

break;

}

}

int booked = 0;

for (Booking b : bookings) {

if (b.busNo == busNo && b.date.equals(date)) {

booked++;

}

}

return booked < capacity;

}

}

public class Main {

public static void main(String[] args) {

ArrayList<Bus> buses = new ArrayList<>();

ArrayList<Booking> bookings = new ArrayList<>();

buses.add(new Bus(1, true, 1));

buses.add(new Bus(2, true, 10));

buses.add(new Bus(3, false, 10));

Scanner sc = new Scanner(System.in);

System.out.println("Available Buses:");

for (Bus b : buses) {

b.dispalybus();

}

int userOption = 1;

while (userOption == 1) {

System.out.println("Enter 1 to book and 2 to exit:");

userOption = sc.nextInt();

if (userOption == 1) {

Booking book = new Booking();

if (book.isAvailable(bookings, buses)) {

bookings.add(book);

System.out.println("Booking Confirmed!");

} else {

System.out.println("Sorry, the bus is full.");

}

}

}

System.out.println("Thank you for using the bus booking system.");

sc.close();

}

}