GREEDY ALGORITHMS

Question 1

You are in charge of running a motel that has N rooms. You receive requests for bookings in batches in the format given below. Your algorithm should return "1" if you are able to accommodate the set of bookings, and "0" if N rooms are insufficient to accommodate the bookings.

(a) You might consider using some of the strategies we saw in applying greedy algorithms to solve this problem.

An example of what your driver code *might* look like in your main function follows.

```
// Main Program
int main()
{

    // Booking 1 arrives on the 1st and leaves on the 2nd
    // Booking 2 arrives on the 3rd and leaves on the 6th
    // etc.
    // You may wish to try some of your own examples

    int arrive_dates[] =   { 1, 3, 5, 6, 6 };
    int leave_dates[]  =   { 2, 6, 8, 7, 8 };
    int n = 3;

    cout << canBook(arrive_dates, leave_dates, n) << "\n";

    return 0;
}
```

You should submit your solution to the D2L Dropbox for Lab 5. Please name your CPP file according to the scheme lastname_firstname_lab5.cpp.

Here you will replace lastname and firstname with your own name.