Q1 Flight Ticket Booking

A airline operates multiple flights from Chennai to Mangalore. You need to write a basic ticket booking program for their flights.

Assumptions

1. For simplicity, assume there are only two flights, each identified by a unique number say 101, 102. Your program should be generic enough to handle any number of flights.

2. Flight seats are categorized under two types namely Economy and Business Class.
    a. The number of seating arrangements and the number of seats in business class and economy class should be given as file input.
    b. The file name will be the Flight no.
    c. For example, Lets say file A114.txt has the data

        Business : {2, 3, 2}, 12
        Economy : {3, 4, 4}, 20

        This means, flight A114 has
        12 rows of business class tickets with seating arrangements like
            WA AMA AW
            WA AMA AW
            WA AMA AW
            ..... 9 more rows
        20 rows of Economy class tickets with seating arrangements like
            WMA AMMA AMMW
            WMA AMMA AMMW
            WMA AMMA AMMW
            .... 17 more rows
        W - Window
        M - Middle
        A - Aisle

3. Base price of an Economy Class ticket is INR1000 and for Business Class it is INR 2000.
4. Aisle and Window seats will cost INR 100 more
5. In a single booking, any number of tickets on a single class shall be booked.
6. Each booking should be identified by a unique auto generated BookingID.This Id is unique across all flights.
7. Surge pricing : After each successful booking, price of the ticket increases by INR 100 for Economy class and INR 200 for Business class on successive booking irrespective of any number of cancellations in between. Price increase is per flight basis
8. Along with each booking, provide an option to book meal at an additional cost of 200 per passenger (Meal shall be ordered either for all passengers or none in a single booking)
9. Cancellation is allowed for any given BookingID for a flat cancellation fee of Rs 200 per seat.

Your program should handle the following cases and display results appropriately

1. Handle booking
    a. The user can choose the seats. Seat number is represented as Row_Column. Example 5_F represents 5th row, 6th Column
2. Handle cancellation
    a. Mention the seat to be canceled for the specific Booking ID
3. Print all available seats for each flight
4. Print seat numbers for which meal is ordered for each flight
5. Print individual and flight summary for all the bookings
    a. ***Input : BookingID***
    output : Passenger Details (with seat and Meal preference) & Flight details. (Flight no)