

## Zoho Programming Test - Level III

Duration : 3 Hours

- Java or C/C++ can be used for writing the programs
- Create a folder in the Desktop with your name and department and save the source files there.  
Example folder name Mani\_CSE , Bala\_MCA
- Read the questions clearly and inform invigilators before starting to code
- Talk to the invigilators for any clarifications

### Flight Ticket Booking

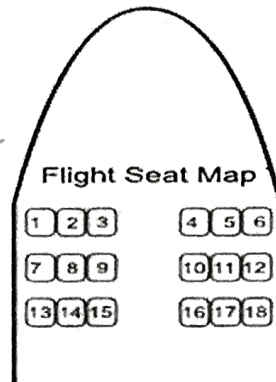
A airline operates multiple flights from Chennai to Hyderabad. You need to write a basic ticket booking program for their flights.

#### Assumptions

1. For simplicity, consider 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. Each flight has 6 Business seats and 12 Economy seats.
3. There are 6 seats in a row. 3 seats on either side of the pathway (refer the image below for more details) . First row seats are for Business Class, second and third row are for Economy class
4. Base price of an Economy Class ticket is INR 1000 and for Business Class it is INR 2000.
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 a 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

Seat Map

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Your program should handle the following cases and display results appropriately

1. Handle booking
2. Handle cancellation
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

### Note :

You are free to hard code the input inside the program in any format you are comfortable with or build it in an interactive way. The decision is entirely yours. We are comfortable with both the ways. For easier understanding the input is shown as a table.

### Input:

Booking ID	Operation	Flight No	Seat Class	Total Seats	Meal Pref
1	B	101	EC	2	Y
2	B	101	EC	2	N
3	B	102	EC	4	Y
4	B	102	BC	2	N
2	C				

where

- 'B' represents Booking and 'C' represents Cancellation
- 101, 102 represent the flight numbers
- 'EC' represents Economy Class and 'BC' represent Business Class
- Y represents a yes for meal and N represents a no for meal

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### **OUTPUT :**

Booking Id : 1  
Flight Number : 101  
Economy Class : 7,8  
Meals Required : Yes  
Total Cost : 2400

Booking Id : 2  
Flight Number : 101  
Cancelled  
Total Cost : 400

Booking Id : 3  
Flight Number : 102  
Economy Class : 7, 8, 9, 10  
Meals Required : Yes  
Total Cost : 4800

Booking Id : 4  
Flight Number : 102  
Business Class : 1, 2  
Meals Required : No  
Total Cost : 4000

Summary for Flight Number : 101  
Seats Booked : 7, 8  
Meals Booked : 7, 8  
Total Cost : 2800  
Seats Available : 1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18

Summary for Flight Number : 102  
Seats Booked : 1, 2, 7, 8, 9, 10  
Meals Booked : 7, 8, 9, 10  
Total Cost : 8800  
Seats Available : 3,4,5,6,11,12,13,14,15,16,17,18

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### Input Example 2 :

Booking ID	Operation	Flight No	Seat Class	Total Seats	Meal Pref
1	B	101	EC	12	Y
1	C				
2	B	101	EC	12	Y

Booking Id : 1

Flight Number : 101

Cancelled

Total Cost : 2400

Booking Id : 2

Flight Number : 101

Economy Class : 7,8,9,10,11,12,13,14,15,16,17,18

Meals Required : Yes

Total Cost : 15600

Summary for Flight Number : 101

Seats Booked : 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

Meals Booked : 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

Total Cost : 18000

Seats Available : 1,2,3,4,5,6

Summary for Flight Number : 102

Seats Booked : -

Meals Booked : -

Total Cost : 0

Seats Available : 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18