



# Indian Institute of Information Technology Sri City, Chittoor

(An Institute of National Importance under An Act of Parliament)

## Object Oriented Programming - Section C [Monsoon 2021]

### Mini Project Description

**Project Title: Bus Ticket Reservation System**  
**Project Code: P16**

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**Team Name - Marcopolo**

#### Team Details:

- 1) Member (Lead) - 1: NIKHIL KUMAR (S20200020289) – [nikhil.k20@iiits.in](mailto:nikhil.k20@iiits.in)
- 2) Member - 2: POLAMARASETTI JAGAN RAM JASWANTH (S20200020295) – [jaganramjaswanth.p20@iiits.in](mailto:jaganramjaswanth.p20@iiits.in)
- 3) Member - 3: SAI MEGHANA TEJAVATH (S20200020304) – [saimeghana.t20@iiits.in](mailto:saimeghana.t20@iiits.in)
- 4) Member - 4: K C MEGHAVARDHAN REDDY (S20200020268) – [meghavardhanreddy.k20@iiits.in](mailto:meghavardhanreddy.k20@iiits.in)

Team Contact Email: <<user\_id>>@iiits.in

## Railway Reservation System (P01)

### Description:

This project helps you to perform a few specific tasks related to the Online Bus Ticket Reservation System. Using this system, a user can do a fresh booking of a ticket or modify or cancel the booking of a ticket and search the bookings based on various fields. You are provided with a long list of unique IDs which can be used as the PNR number (Passenger Name Record) for each booking. One booking (one ticket) can have a maximum of 4 passengers.

### Tasks:

Each of the following tasks should have a minimum of 5 - 8 subtasks (each with a corresponding function):

#### a) Reservation - Mr. NIKHIL KUMAR (S20200020289)

Load bookings, Create new booking, View booking, Estimate Ticket Price, Apply discounts, get Estimate of taxes, Get Final Booking Price, Confirm Booking and so on.

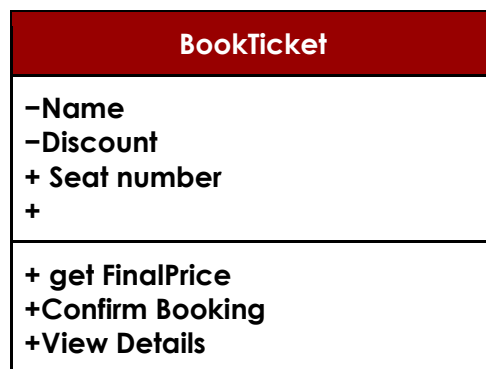
- **Load bookings:**
  - **Description:**
    - **This class will handle reservation of passengers, ticket fare calculation after including taxes and discounts available and finally ticket booking.**
  - **Class Diagram**
    - Load\_Bookings

Load_Bookings
<div><div><div>-Name</div><div>-Ticket price</div><div>+Discount</div><div>+Bus number</div><div>+Bus type</div><div>+Tax</div><div>+Seat number</div><div>+Distance</div><div>+Source</div><div>+Destination</div></div></div>
<div><div><div>+get Fullname()</div><div>+set FullName()</div><div>+get TicketPrice()</div><div>+set TicketPrice ()</div><div>+get Discount ()</div><div>+set Discount ()</div><div>+get Tax()</div><div>+set Tax()</div><div>+set Distance()</div><div>+get Distance()</div><div>+set Type()</div></div></div>

<b>+get Type()</b> <b>+set Source()</b> <b>+get Source()</b> <b>+set Destination()</b> <b>+get Destination ()</b> <b>+isEmpty()</b> <b>+Create Booking</b> <b>+View Booking</b> <b>+Set Bookings()</b>
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- **BookTicket**
- This class will handle final ticketing price, finalizing reservation etc.

○ **Class Diagram**

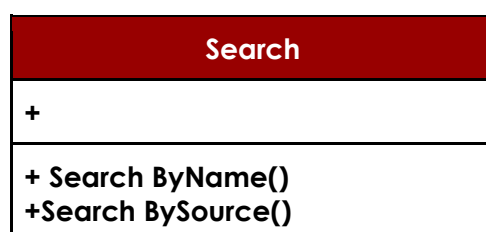


**b) Search Booking - SAI MEGHANA TEJAVATH (S20200020304):**

Load bookings by Specific field, Search bookings by Name, Search bookings by Source and Destination, Search booking by PNR, Search Bookings by train number and so on.

- **Search**
- This class will be used for searching details of passengers using different information used while reserving ticket.

○ **Class Diagram**



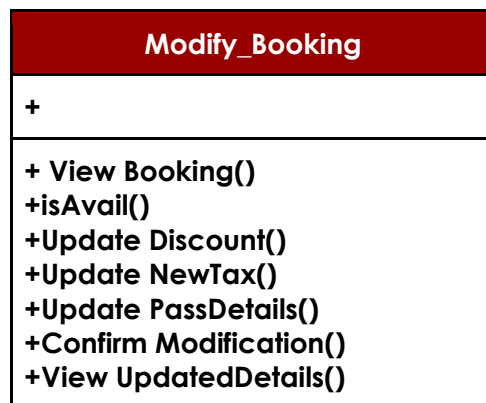
<b>+Search ByDestination()</b> <b>+Search ByBusNum()</b> <b>+View PassengerDetails</b>
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**c) Modify Booking - POLAMARASETTI JAGAN RAM JASWANTH (\$20200020295):**

Load bookings by primary key, View booking by specific key, modify the booking by applying discounts, modify booking by changing passenger name, confirm modification of booking, Update Booking and so on .

- **Modify Booking**
- This class will be used for modifying reservations by applying different taxes or discounts, updating passenger's name and other details and finally modifying new reservation data.

○ **Class Diagram**

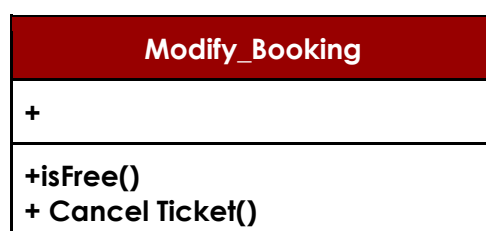


**d) Cancellation - K C MEGHAVARDHAN REDDY (\$20200020268):**

Load bookings, cancel a specific ticket (delete the node), View delete history, Delete history by PNR, Confirm cancellation, Update bookings, Cancel ticket and so on.

- **Modify Booking**
- This class will be used for cancellation of tickets, and delete passenger through different means like by PNR and finally free up and display the seats whose tickets are cancelled by passengers.

○ **Class Diagram**



<ul style="list-style-type: none"><li>+Delete History()</li><li>+ Delete HistoryByPNR()</li><li>+Confirm Cancellation()</li><li>+Update Bookings()</li><li>+View UpdatedDetails()</li></ul>
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### **Uploading Instructions:**

After Completing the Object Oriented Design (Must apply Object Oriented Concepts wherever possible) and then please upload the pdf via SmartMISS @

<http://smartmiss.iiits.ac.in/upload>

Remember that you are going to follow this very strictly and any deviation should be report to me or to Mr. Jaswanth N <[jaswanth.n@iiits.in](mailto:jaswanth.n@iiits.in)>

**Deadline: 12 November 2021 before 12:00 Noon**