**RDBMS MINI PROJECT**

**(SPRINT 1 &2)**

**AIRLINE RESERVATION SYSTEM**

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1. **Introduction**

This document outlines a mini project for the RDBMS LOT. The project is to design the database, reports the queries related to Warehouse Airline Reservation System. This document contains information about the attributed that will be participating in the system and guidelines about reports.

* 1. **Setup Checklist for Mini Project**

Minimum System Requirements

* Physical Memory (RAM) - 1GB Minimum
* Virtual Memory - Double the amount of RAM
* Disk space - Total 5 GB
* Processor - 550 MHz minimum
* Video Adapter - 256 colors
  1. **Instructions**
* Follow standards while coding
* Create a directory by your name in drive <drive>. In this directory, create a subdirectory MiniProject. Store your Project here.
* You can refer to your course material.
* The total time required to complete this mini project is 8 hrs.
* Maintain the code.

1. **Problem Statement**
   1. **Objective**

Designing the database, developing the queries and basic reports required for Airline Reservation System.

* 1. **Abstract of the Project**

## We are Domestic Airline Company in India there is a (single) booking office. You are going to design a central air-reservation database to be used by all booking offices.

## The flight has a unique flight number, air line code, business class indicator, smoking allowed indicator. Flight availability has flight number, date + time of departure, number of total seats available in business class, number of booked seats in business class, number of total seats available in economy class, and number of booked seats in economy class.

## Customer has first & last name, mailing address, zero or more phone numbers, zero or more fax numbers, and zero or more email addresses. Mailing address has street, city, province or state, postal code, Phone/fax. Email address has only one string, and no structure is assumed. A customer can book one or more flights. Two or more customers may have same mailing address and/or same phone number(s) and/or same fax number(s). But the email address is unique for each customer. First and last names do not have to be unique.

## Booking has an unique booking number, booking city, booking date, flight number, date + time of departure (time is always in hours and minutes), date + time of arrival (time is always in hours and minutes ), class indicator, total price (airport tax in origin + airport tax in destination + flight price. The flight price for business class is 1.5 times of the listed flight price), status indicator (three types: booked. Cancelled – the customer cancelled the booking, scratched – the customer had not paid in full 30

## days prior to the departure), customer who is responsible for payment, amount-paid-so far, outstanding balance, the first & last names to be printed on the ticket.

* 1. **Functional components of the project**

Design the normalized relational database using the following details. You can make appropriate assumptions wherever required. Some of the attributes are given below with the restrictions on data it can contain. Find the required attributes for all the tables and create appropriate constraints on it. (For Ex. Primary key, Foreign key, etc.)

Some of the entities and attributes are as follows:

* **customer\_email** - customer id, customer email
* **customer\_master** - customer id, customer first name , customer last

name , customer street, customer city, customer state

* **customer\_fax\_mst** - customer id,customer fax number
* **customer\_phone\_mst** - customer id, phone1 , phone2
* **booking\_details** - customer id, flight number, class id, origin, destination, departure date time, arrival date time, booking city, paid by,

flight price, total price, paid by, balance, booking date

* **city\_master** - city id, city name
* **airport\_master** - airport code, city id, airport name, air port tax
* **flight\_availability** - flight no, origin, dest, dept\_time, arrival\_time
* **flight\_master - flight no**

This Mini project will be done individually. Implement the Software development life cycle for the project and develop code for the respective functionality.

Customer Flight availability checking and Booking a flight online presentation mode.

This project shall be done in 2 parts :

* Customer login and registration.
* Customer Flight availability checking and Booking a flight
* Some of the guidelines/protocols are given below:- Normalize the tables.
* Create additional tables, if necessary.
  1. **Technology Used**

Databases:

Oracle 11G Express Edition

1. **Implementation in RDBMS LOT**
   1. **Guidelines on the functionality to be built :**

* Create a procedure which gets number\_of\_bookings, number\_of\_emails, number\_of\_phones and number\_of\_faxs for each

Customer. Customer id will be the input to the procedure.

* Create a procedure which Display all customer's first\_name, last\_name, phone\_no and email. Please sort them by customer\_id.

Customer id will be the input to the procedure.

* Create a procedure which will give list of all customers which did not place any booking.
* Create a procedure which will list all cancelled bookings, please display booking\_no, customer\_id, flight\_no, origin, destination,

Booking city. Also sort by booking\_no, customer\_id and flight no.

* Create a procedure which do transaction processing the i.e a customer must be able to book the flight the effects must go to respective tables
* Create a procedure which do transaction processing the i.e a customer must be able to cancel the flight the effects must go to respective tables

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1. Perform performance tuning on the database and the pl/sql code built.
2. Create the entire database in Oracle db.
3. **Evaluation and assessment parameters:**
   1. **Evaluation**

* Evaluation will be done at the end of Oracle training
* Total Marks: 100
* Marks Distribution mentioned below.

This Mini project will be done individually. Implement the Software development life cycle for the project and develop code for the respective functionality. Evaluation will be done using online presentation mode, where participant will present their work.

This project shall be evaluated in two parts:

* Marks distribution is for one part of project evaluation (Marks: 90)
* Project Presentation is another part of project evaluation (Marks: 10)