

# **MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR**

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)



**Skill Based Project Report**

**on**

**Airline Management System**

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# **MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR**

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## **CERTIFICATE**

This is certified that **Aditya Rawat (0901CA211002)** has submitted the project report titled **Airline Management System** under the mentorship of **Dr. Anshu Chaturvedi** (Professor), as the skills based mini project in 1st year of Master of Computer Application in Computer Science and Engineering from **Madhav Institute of Technology and Science, Gwalior**.



**Dr. Anshu Chaturvedi**

Professor & Coordinator  
Computer Science and  
Engineering

## **DECLARATION**

I hereby declare that the work being presented in this project report, for the fulfilment of partial requirement of the skills based mini project in 1st year of Master of Computer Application in Computer Science and Engineering at **Madhav Institute of Technology & Science, Gwalior** is an authenticated and original record of my work under the mentorship of **Dr. Anshu Chaturvedi**, (Professor), MITS Gwalior.

I declare that I have not submitted the matter embodied in this report anywhere else.



Aditya Rawat  
0901CA211002  
2021-2023 Year,  
Master of Computer Application,  
Computer Science and Engineering

## **ACKNOWLEDGEMENT**

The full semester project has proved to be pivotal to my career. I am thankful to my institute, **Madhav Institute of Technology and Science** to allow me to continue my disciplinary project. I extend my gratitude to the Director of the institute, **Dr. R. K. Pandit** and Dean Academics, **Dr. Manjaree Pandit** for this.

I would sincerely like to thank my department, **Department of Computer Science and Engineering**, for allowing me to explore this project. I humbly thank **Dr. Manish Dixit**, Professor and Head, Department of Computer Science and Engineering, for his continued support during the course of this engagement, which eased the process and formalities involved.

I am sincerely thankful to my faculty coordinator. I am grateful to the guidance of **Dr. Anshu Chaturvedi**, Professor & Coordinator, Computer Science and Engineering, for her continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.



Aditya Rawat  
0901CA211002  
2021-2023 Year,  
Master of Computer Application,  
Computer Science and Engineering

## **ABSTRACT**

The project presented here is the Airline Reservation System. Airline reservations system is an integrated passenger processing system, including inventory, fares, ticket-less operations and credit card transactions. All communications are via TCP/IP network protocol enabling the using of both intranet and internet communications world wide.

The solution includes several standard items, which are combined to provide an integrated solution with interfaces to other business systems. The system is based on open architecture, using industry standard equipment and software. The open nature of VRS allows the addition of new systems and features, ensuring that the VRS system can be adapted to keep up with the changing requirements of the airline business. The VRS suite of software includes the functions of

- 1> Reservations
- 2> Flight inventory
- 3> Fares
- 4> Ticketing-Ticket less module

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## **1. Introduction to our system:**

Airline reservation system is an integrated passenger processing system. This system includes:

- 1> Fares
- 2> Inventory
- 3> Enquiry
- 4> Reservations

In this system all the communications are via TCP/IP protocol using both the Intranet and Internet communications worldwide.

The Airline Reservation system has the following Modules:

### **1> User registration module:**

This module is helpful for the registration of the new customer.

### **2> Login module:**

This module performs the login of the registered customer. In this module Customer-id and password is verified.

### **3> Reservation module:**

This module performs the reservation of the ticket to the registered module.

### **4> Cancellation module:**

This module performs the cancellation of the reserved ticket.

## **2. Problem Statement :**

The objective of the project is to design and implement the software which helps the Airline System employees to issue reservation tickets for various Air flights and maintain the records of various passengers and provide quick services to the passengers. It provides the following services:

- Reservation and Cancellation of the Airline tickets.
- Maintains the passengers' records.
- Reports about the daily transactions of the Airline System.
- Quick Response to the passengers.
- Automation and integration of Airline system functions.
- Higher productivity and effective management
- Security and protection of confidential data.
- Transaction management and routing.

## **3. Objective:**

This software was build to provide assistance for the purpose of reserving tickets, or cancelling a reserved ticket, as well as rescheduling tickets. Since the information will be centralised so it can be easily updated in case of any changes



to flight schedule. This minimises the need of help lines and customer support even at any locations. Thus it can help in minimizing the need for manual work.

This system has been developed to help passengers in reserving their tickets online, access information about reserved passengers and passengers on waiting, cancel a booked ticket, and even reschedule a ticket. The main disadvantage of a manual system is eradicated in this software, i.e., the introduction of an error due to manual negligence.

## **4.Code :**

```
import java.sql.*;
import java.text.DateFormat;
import java.text.SimpleDateFormat;
import javax.swing.*;
import javax.swing.table.DefaultTableModel;

/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */

/**
 *
 * @author HP
 */
public class FrontEnd extends javax.swing.JFrame {

    Connection con;
    Statement stmt;
    ResultSet rs;

    public FrontEnd() {
        initComponents();
        Connect();
        autoID();
    }
}
```

```

}
public FrontEnd(String s){
    initComponents();
    jLabel11.setText(s);
    jLabel11.setVisible(false);
    Connect();
    autoID();
}
public void autoID()
{
    try {
        stmt = con.createStatement();
        rs = stmt.executeQuery("select MAX(customer_id) from customer");
        rs.next();
        rs.getString("MAX(customer_id)");
        if(rs.getString("MAX(customer_id)") == null)
        {
            jLabel7.setText("CO001");
        }
        else
        {
            long id =
            Long.parseLong(rs.getString("MAX(customer_id)").substring(2,rs.getString("MAX(custom
            er_id)").length()));
            id++;
            jLabel7.setText("CO" + String.format("%03d", id));
        }
    }
    catch(Exception o){
        JOptionPane.showMessageDialog(null,o.getMessage());
    }
}

```

```

public void Connect(){
try{
con= DriverManager.getConnection("jdbc:mysql://localhost:3306/airline","root","3308");
stmt=con.createStatement();
}
catch(Exception ex){
JOptionPane.showMessageDialog(this, ex.getMessage());
}
}
}

/**
 * This method is called from within the constructor to initialize the form.
 * WARNING: Do NOT modify this code. The content of this method is always
 * regenerated by the Form Editor.
 */

@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code"> //GEN-BEGIN: initComponents
private void initComponents() {

    buttonGroup1 = new javax.swing.ButtonGroup();
    jLabel1 = new javax.swing.JLabel();
    jLabel2 = new javax.swing.JLabel();
    jLabel3 = new javax.swing.JLabel();
    jLabel4 = new javax.swing.JLabel();
    jLabel5 = new javax.swing.JLabel();
    jLabel6 = new javax.swing.JLabel();
    jLabel7 = new javax.swing.JLabel();
    jLabel8 = new javax.swing.JLabel();
    jLabel9 = new javax.swing.JLabel();
    jPanel1 = new javax.swing.JPanel();
    jRadioButton1 = new javax.swing.JRadioButton();
    jRadioButton2 = new javax.swing.JRadioButton();
    jLabel11 = new javax.swing.JLabel();

```

```

jTextField1 = new javax.swing.JTextField();
jTextField2 = new javax.swing.JTextField();
jTextField4 = new javax.swing.JTextField();
jDateChooser1 = new com.toedter.calendar.JDateChooser();
jButton2 = new javax.swing.JButton();
jButton1 = new javax.swing.JButton();
jScrollPane1 = new javax.swing.JScrollPane();
jTextArea1 = new javax.swing.JTextArea();
jLabel10 = new javax.swing.JLabel();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
setSize(new java.awt.Dimension(1920, 1080));
getContentPane().setLayout(null);

jLabel1.setFont(new java.awt.Font("Algerian", 0, 48)); // NOI18N
jLabel1.setText("Customer");
getContentPane().add(jLabel1);
jLabel1.setBounds(710, 160, 257, 60);

jLabel2.setFont(new java.awt.Font("Rockwell", 1, 24)); // NOI18N
jLabel2.setText("Customer Id");
getContentPane().add(jLabel2);
jLabel2.setBounds(240, 370, 160, 30);

jLabel3.setFont(new java.awt.Font("Rockwell", 1, 24)); // NOI18N
jLabel3.setText("Name");
getContentPane().add(jLabel3);
jLabel3.setBounds(310, 440, 90, 40);

jLabel4.setFont(new java.awt.Font("Rockwell", 1, 24)); // NOI18N
jLabel4.setText("Passport ID");
getContentPane().add(jLabel4);
jLabel4.setBounds(250, 530, 140, 50);

jLabel5.setFont(new java.awt.Font("Rockwell", 1, 24)); // NOI18N
jLabel5.setText("Address");

```

```

getContentPane().add(jLabel5);
jLabel5.setBounds(290, 660, 130, 40);

jLabel6.setFont(new java.awt.Font("Rockwell", 1, 24)); // NOI18N
jLabel6.setText("Gender");
getContentPane().add(jLabel6);
jLabel6.setBounds(880, 550, 110, 30);

jLabel7.setFont(new java.awt.Font("Rockwell", 1, 20)); // NOI18N
getContentPane().add(jLabel7);
jLabel7.setBounds(440, 370, 200, 50);

jLabel8.setFont(new java.awt.Font("Rockwell", 1, 24)); // NOI18N
jLabel8.setText("Date Of Birth");
getContentPane().add(jLabel8);
jLabel8.setBounds(840, 620, 160, 30);

jLabel9.setFont(new java.awt.Font("Rockwell", 1, 24)); // NOI18N
jLabel9.setText("Contact");
getContentPane().add(jLabel9);
jLabel9.setBounds(890, 690, 110, 50);

jPanel1.setOpaque(false);

buttonGroup1.add(jRadioButton1);
jRadioButton1.setFont(new java.awt.Font("Rockwell", 1, 24)); // NOI18N
jRadioButton1.setText("Male");
jRadioButton1.setOpaque(false);

buttonGroup1.add(jRadioButton2);
jRadioButton2.setFont(new java.awt.Font("Rockwell", 1, 24)); // NOI18N
jRadioButton2.setText("Female");
jRadioButton2.setOpaque(false);

javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
jPanel1.setLayout(jPanel1Layout);
jPanel1Layout.setHorizontalGroup(
jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

```

```

.addGroup(jPanel1Layout.createSequentialGroup())
.addComponent(jRadioButton1)
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 37,
Short.MAX_VALUE)
.addComponent(jRadioButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 124,
javax.swing.GroupLayout.PREFERRED_SIZE))
);
jPanel1Layout.setVerticalGroup(
jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup())
.addContainerGap(24, Short.MAX_VALUE)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jRadioButton1)
.addComponent(jRadioButton2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
.addContainerGap())
);

getContentPane().add(jPanel1);
jPanel1.setBounds(1010, 520, 250, 70);

jLabel11.setText("jLabel11");
getContentPane().add(jLabel11);
jLabel11.setBounds(1780, 230, 120, 50);

jTextField1.setFont(new java.awt.Font("Rockwell", 1, 18)); // NOI18N
getContentPane().add(jTextField1);
jTextField1.setBounds(440, 450, 210, 50);

jTextField2.setFont(new java.awt.Font("Rockwell", 1, 18)); // NOI18N
getContentPane().add(jTextField2);
jTextField2.setBounds(440, 540, 220, 50);

jTextField4.setFont(new java.awt.Font("Rockwell", 1, 18)); // NOI18N
jTextField4.addActionListener(new java.awt.event.ActionListener() {

```

```

public void actionPerformed(java.awt.event.ActionEvent evt) {
jTextField4ActionPerformed(evt);
}
});
getContentPane().add(jTextField4);
jTextField4.setBounds(1020, 700, 250, 40);

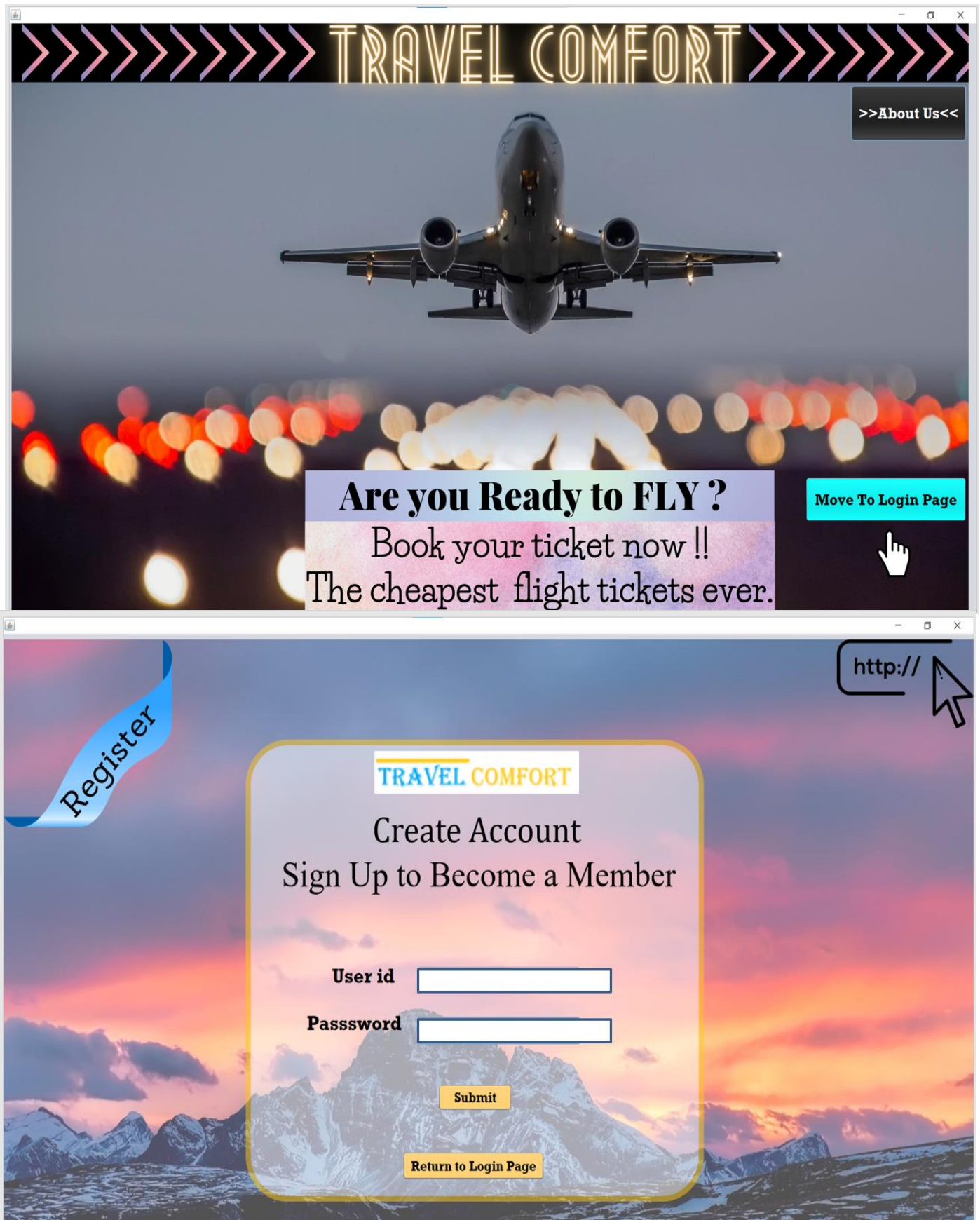
jDateChooser1.setFont(new java.awt.Font("Rockwell", 1, 18)); // NOI18N
getContentPane().add(jDateChooser1);
jDateChooser1.setBounds(1030, 620, 240, 40);

jButton2.setFont(new java.awt.Font("Rockwell", 1, 24)); // NOI18N
jButton2.setText("Back");
jButton2.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
jButton2ActionPerformed(evt);
}
});
getContentPane().add(jButton2);
jButton2.setBounds(1000, 850, 160, 60);

jButton1.setFont(new java.awt.Font("Rockwell", 1, 24)); // NOI18N
jButton1.setText("Submit");
jButton1.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
jButton1ActionPerformed(evt);
}
});
getContentPane().add(jButton1);

```

## 5. Output :





TRAVEL COMFORT

Flight Services

### Log In Your Account

User Id

Password

Login

Don't have an account?

>>Register Now<<

Back to Home

CUSTOMER

Customer Id

CO006

Name

Passport ID

Address

18 Rajpur Road, Kara

Gender

☒ Male ☐ Female


Date Of Birth

14 Jun, 2001

Contact

Submit

Back



## FLIGHT SELECTION

**Customer ID**      CO006

Name:       Gender:

PassPort ID:       DOB:

Phone Number:

Origin Switzerland      Destination India

Next

**Flight ID:-**    F-001

**Seat ID:-**    F-001-S02

**Flight Name:-**    Jet Airways

**Flight is From** Switzerland **To** India

**Date:-** 2021-05-26

**Duration is from** 08:00:00 **To** 18:00:00

**Flight Charge:-** 50000

Flight Id	Flight Name	Origin	Destination	Departure Time	Arrival Time	Date	Flight Charge	Available Seats
F-001	Jet Airways	Switzerland	India	08:00:00	18:00:00	2021-05-26	50000	59
F-002	SpiceJet	Switzerland	India	06:00:00	16:00:00	2021-05-27	50000	58

Book A Ticket
Cancel

## YOUR REGISTERED FLIGHTS

Customer Id	Customer Name	Flight ID	Seat ID	Flight Name	Origin	Destination	Departure Time	Arrival Time	Date	Flight Charge
CO001	Sanjay Chaturkar	F-001	F-001-S01	Jet Airways	Switzerland	India	08:00:00	18:00:00	2021-05-26	50000
CO006	Akashash Rawat	F-001	F-001-S02	Jet Airways	Switzerland	India	08:00:00	18:00:00	2021-05-26	50000
CO002	Sakshi Rana	F-002	F-002-S01	SpiceJet	Switzerland	India	06:00:00	16:00:00	2021-05-27	50000
CO005	Kevin Gandhi	F-005	F-005-S01	SpiceJet	USA	India	05:00:00	15:00:00	2021-05-27	65000

## **6.Conclusion:**

The software package “Airline Reservation System” provides convenient online uploading the report from executive and viewing that report by the managing director in an online fashion.

To input the data in a highly validated manner and generating the different reports , this involves complex process that was being done on based manner.

This package is designed and developed in a compact manner , which is ready to meet the users specification and to serve them in an effective as well as in an enhanced manner . The actual problem has been observed with keen interest and it has been defined and analyzed in such a way that it never causes choice to the user. More ever the limitation that has been prevailing in the existing system had been overcome to suit the need of the user .

High precision and care has been taken to design the data base , input forms an output reports since they should be given due importance which could otherwise to serious consequences thus affecting the whole system . The system thus developed has been implemented successfully which has been performed to scrutinized the validation of each data and errors were spotted out and then finally cleared in a sophisticated manner .

The added feature of this system is that it has been provided with many provisions for future enhancement in order to maintain the system in such a way that the future requirement of the user could also be satisfied and upgraded.

## **7. Bibliography :**

Oracle Java

MySQL

WikiHow

Google

VsCode Studio