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## **ONLINE FLIGHT BOOKING SYSTEM USING J2EE**

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# Introduction

## Purpose:

The aim of this software is to develop a systematic analysis of the procedure involved in the reservation of ticket for railway travel. This should be used in an effective way so that various advantages are obtained from the software. Software means establishment of sound and in-depth development of a task using high-level language that results in well-equipped, economical software, which is reliable. The introduction may be divided into various steps based on the developer and also depending upon the operation to be performed using the particular software. The "AIRLINE RESERVATION SYSTEM" undertakes as a project I based on relevant technologies. The main aim of this project is to develop the software for the process of reserving airway ticket should lead to increased efficiency and reduced drawbacks which were present in the previous procedure of airline reservation. The software should be, error controlled both logically as well as in syntactic manner. The features deal with the different operations involved in the process of AIRLINE RESERVATION. Business people don't have any planned air travel. They just receive the invitation for some international exhibition at the last minute, which they should or can attend to improve their ability both in the skilled manpower and also in the machinery importing. Tickets can now be booked online. Some agents or the organization with the idea of eyeing increased profit through the extra taxes for the comfort they give to buy the ticket just by a single click of the mouse.

## Scope:

This project designs and implements AFRS to fulfill all the vision statements. Supported by a well designed database, all available air flight information is integrated together and can be accessed easily through a single point. A friendly user interface is provided so that various combinations of search criteria can be fetched from user and generates corresponding database search statements. AFRS provided both customer and administration interfaces with the latter used for administration purposes. If time permits, AFRS will support frequent user registration and personal information management.

# System Overview

## REQUIREMENT ANALYSIS

Requirements are prone to issues of the ambiguity, incompleteness and inconsistency techniques such as rigorous inspection have been shown to help deal with these issues. Ambiguity, incompleteness and inconsistencies that can be resolved in the requirement phase typically cost orders of the magnitude less to correct than when these same issues are found in later stages of product development. The purpose of developing the specified software is to describe the analysis involved in the reservation of air ticket.

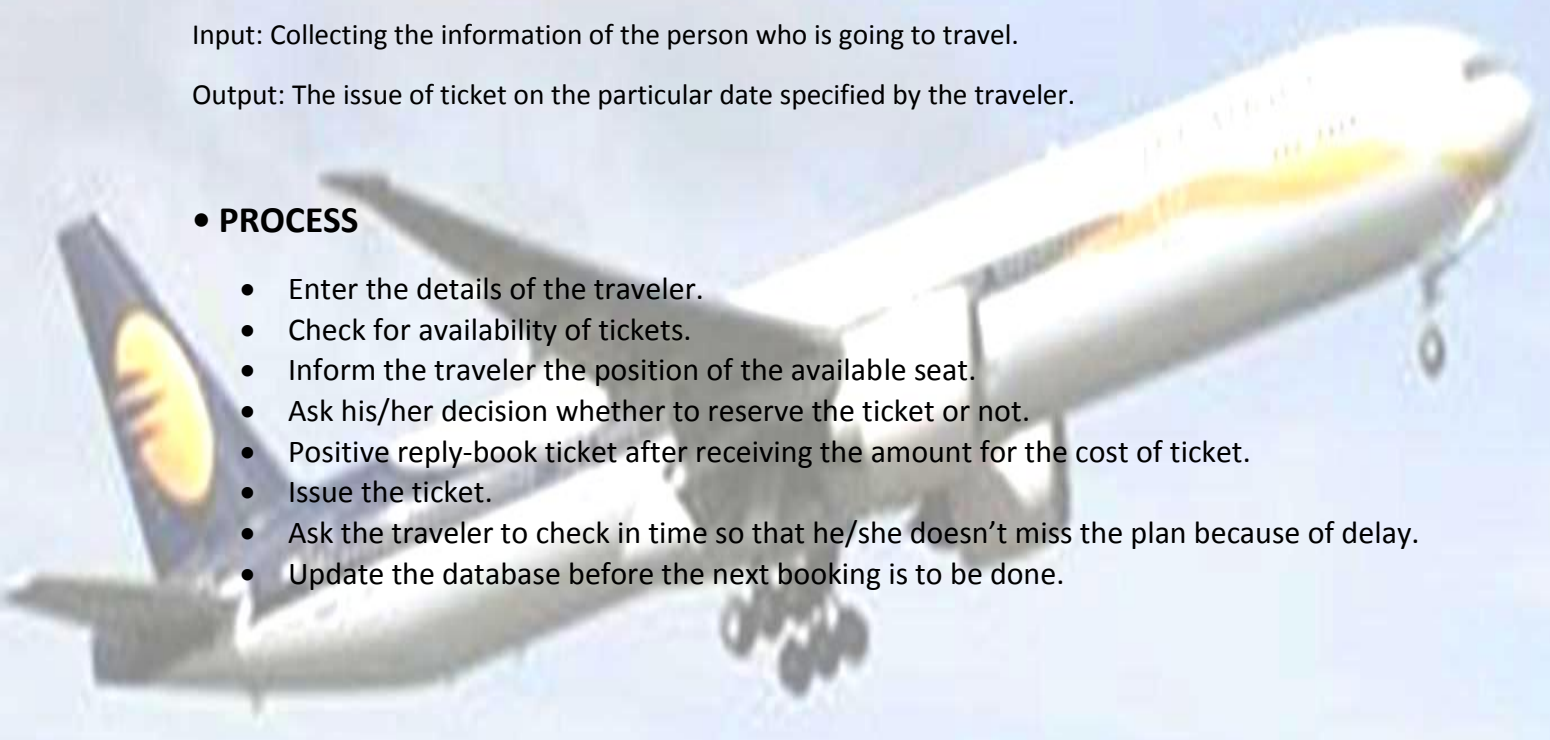
### Reservation:

Input: Collecting the information of the person who is going to travel.

Output: The issue of ticket on the particular date specified by the traveler.

#### • PROCESS

- Enter the details of the traveler.
- Check for availability of tickets.
- Inform the traveler the position of the available seat.
- Ask his/her decision whether to reserve the ticket or not.
- Positive reply-book ticket after receiving the amount for the cost of ticket.
- Issue the ticket.
- Ask the traveler to check in time so that he/she doesn't miss the plan because of delay.
- Update the database before the next booking is to be done.



## **Flight details, Seat available and Book ticket part....**

The tickets issued should have the details such as plane number, ticket number, seat number, traveler's name, time of departure. The traveler should be informed about the check-in time. The names of the fields involved in the airline reservation system are

1. FLIGHT DETAILS
2. CHECK AVAILABILITY
3. BOOK TICKET
4. VIEW SINGLE PASSENGER RECORD(by taking the ticket number)
5. EXIT

- **MODULE 1:FLIGHT DETAILS**

This module is used to view the flight details with ease and it tends the passenger to book tickets without much difficulty.

- **MODULE 2:CHECK AVAILABILITY**

This module is used to check the availability of the flights and the information of the seats in that flight.

- **MODULE 3:SINGLE PASSENGER RECORD**

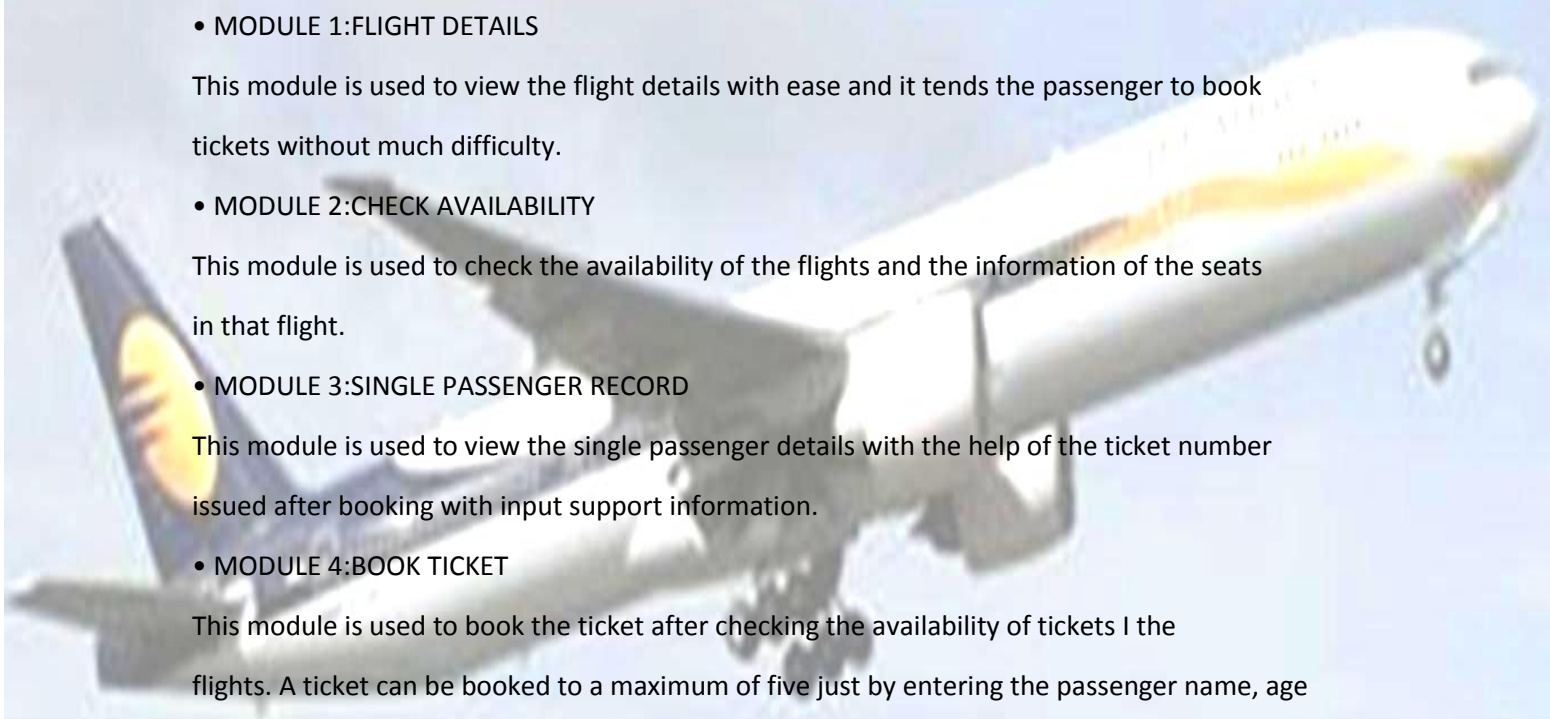
This module is used to view the single passenger details with the help of the ticket number issued after booking with input support information.

- **MODULE 4:BOOK TICKET**

This module is used to book the ticket after checking the availability of tickets I the flights. A ticket can be booked to a maximum of five just by entering the passenger name, age and their details.

- **MODULE 5:EXIT**

This module is used to exit from the reservation form.





## Description:

- **The information about several Flights, more specifically:**

- o Flight id
- o Airline
- o Flight number
- o Departure/Arrival Date/Time
- o Departure/Destination Airport
- o Seats
- o Total / Vacant
- o Seat Number
- o First Seats
- o Coach Seats
- o Type plane
- o Fare

- **Information of Reservations made:**

- o Flights id
- o Email
- o Passenger names
- o Credit card type/number
- o Address
- o Total Price

- **User Information, most importantly containing:**

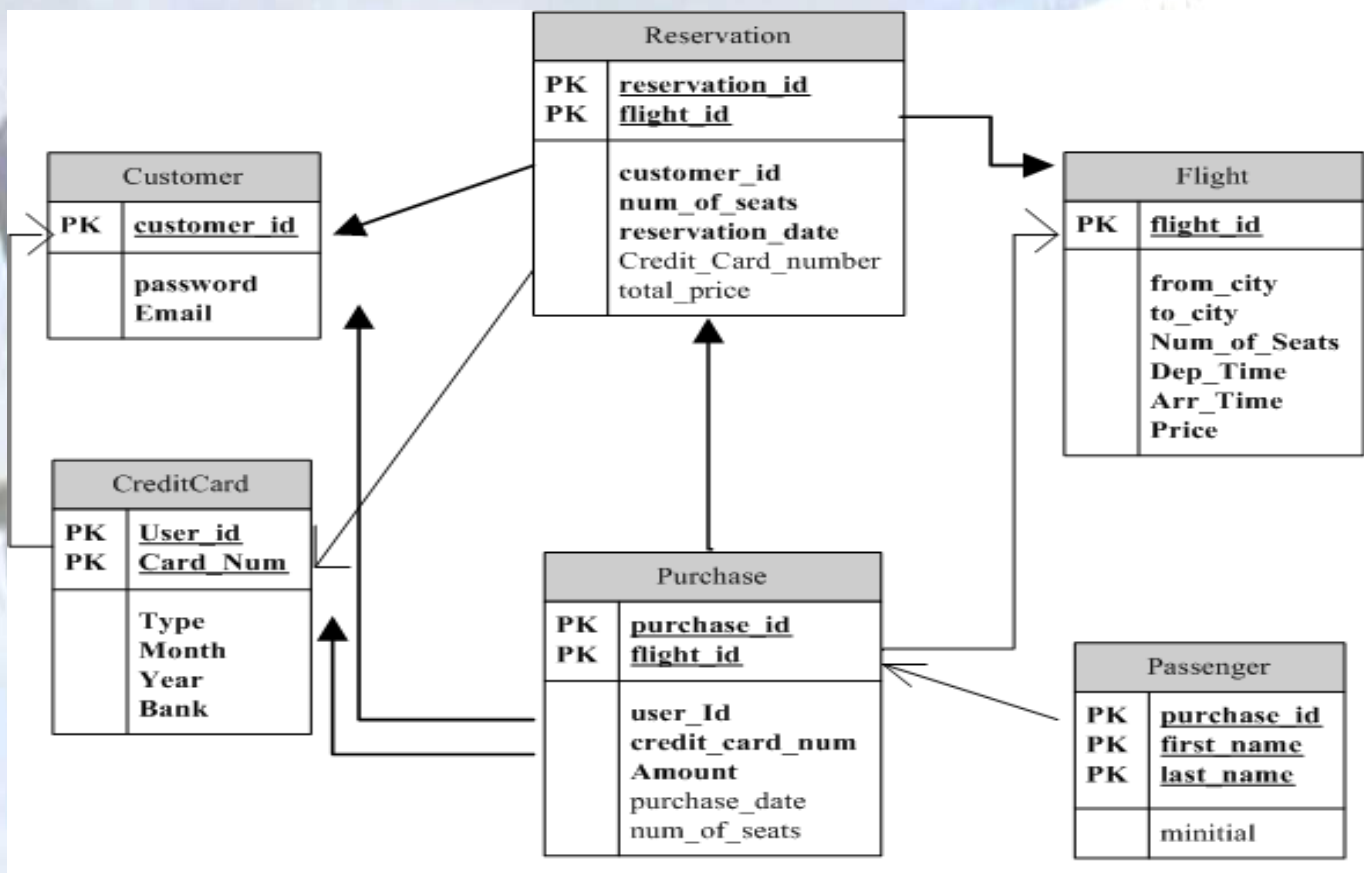
- o Email
- o Password o Reservations



# Project Overview

- Three-tier architecture
- IDE -  
Eclipse, Tomcat and Oracle
- Programming languages –  
JSP, JavaScript, Servlet, Java Beans

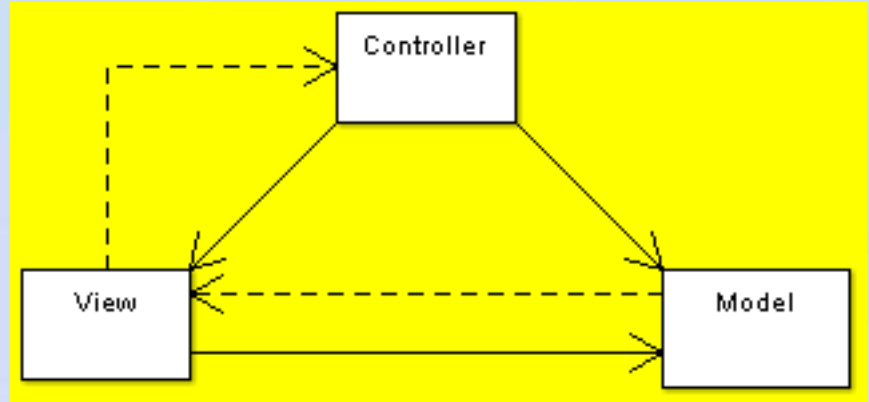
## Database Design



# MVC Architecture

Three components -

- Model
- View
- Controller



## Program Design

- In my program,
  - JSP pages act as View
  - Java Servlets act as Controller
  - Java beans act as Model
    - Separate entity beans from action beans
    - Entity beans: getter and setter methods
    - Action beans: data manipulation and calculation

## Synchronization

- Database level
  - Oracle: implicit lock automatically
- Application level
  - Synchronized keyword
  - Java's synchronization model is based on the monitor mechanism.
  - It is used to protect shared resources from simultaneous access and manipulation in a multi-threaded environment

# User Experience

## Flight Booking

bluewhale  
WEB SOLUTIONS

*Welcome to BlueWhale's Flight  
Reservation System!!*



*Search Flight*










### *Search Flight*

Origin City	Kolkata	▼				
Destination City	Bangalore	▼				
Travel Date	1	▼	August	▼	2013	▼
Passengers	1 Adult	▼	0 Children	▼	0 Infants	▼
Class	<input checked="" type="radio"/> Economy <input type="radio"/> Business					
<div>Search</div>						

[Flight Status](#) [Login Here](#) [Cancel Booking](#) [Give Feedback](#)



# Flight Search

Airline	Number	Depart	Arrive	Duration	Price	Book-Flight
Indigo 	E3456	Kolkata	Bangalore	2hrs 30mins	1990	<a href="#">Book</a>
SpiceJet 	S3778	Kolkata	Bangalore	2hrs 22mins	2050	<a href="#">Book</a>
Go Air 	G3678	Kolkata	Bangalore	1hr 50mins	2190	<a href="#">Book</a>
Indigo 	E6788	Kolkata	Bangalore	3hrs 10mins	2240	<a href="#">Book</a>
AirIndia 	A4567	Kolkata	Bangalore	2hrs 35mins	2300	<a href="#">Book</a>
Jet Airways 	J3498	Kolkata	Bangalore	2hrs 45mins	2350	<a href="#">Book</a>
SpiceJet 	S7890	Kolkata	Bangalore	2hrs 20mins	2420	<a href="#">Book</a>
JetKconnect 	JK5678	Kolkata	Bangalore	2hrs 15mins	2450	<a href="#">Book</a>
AirIndia 	A3567	Kolkata	Bangalore	2hrs 25mins	2470	<a href="#">Book</a>

## Ticket Booking

### Ticket Booking!

Booking Reference	1E6788
Flight No	E6788
Passenger Firstname	<input type="text" value="Varun"/>
Passenger Lastname	<input type="text" value="Agrawal"/>
Passenger Age	<input type="text" value="21"/> <input type="button" value="x"/>
Origin City	Kolkata
Destination City	Bangalore
Travel Date	1, August, 2013
Class	Economy class
How many more Passengers?	<input type="text" value="0"/> <input type="button" value="v"/>
<input type="button" value="Proceed For Payment"/>	

# Payment Gateway

## Payment GateWay!

Total Due INR

Rs.2240/-




Payment Mode\*

☒ Credit Card ☐ Debit Card

Your Name\*

Varun Agrawal (Card Holder's Name)

Card type\*

☒ Maestro  ☐ Visa  ☐ Mastercard 

Card Expiry Date\*

January 2016

3 Digit CVV Number\*

...

Enter Your Card Number\*

1234

5678

1234

5678

X

\*Mandatory Field

Pay

Cancel

## Payment Successfull..

**Congratulations! your Ticket has been Booked and the ticket has been sent to your Email Id..**

[Book Another Ticket](#) [Flight Status](#) [Login Here](#) [Cancel Booking](#) [Give Feedback](#)

```
SQL> select * from flightbook;
```

BOOKINGREF	ORIGIN	DESTINATION	DAY
MONTH	YEAR	FNAME	LNAME
AGE	TYPEOFCLASS	FLNO	SEATNO
1E6788	Kolkata	Bangalore	1
August	2013	Varun	Agrawal
21	Economy class	E6788	1A

# User Login

## Login Here!

Enter UserName & Password

UserName:

Password:

☒ Remember Password

Not a Member [Register here](#)

[Forgot Password?](#)

## Successful Login

User vroom92 you have successfully logged in.

[Book Ticket](#) [Flight Status](#) [Cancel Booking](#) [Give Feedback](#)

```
SQL> select * from registration;
```

LOGIN_ID	PASSWORD	MOBILE_NUMBER
SECURITY_QUES		
ANSWER		
EMAIL		
vroom92	UarunUarun	801871317
What is the name of your favorite childhood friend?		
mayank		
varun_1992@yahoo.co.in		

```
SQL> _
```

# User Registration

## User Registration Form

Firstname	<input type="text" value="Varun"/>	(max 30 characters a-z and A-Z)
Lastname	<input type="text" value="Agrawal"/>	(max 30 characters a-z and A-Z)
Date of Birth	<input type="text" value="9"/> <input type="text" value="Dec"/> <input type="text" value=""/>	
Choose Login Id	<input type="text" value="vroom92"/>	
Create Password	<input type="password" value="....."/>	(containing both Uppercase & Lowercase letters)
Confirm Password	<input type="password" value="....."/>	
Email Id	<input type="text" value="varun_1992@yahoo.co.in"/>	
Mobile Number	<input type="text" value="8018713170"/>	(10 digit number)
Gender	Male <input checked="" type="radio"/> Female <input type="radio"/>	
Address	<input type="text" value="Natural Heights, Blk-7 Flat 4C"/>	
City	<input type="text" value="Kolkata"/>	(max 30 characters a-z and A-Z)
Pin Code	<input type="text" value="700052"/>	(6 digit number)
State	<input type="text" value="West Bengal"/>	(max 30 characters a-z and A-Z)
Country	<input type="text" value="India"/>	
Security Question	<input type="text" value="What is the name of your favorite childhood friend?"/> <input type="button" value="v"/>	
Answer	<input type="text" value="mayank"/>	(max 50 characters)
<input type="button" value="Submit"/> <input type="button" value="Reset"/>		



# Flight Status

## Flight Status

Enter Flight Information!

Booking Reference

Flight Number

### Flight Details

Dear Varun, Your Booking Reference is 1E6788, Flight no is E6788, Origin is Kolkata, Destination is Bangalore, Travel Date is 1/August/2013 and your Seat no is 1A .

[Book Ticket](#) [Give Feedback](#) [Cancel Booking](#) [Login](#)

# Cancel Booking

## Cancel Booking

Enter Flight Information!

Booking Reference

Flight Number

Travel Date

### Successful Cancellation

**You have successfully cancelled you ticket.**

[Book Ticket](#) [Flight Status](#) [Give Feedback](#) [Login](#)

# Feedback

## Tell Us What U Think About Us

At BlueWhale, we LOVE hearing from our customers. Is the site user friendly, are the search results showing everything you need, are our prices competitive? We're striving to make travel simple so tell us how we are doing.

Please write your valuable feedback here.

Name:	<input type="text" value="Varun Agrawal"/>
Mobile Number	<input type="text" value="8018713170"/> (10 digit number)
Email Id	<input type="text" value="varun_1992@yahoo.co."/>
Booking Reference	<input type="text" value="1A2345"/>
Rate Our Services on a Scale of 5	Poor <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input checked="" type="radio"/> 5 Excellent
How did you first Learn about BlueWhale?	<input type="radio"/> Word Of Mouth <input checked="" type="radio"/> Online Advertising <input type="radio"/> Magazine/Print Ad <input type="radio"/> Television Advertisement
Would You Recommend Our Service To Your Friends?	Yes <input type="radio"/> No <input checked="" type="radio"/>
Type Of Feedback	<input type="text" value="Appreciation"/>
How Can We Improve?	<input type="text" value="Your Services are Awesome!"/>

# Password Recovery

## Password Recovery

### Enter The Information!

Enter Your Email Id	<input type="text" value="varun_1992@yahoo.co."/>
Security Question	<input type="text" value="What is the name of your favorite childhood friend?"/>
Answer	<input type="text" value="mayank"/> (max 50 characters)
<input type="button" value="Done"/>	

### Successful Password Recovery

**Ur Login Id is vroom92 & ur Password is VarunVarun**

[Book Ticket](#) [Flight Status](#) [Cancel Booking](#) [Login](#)

# Conclusion

- Learnt a great deal of the J2EE application development
- Realize the advantage of the MVC framework
- Understand the function of the system fully
- Later changes can be costly

Note – Printed source code is attached, CD also contains code.

Trainer – Velliraj

Course – Advance JAVA

THANK YOU