

# **RAILWAY TICKET BOOKING SYSTEM FOR COLOMBO RAILWAY DEPARTMENT**

---

---

By: T.N.DISSANAYAKE  
SEU/IS/14/MIT/024

---

**DEPARTMENT OF MANAGEMENT AND INFORMATION TECHNOLOGY  
FACULTY OF MANAGEMENT AND COMMERCE  
SOUTH EASTERN UNIVERSITY OF SRI LANKA**

## TABLE OF CONTENTS

1. Introduction .....	2
2. EXISTING SYSTEM .....	2
3. PROPOSED SYSTEM .....	3
4. Objective of Project on Railway Reservation System:.....	3
5. Scope of the project Railway Reservation System .....	4
6. Features of the project Railway Reservation System: .....	4
7. Software Requirement Specification .....	5
8. The proposed system has the following requirements: .....	5
9. Function of proposed System .....	6
10. Feasibility Study .....	7
11. System Design of Railway Reservation System .....	8
12. The general tasks involved in the design process are the following:.....	8
13. Work Duration .....	9
14. REFERENCES .....	10

## **1. Introduction**

Railway ticket booking will help the passengers to book their tickets for their journey, search train between two stations and get details of particular train schedules including their fare details. To use this system, its users should be registered and should have a valid login and password to make their reservation. Even if users who have not their valid login id and password can make new registration and get their id and set password as per their choice.

The main objective of this login module is to keep each passengers safe which will not allowed to make fraud and make their transactions secure. After making registration passengers have to enter the source and destination station name and the system will able to provide the list of all available trains for particular destination and their arrival and departure time and date. Upon selecting particular train, system will able to display the number of seats available under particular coach type and coach will be either sleeper class, three tier or two tier. To book their tickets passengers have to select coach type and total number of passengers and passengers will be provided with choice to select the seat numbers as per their location and their location also such as upper birth, middle birth or lower birth or seat chair. When all the selection work will be done, passengers will be provided with total fare charges and mode of payment which they want to select for making payment.

## **2. EXISTING SYSTEM**

Even though the online railway tickets booking system is available but the passengers have to fill all their necessary details using pen and paper which involves manual working. It's the main counter is not open due to late arrival or due to some reasons then in this case, passengers have to wait and in certain cases they have to wait in line, waiting for their chance to come. After wasting so much time, customers able to get their answers and sometimes they did not positive response.

**Disadvantages:**

- Time consuming process
- Inefficient

**3. PROPOSED SYSTEM**

Through this online railway tickets booking system customers do not have to wait in line and they will be able to get their answers in just a click. Through this system online form will be available by which passengers will be able to fill their details along with their journey details. To book their seats, users will have to first search their trains as per their requirements and after getting correct train they will have to provide Train number. After pressing next button, it will show its status, whether it has been activated or in process. Online cancellation form will also be available and to cancel their reservation, they will have to provide their number again to carry the next task. After booking the train ticket the response message will automatically forward to the customer.

**Advantages:**

- Commission free
- Good customer service
- Minimize your work load
- Online payments

**4. Objective of Project on Railway Reservation System:**

The main objective of the Project on Railway Reservation System is to manage the details of Train, Ticket, Booking, Passenger, and Train Schedule. It manages all the information about Train, Train Route, Train Schedule, and Train. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Train, Ticket, Train Route, and Booking. It tracks all the details about the Booking, Passenger, and Train Schedule.

## **5. Scope of the project Railway Reservation System**

It may help collecting perfect management in details. In a very short time, the collection will be obvious, simple and sensible. It will help a person to know the management of passed year perfectly and vividly. It also helps in current all works relative to Railway Reservation System. It will be also reduced the cost of collecting the management & collection procedure will go on smoothly.

Our project aims at Business process automation, i.e. we have tried to computerize various processes of Railway Reservation System.

- In computer system the person has to fill the various forms & number of copies of the forms can be easily generated at a time.
- In computer system, it is not necessary to create the manifest but we can directly print it, which saves our time.
- To assist the staff in capturing the effort spent on their respective working areas.
- To utilize resources in an efficient manner by increasing their productivity through automation.
- The system generates types of information that can be used for various purposes.
- It satisfy the user requirement
- Be easy to understand by the user and operator
- Be easy to operate
- Have a good user interface
- Be expandable

## **6. Features of the project Railway Reservation System:**

- Product and Component based
- Creating & Changing Issues at ease
- Query Issue List to any depth
- Reporting & Charting in more comprehensive way
- User Accounts to control the access and maintain security
- Simple Status & Resolutions
- Multi-level Priorities & Severities.
- Targets & Milestones for guiding the programmers

- Attachments & Additional Comments for more information
- Sql database back-end
- Various level of reports available with a lot of filter criteria's
- It contain better storage capacity.
- Accuracy in work.
- Easy & fast retrieval of information.
- Well-designed reports.
- Decrease the load of the person involve in existing manual system.
- Access of any information individually.
- Work becomes very speedy
- Easy to update information

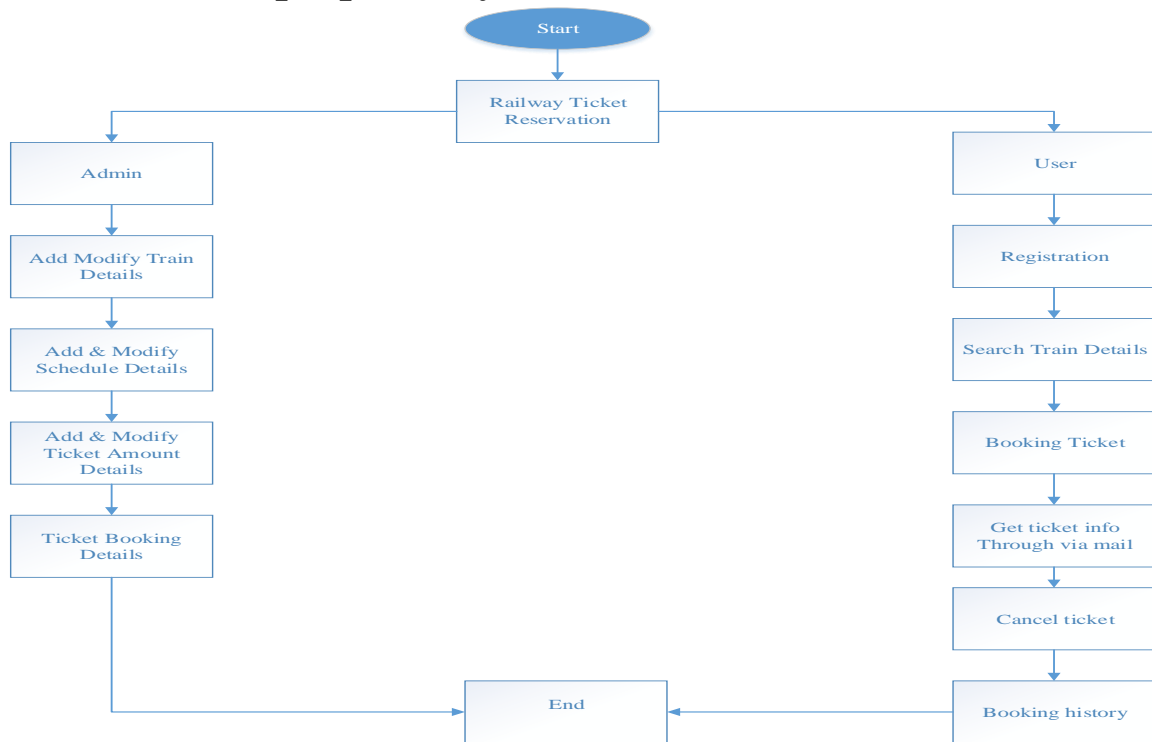
## **7. Software Requirement Specification**

The Software Requirements Specification is produced at the culmination of the analysis task. The function and performance allocated to software as part of system engineering are refined by establishing a complete information description, a detailed functional and behavioral description, an indication of performance requirements and design constraints, appropriate validation criteria, and other data pertinent to requirements.

## **8. The proposed system has the following requirements:**

- System needs store information about new entry of Train.
- System needs to help the internal staff to keep information of Ticket and find them as per various queries.
- System need to maintain quantity record.
- System need to keep the record of Booking.
- System need to update and delete the record.
- System also needs a search area.
- It also needs a security system to prevent data.

## 9. Function of proposed System



- Provides the searching facilities based on various factors. Such as Train, Booking, Passenger, Train Schedule
- Railway Reservation System also manage the Train Route details online for Passenger details, Train Schedule details, Train.
- It tracks all the information of Ticket, Train Route, Passenger etc
- Manage the information of Ticket
- Shows the information and description of the Train, Booking
- To increase efficiency of managing the Train, Ticket
- It deals with monitoring the information and transactions of Passenger.
- Manage the information of Train
- Editing, adding and updating of Records is improved which results in proper resource management of Train data.
- Manage the information of Passenger
- Integration of all records of Train Schedule.

## **10. Feasibility Study**

After doing the project Railway Reservation System, study and analyzing all the existing or required functionalities of the system, the next task is to do the feasibility study for the project. All projects are feasible - given unlimited resources and infinite time.

Feasibility study includes consideration of all the possible ways to provide a solution to the given problem. The proposed solution should satisfy all the user requirements and should be flexible enough so that future changes can be easily done based on the future upcoming requirements.

### **A. Economic Feasibility**

This is a very important aspect to be considered while developing a project. We decided the technology based on minimum possible cost factor.

- All hardware and software cost has to be borne by the organization.
- Overall we have estimated that the benefits the organization is going to receive from the proposed system will surely overcome the initial costs and the later on running cost for system.

### **B. Technical Feasibility**

This included the study of function, performance and constraints that may affect the ability to achieve an acceptable system. For this feasibility study, we studied complete functionality to be provided in the system, as described in the System Requirement Specification (SRS), and checked if everything was possible using different type of frontend and backend platforms.

### **C. Operational Feasibility**

No doubt the proposed system is fully GUI based that is very user friendly and all inputs to be taken all self-explanatory even to a layman. Besides, a proper training has been conducted to let know the essence of the system to the users so that they feel comfortable with new system. As far our study is concerned the clients are comfortable and happy as the system has cut down their loads and doing.



## **11. System Design of Railway Reservation System**

In this phase, a logical system is built which fulfils the given requirements. Design phase of software development deals with transforming the client's requirements into a logically working system. Normally, design is performed in the following in the following two steps:

### **1. Primary Design Phase:**

In this phase, the system is designed at block level. The blocks are created on the basis of analysis done in the problem identification phase. Different blocks are created for different functions emphasis is put on minimizing the information flow between blocks. Thus, all activities which require more interaction are kept in one block.

### **2. Secondary Design Phase:**

In the secondary phase the detailed design of every block is performed.

## **12. The general tasks involved in the design process are the following:**

- 1.** Design various blocks for overall system processes.
- 2.** Design smaller, compact and workable modules in each block.
- 3.** Design various database structures.
- 4.** Specify details of programs to achieve desired functionality.
- 5.** Design the form of inputs, and outputs of the system.
- 6.** Perform documentation of the design.
- 7.** System reviews.

## 13. Work Duration

Task Name	Duration	Start	Finish
<b>RAILWAY TICKET BOOKING SYSTEM</b>	<b>70 days</b>	<b>Mon 10/8/18</b>	<b>Fri 1/11/19</b>
<b>1 Requirement Analysis</b>	<b>20 days</b>	<b>Mon 10/8/18</b>	<b>Fri 11/2/18</b>
1.1 Evaluate current system	4 days	Mon 10/8/18	Thu 10/11/18
<b>1.2 Define Requirements</b>	<b>16 days</b>	<b>Fri 10/12/18</b>	<b>Fri 11/2/18</b>
1.2.1 Define user Requirements	5 days	Fri 10/12/18	Thu 10/18/18
1.2.2 Define Content Rquirment	4 days	Fri 10/19/18	Wed 10/24/18
1.2.3 Define spcific functionality	7 days	Thu 10/25/18	Fri 11/2/18
<b>2 Designing the System</b>	<b>15 days</b>	<b>Mon 11/5/18</b>	<b>Fri 11/23/18</b>
2.1 System Design	6 days	Mon 11/5/18	Mon 11/12/18
2.2 Database Design	4 days	Tue 11/13/18	Fri 11/16/18
2.3 User Interface Design	5 days	Mon 11/19/18	Fri 11/23/18
<b>3 System Development</b>	<b>14 days</b>	<b>Mon 11/26/18</b>	<b>Thu 12/13/18</b>
3.1 Develop the Database	6 days	Mon 11/26/18	Mon 12/3/18
3.2 Coding the Interface	5 days	Tue 12/4/18	Mon 12/10/18
3.3 Integrating Front-end with Back-end Database	3 days	Tue 12/11/18	Thu 12/13/18
<b>4 Testing And Implementation</b>	<b>7 days</b>	<b>Fri 12/14/18</b>	<b>Mon 12/24/18</b>
4.1 Testing the Coding	3 days	Fri 12/14/18	Tue 12/18/18
4.2 System Testing	4 days	Wed 12/19/18	Mon 12/24/18
<b>5 Modification And Varification</b>	<b>9 days</b>	<b>Tue 12/25/18</b>	<b>Fri 1/4/19</b>
5.1 System Monitoring	4 days	Tue 12/25/18	Fri 12/28/18
5.2 System Varification	2 days	Mon 12/31/18	Tue 1/1/19
5.3 Database Varification	3 days	Wed 1/2/19	Fri 1/4/19
<b>6 Final Documentation and System Submission</b>	<b>5 days</b>	<b>Mon 1/7/19</b>	<b>Fri 1/11/19</b>
6.1 Final Documentation	3 days	Mon 1/7/19	Wed 1/9/19
6.2 System Submission	2 days	Thu 1/10/19	Fri 1/11/19

## 14. REFERENCES

- [1] AkintundeIbitayoakinwande,IoannisKymissisand John Sarik, ‘A Laboratory Based Course in Display Technology’, IEEE Trans. Educ., vol. 54, no. 2, May.2011.
- [2] ApostolosFournaris , George Kostopoulos, GeorgeSelimis, and Odysseas Koufopavlou , ‘Software and Hardware Issues in Smart Card Technology’,IEEE Commun.,Vol.11.no.3,2009.
- [3] Amit Kumar Gupta and PriyankaAhlawat Mann , ‘Railway Train Ticket Generation A Business Application for Indian Railways’, An international Journal of Computer Applications,vol.22,no.7,May.2011.
- [4] Ana Aguiar and Francisco Maria Cruz,Manuel Joao Fernandes Silva , ‘Leveraging Electronic Ticketing to Provide Personalised Navigation in aPublicTransportNetwork’,IEEETrans. Intell. Transp. syst., vol.13, no.1, Mar.2012.
- [5] M. E. Bahlke, I. Kymissisand S. P. Subbarao, ‘Laboratory thin - film encapsulation of air - sensitive organic semiconductor devices,’IEEE Trans. Electron Devices, vol. 57, no. 1, pp. 153 – 156,Jan.2010.
- [6] Harvey Glickenstein, San Francisco’s Multiagency Clipper Card Advances, IEEE Vehicular Technology Magazine, June 2011.
- [7] M.Hendry , Multi -Application Smart Cards: Technology and applications, Cambridge University Press, July 2007.
- [8] Fukushima, ‘New intelligent thermal printing technology’, in Proc. Int. Conf. Digit. Printing Technol. pp. 268 –271,2006.
- [9] K.Mayes and K.Markantonakis , SmartCards, Tokens, Security & Application, Springer, Jan 2008