THAPATHALI CAMPUS
Institute of Engineering

A PROJECT PROPOSAL

AIRLINES RESERVATION SYSTEM

IN PARTIAL FULLFILLMENT OF THE REQUIREMENTS FOR THE COURSE OF CT 501 OBJECT ORIENTED PROGRAMMING

BACHELOR OF ELECTRONICS, COMMUNICATION AND INFORMATION ENGINEERING

SUBMITTED BY

DIPESH GIRI	THA075BEI016
RIWAJ NEUPANE	THA075BEI034
ABHISHEK POUDEL	THA075BEI003
CHARCHIT REGMI	THA075BEI014

SUBMITTED TO

DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING, THAPATHALI CAMPUS

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Without encouragement and inspirations, it is very difficult to work and develop anything. A suitable method for airline management system was found to be wanted from a long time. The project "AIRLINE RESERVATION SYSTEM" is one of the most reliable, fast and secure method to fulfill user needs regarding airline management system. This system uses a simple interface for the users and administrator to communicate with the system. It allows the users to book and view their ticket details.

We would like to thank our teachers for providing us project work which helped in building and enhancing our knowledge regarding concepts in programming. We would like to thank our classmates who assisted us while encountering various problems regarding our project.

ABSTRACT

The purpose and essence of any records and booking system is to provide the right information in the right place in the right order, at the right time for the right person at the lowest price. Airline reservation system is programmed to deal with the day to day problems faced during day to day operation. The program can look after passenger records, booking and status of booking. The purpose of the project is to computerize the front office management of airport to develop a system which is user friendly, simple, fast and cost effective. It deals with the problems that were faced during manual method of recording which is still in use nowadays. It deals with the collection of passenger's information, booking details, transit etc. Traditionally, it was done manually. The project outlines all the process followed to come up with the system that is from analysis to testing the system

KEYWORDS

Reservation, Domestic, International, UI, Rates

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CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

One of the most common modes of travel in travelling by air. Customers who wish to travel by air nowadays have a wide variety of airlines and ranges of timing to choose from. Airline reservation systems incorporate airline schedules, passenger and ticket records. It is based on a concept of booking and cancelling flight reservations. Here, the system contains a login feature for both the client and administrator. The users can easily book flights, cancel flight reservation and check tickets. It contains a system through which you can book as well pay for the ticket you wish to buy. Airline reservation system is a computerized system designed and programmed to deal with the problems faced in day to day operations. The purpose of the project entitled as "AIRLINE RESERVATION SYSTEM" is to computerize the front office of management of airlines and to develop a system which is user friendly, simple, fast and cost effective. Traditionally, it was done manually which is a paper- based system. It is too slow and cannot provide updated list of passengers in a reasonable time frame. The intentions of the system are to reduce over pay time and increase passengers that can be treated accurately.

Talking about the features of airline reservation system for a flight reservation the users has to select whether he/she wants domestic or international and date of the journey. Then the system displays the city and the countries name and the users has to provide the destination where they want to travel. After this, system checks whether the flight is available or not. If it is available then the system displays airline list with departure and arrival time. The system asks for the information such as name, contact details, gender, email id, nationality etc. The objective of this project is to create an airline reservation system where a user can request all flight information as per their journey dates. They can get information regarding time, cost etc all at the same time and place. This project designs and implements airline reservation system. 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 elements. The airline reservation system provides both customer and administration interfaces with the latter used for administration purposes. If time permits, the reservation system will support frequent user registration and personal information management.

Airline system uses a manual system for the reservation and maintenance of critical information. The various personal data provided by the users are highly confidential. The current system uses numerous paper forms, with data stores spread throughout the airline reservation system. It is also very inefficient and a time-consuming process and error prone. It is also not economically and technically feasible to maintain records on a paper. Other information is incomplete, or does not follow the management standard forms are often lost in transit between departments requiring a confidential material to ensure that no vital information is lost. The loss of data can cause various impact on data management system.

1.2 PROBLEM STATEMENT

Keeping track of all activities and their records on a paper was very tedious task and error prone. It is also difficult to handle the whole system manually and in less accurate and to keep data in case files for future reference because it may get lost or destroyed. Moreover, it is difficult to retrieve data. The manual system is time consuming. The manual system is time consuming. To overcome the challenges faced in manual method we have developed an automated version of the manual system named as airline reservation system. The data are stored in the computer memory. It also helps on proper documentation of the record because the records can be used as future reference at any given time. The proposed system will easily handle all the data and work done by the existing system. It provides more security and integrity to the data.

1.3 OBJECTIVES

The main objectives of our project are:

- Provide large number of ticket reservation and cancelation service in a lesser time.

1.2 APPLICATIONS

In the context of Nepal where most of the ticket reservation is not computerized to manage ticket reservations. This program will be a perfect way to manage the airline reservation system. It is found to be used in airport to keep day to day activities. It can be used by the customers to reserve their tickets for their journey. It allows the administrator to interact with the system. It mainly uses file handling to perform basic operations like: to add, edit, delete your booking. Through this system you can know the basic things about your flight. You can also know about your transit details while on a international flight. It can revolutionize the way different airports are imparting their ticketing services. It works towards making processes organized and productive by managing the ticketing system. The system can be very useful for both the customers and the airport.

1.5 PROJECT FEATURES

The main features are:

- It asks the users to enter their details such as: name, age, gender, phone no, email id.
- It checks the availability of tickets as demanded by the customer.
- It informs the traveler the position of the available seat.
- It asks the user to either book or not a ticket.
- It tells the user to check in time so that the passenger won't miss the flight.
- It shows the booking detail to the customer.
- Cancels ticket if travelers want to cancel their ticket.

1.6 FEASIBILITY ANALYSIS

1.6.1 ECONOMIC FEASIBILITY

Economic justification includes a range of concerns that includes cost benefit analysis. In this we weight the cost and benefits associated with the candidate system and it runs the basic purpose of the organization. This feasibility checks whether the system can be developed with the available funds. This project does not require a lot of money to be developed. This can be done economically if developed properly so it is economically feasible.

1.6.2 TECHNICAL FEASIBILITY

Technical feasibility centers on the existing computer system and to what extent it can support the proposed system. This is concerned with specifying equipment and software that will meet the user requirement. The system maintains data in digital form so maintaining of information will be easy and retrieval of the information is fast. The system also has the facility to provide the required output in least time. In the case of this system, the required infrastructure hardware, software application already exist. Thus the, project is technically feasible.

1.6.3 OPERATIONAL FEASIBILITY

This system reduces the workload on the staff of the airline system on a click of mouse he can get the desired output. The system will be built in computer system which will make it more efficient, cheap and easy to use. The results obtained are more efficient and contains less errors than in manual system. The proposed system is better in use and user friendly as it generates proper messages at the run time. Hence, for the following reasons the system is feasible.

1.7 SYSTEM REQUIREMENT

1.7.1 Software Requirement

Operating system: DOS, Windows 7/8/9/10

Compiler: QT with c++ tutorial

1.7.2 Hardware Requirement

Operating system: Windows

Hard disk: 1 GB or better

RAM: 1 GB or better

Processor: Pentium(R) Dual-core CPU or better

CHAPTER 2: LITERATURE REVIEW

2.1 OVERVIEW

In order to understand the concept related to reservation system using C++, it is necessary to analyze and read the previous work done in the related field. The purpose of this review is to analyze and examine the operations involved in creating reservation system using C++. This review is a small overview of the main concept associated with the creation of reservation system with reference to published articles, projects and work done in the related fields.

2.2 DETAILS

Airline reservation systems incorporate airline schedules, fare tariffs, passenger reservations and ticket records. In the airline industry, available seats are commonly referred to as inventory. The inventory of an airline is generally classified into service classes (e.g. first, business or economy class) and up to 26 booking class, for which different prices and booking conditions apply. Inventory data is imported and maintained through a schedule distribution system over standardized interfaces. One of the core functions of inventory management is inventory control. Inventory control steers how many seats are available in the different booking classes, by opening and closing individual booking classes for sale. In our case, we have incorporated our project of reservation system in airplanes only to passenger reservation and ticket booking system. This project approaches the system in two ways, namely the administrative and user login system. The administrative login provides the user with information about the entire reservation system as well as user login while the user login mainly deals with reserving seats for airlines.

2.3 EXISITING SYSTEM

Currently our country doesn't have a standard and established platform dedicated solely for the airline reservation system and connected with the GDS (Global Distribution System).This has created problems from time and again while booking tickets in our country.

2.4 OBJECTIVE

The main objective of our project is to provide a platform for the user from which they can either book their tickets or even cancel them according to their need and requirements. Though our project is far cry from what really is implemented in international system, we have tried to make the best out of available knowledge and resource.

CHAPTER 3: METHODOLOGY

3.1 SYSTEM DESIGN

The purpose of the phase is to plan a solution for problem specified by the requirements. System design aims to identify the modules that should be in the system, the specification of these modules and how the interact with each other to produce the results. The goal of the design process is to produce a module that can be used later to build the system. The purposed model is called design of the system. System design is the process of defining the architecture, components, interfaces and data for a system.

3.2 SOFTWARE REQUREMENT SPECIFICATIONS

A software-requirements a requirement for a system, is a complete description of the behavior of the system to be developed and may include a set of use cases that describes interactions the users will have with the system. More, it may also contain the non-functional requirements. Non-functional requirements impose constraints on the design or implementation such as performance enhancing requirements, quality standards, or other designer constraints. The above relation of software requirement specification document should facilitate in providing the entire overview of the information system under development.

3.3 PURPOSE

The main purpose of the system is to describe in a precise manner all the capabilities of the proposed system. It also states the various constraints which the system will be abide on. This document further leads to clear vision of software requirements, specifications and capabilities. These are to be expressed to the development testing a user software.

3.4 OVERALL DESCRIPTION OF THE PROPOSED SYSTEM

The features of airline's reservation system for a flight reservation the user's needs to select whether he/she wants domestic or international and date of the journey. Then the system displays the city and the countries name and the users has to provide the destination where they want to travel. After this, system checks whether the flight is available or not. If it is available then the system displays airline list with departure and arrival time. The system asks for the information such as name, contact details, gender, email id, nationality etc. The objective of this project is to create an airline reservation system where a user can request all flight information as per their journey dates. They can get information regarding time, cost etc all at the same time and place. This project designs and implements airline reservation system. 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 elements. The airline reservation system provides both customer and administration interfaces with the latter used for administration purposes. If time permits, the reservation system will support frequent user registration and personal information management.

3.5 INTERFACES:

The system will have a user friendly and menu-based interface. Following screens will be provided:

1. A login screen for entering the username, password for both the administrator and customer where the maximum limit is 3 if it is crossed then the system will be automatically closed.

2. Add passengers record: this menu allows us to enter the details about the user it asks the following information's as:

- First name.
- Last name.
- Age.

- Gender.
- Contact no.
- Email.

3. The following system also asks the flight details as:

- Destination.
- Domestic or international flight.

4. The system also allows the users to:

- Reserve their tickets.
- View their reservation details.
- Know about the reporting time.
- Cancel their reservations.
- Edit their details.

5. The following system also allows the administrator to view:

- Reserved tickets.
- Reservation details.
- Cancellation of reservations.

CHAPTER 4: EPILOGUE

4.1 EXPECTED OUTPUT

The program will ask the user to login first, then after successful login the program directs the user towards the flight category they want to select: namely international or domestic. After the selection the program directs the user towards the seats available according to the class of the seats. From there the user can book the seats or cancel the previously booked ticket.

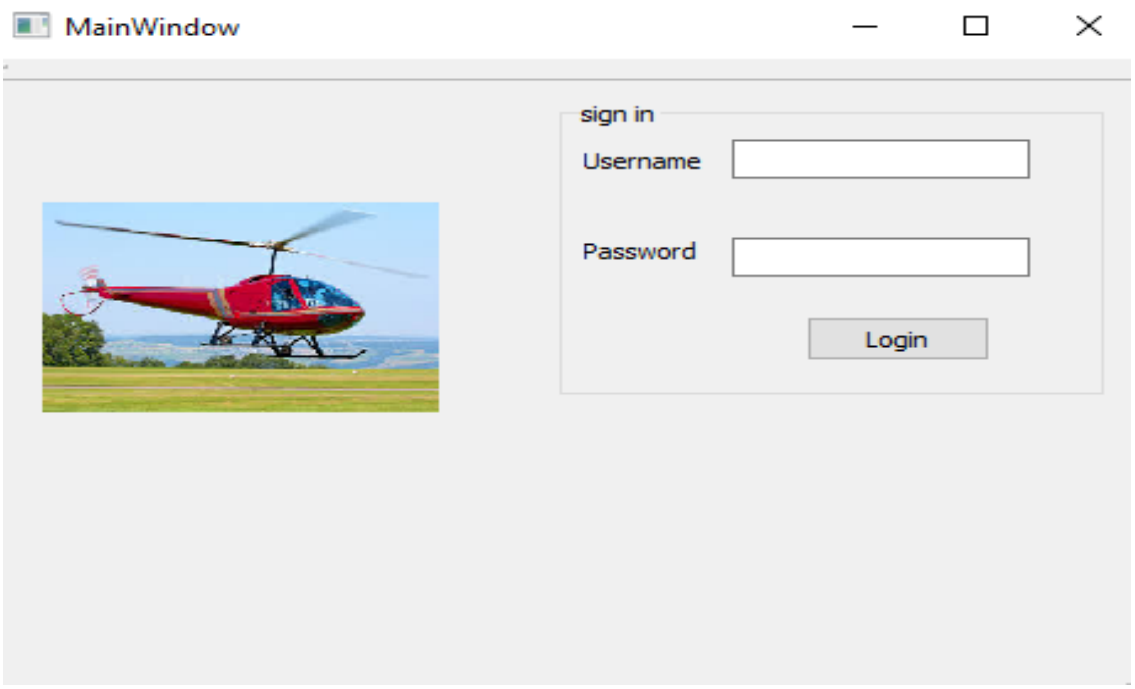

Fig 1: Sample Login Window

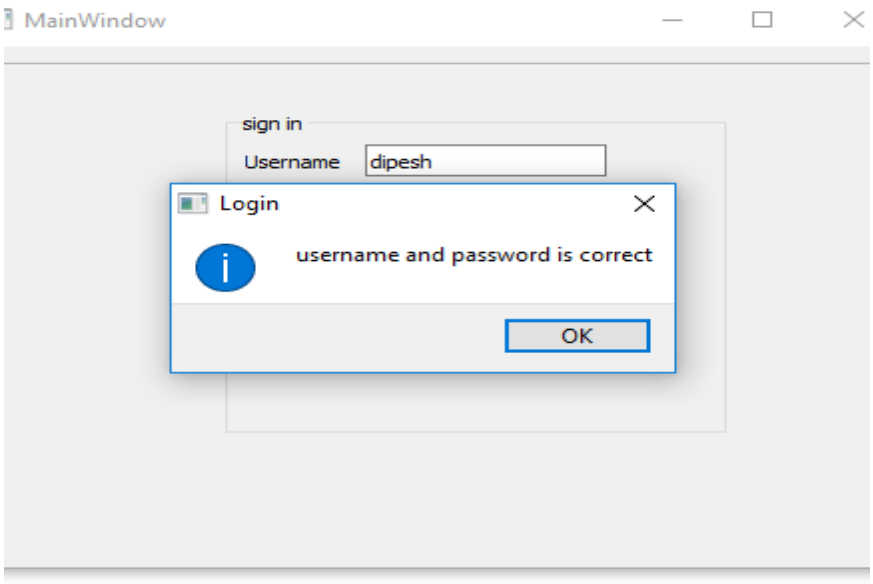

Fig 2: Sample Login

4.2 Budget Analysis

The project is a program that can be created on any C++-application. Along with that the collection of data, coding and the running of this program is all cost-free. Therefore the budget required for the project is almost equivalent to zero.

4.3 Work Schedule

The time allocated for the completion of the project is around 1 month (30 days). The first 7 days have been allocated for research, which in our case is the collection of data regarding the rates of all the international and domestic flight. The 8th day has been allocated for familiarization of tools that includes the different tools and functions in C++ to be used. After that, till the 14th day is the planning and designing of the program. From the 14th day to the 23rd day the main coding for the program is to be done. Then for the next 7 days the program is tested and debugged accordingly.

work	Week 1	Week 2	Week 3	Week 4
Research				
Designing				
coding				
Testing				
Documentation				

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