

Cyanair Airline Booking System Project

Description of Work

The scope of this project involves the creation of a Booking System for Cyanair Airline. We will produce a piece of software that will allow the user to create a booking. There will be two users on this system – Flight Representative and the Administrator.

The Flight Representative will be able to create bookings on behalf of the Passenger using the software created. They will input the details from the perspective passenger that will allow them to book a flight from one departure to one destination, with the additional option of adding a return flight from their destination back to their departure, or an onward leg from their first destination, to another destination. The system also asks for the dates of the flights that the passenger would like, and selection of the type of seats, or class that the passenger can choose from – depending and varying on the flight selected. The information regarding the booking of flights will be on a separate form to the passenger details. After the flights have been selected, the dates and class have been chosen, the flight representative can move on to the next page in the system which will allow for the input of the Passenger Details.

This form will require that all fields are completed before moving on to processing the booking and the booking reference number being generated. Here, the flight administrator will be able to gather all of the Passenger's details such as their Full Name, Passport Number, Nationality, Phone Number, Email Address and Gender. When this has been completed, the system will then produce a popup asking for the Flight Representative to confirm the booking, or the Flight Representative also has the choice to cancel the booking entirely. After the Flight Representative has confirmed the booking, the program will move to another form that will let the Flight Representative know that the booking has been confirmed and provide a reference number that can be shared with the passenger.

The system will only allow the creation of flight bookings for one passenger at a time. Additional flights may be booked for others, or even the same passengers after the creation of a booking, by a button that will be present after the booking confirmation that will allow the Flight Representative to create another booking, for either a new passenger, or the current one looking to book more flights.

The software will also feature Administrator access to a Maintenance Suite that will allow the Administrator to make changes to the Airport data. The system will allow the administrator to add new airports, edit and delete the current airports available. This data will then be updated in the database.

The database for this project will be created using SQLite and the system used to manage this database will be DB Browser.

Deliverables

This section will provide the assets being produced by the project and the key features.

Files:

- Completed Software using C#
- Cyanair.db Database File

Documentation:

- Object Oriented Programming Report Documentation
- Graphical User Interface Report Documentation
- Project Scope Statement Documentation
- User Manual Help Documentation
- Test Log Report Documentation
- Technical Report Documentation

Functionality:

1. The Cyanair Booking System will be protected via a Login (There will be 2 roles – Flight Representative and an Administrator)
2. The system will allow the user to then choose between either the Booking System or the Maintenance Suite. The choice will only be available to the Administrator. The Flight Representative will only have the Booking System as an option.
3. The Booking System will allow the Flight Representative to make bookings on behalf of passengers via the booking process.
4. The system will allow for Departure and Destination flights to be selected, along with the date for the flight.
5. The system will allow One Way, Return, or Onward Leg flights
6. The system will proceed to gather the passenger details
7. After all of the passenger's information has been gathered, the system will ask for a booking confirmation, with all of the information regarding the flight booking being produced on the screen
8. After the flight has been confirmed, a booking reference number will be generated.
9. The user will then have the option to create a new booking.
10. The Maintenance Suite will allow access to only the Administrator where they will be able to view/add/delete airports and to view bookings.

Justification

The justification for this project came from the internal issues within Cyanair in regards to how they process their airline bookings. The current system that they are using is manual with the aid of Microsoft Excel. Using this means of storing bookings is prone to many errors, not only with the input of data, but also the loss of data. Flight representatives are currently forgetting to input data into Excel, which is causing a loss of bookings. There are other issues including the creation of duplicate bookings, as well as a lack of organisation, which has led Cyanair to believe that they need to update their booking system. As the company is looking to expand, and gain even more bookings, Cyanair would like software that allows the company to efficiently create bookings and manage these bookings in a proper system.

Constraints

There are a few constraints affecting the development of this software, budget being the main obstacle. The budget assigned for this system is €125,000 – there are additional features we feel could be added to the project that are not mentioned within the scope, such as a web-based system, an enterprise database package as opposed to the current database system which is free-software – however, the current budget does not allow for this, which is the cause for these constraints within the project. A higher budget would have given the possibility to rectify these issues and perhaps have a smoother system for Cyanair. Particularly in the case of a web-based system, as the new system will only be used by the Cyanair team, the administrators and the flight representatives, meaning that the end-user cannot use this system themselves at all, which could have been achieved with a web-based system to allow the user to make their own bookings. As mentioned, the database is used with free software, which can cause some design constraints as it is more restrictive than perhaps enterprise databases, as it is only entry-level. At the moment, this database is not able to handle dates in a way that the developers find satisfactory which has made the use of SQLite a constraint on the project.

Assumptions

There are a number of assumptions made in this project, for example, the exact details required from the Passenger when creating a booking was never specified by from the client, therefore, we had to make our own assumptions on what information an airline booking system would be looking to gather.

Another example is the inclusion of the flight representative being able to choose a flight date on behalf of the customer while selecting flights. This was never specified in any of the briefs, requirements or talks with Cyanair – but we have made the assumption ourselves that this is necessary in order to book a flight, as without it the system would make no sense, and there would be no flights available.

Exclusions

There are some exclusions within the project that we have identified. Again, some of these exclusions are necessary as there is no room in the budget to accommodate these features, but also, they were never spoken about or agreed with the client as to be requirements. They are simply features that we assume would be necessary in an airline booking system, that are currently not being implemented.

At the moment, this system does not show the price of a flight. This is a big exclusion, as it necessary for the passenger to be aware of the cost of a flight. Not only this, but there are no payment options at the moment. This will need to be rectified in some way by the company, to ensure that they are getting payment for bookings. This could even be by allowing the customer to present their Booking Reference number and visiting the airline's HQ to make physical payments if they do not have the ability for software payments. Of course, this course of action is completely up to the client.

Other exclusions are the lack of multi-language support. The system only allows for the English language. As the company is based in Ireland, this shouldn't be an issue, but in the future as the company expands, this could be an area that the client looks to expand, perhaps on future projects.

Client Sign-off

On behalf of (Client Name)_____ I hereby agree to the above scope of work, and thereby acknowledge that any changes to the above initiated by our organisation will trigger an internal change request analysis procedure. This could result in additional costs and add to the duration and or resources required

Client Name (Block Capitals) _____

Client Signature _____

Witness Signature

(Technical Team Leader) _____

