

Analysis

My name is Natalie Howard and I have been asked to come in and help out a holiday company called First Choice. I have been asked to help them work out a new system to make things a lot easier and simple for the employees and the customers. I have been asked to do this because the present system they are using at the moment takes to much time up and it is too complicated. With the present system things like customers information, booking details and flight details are getting mixed up and it also takes a lot of time to find out what you are looking for. If we work out a new system to use instead of the one we are using at the moment then it will make it a lot easier to find out details about customers, flights, prices etc.

Project Proposal

Project title

Air Tours

Aims of project

To investigate and try solving information handling problems of Air Tours agents. I have been asked to design and set up a more sufficient way of storing and handling information about the customers the bookings and the holidays.

Inputs	Processing	Outputs
Customer details	Look up customer details	Customer details
Holiday details	Look up holiday details	Holiday details
Booking details	Look up booking details	Booking details
Price of holiday	Look up price	Price
What board it is	Look up what board it is	Board e.g. all inclusive
Destination	Look up the destination	The destination
What * the hotel/accommodation is	Look up what * it is	What * it is
Flight details	Look up flight details	Flight details
Amount of people going	Look up amount of people going	Amount of people going

Problem Description

The problem is that the present system is not very easy and simple to use. This is because all the holidays are filed in alphabetical order by the country name. The customer's information such as the surname is also filed in alphabetical order and the bookings of the holidays have an ID number. If a customer wants to book a holiday they are asked many questions by the assistant, such as where they want to go, how long they want to go for, how many people are going, what day they want to fly out and return, where they want to fly from etc. All these questions and answers have to be wrote down on a piece of A4 paper and then are stored in a filing cabinet.

The present system causes the following problems:

- If a customer wants to no what the departure and return time is for their flight, then it will be too difficult to find out the times because all the bookings each have a different ID number. So it will take too long to find the information out.**
- If the staff needed to find out how many females booked a holiday to Tenerife, then it will be too hard because they will have to look through 3 different files to find out this information.**
- If a customer wants to find out if their hotel/apartment has a kids club, then it will be too difficult to find out this information because its filed in alphabetical order.**
- If a customer wants to find out how many places there are available for a certain hotel, then this will also be too difficult because the holidays are all filed in alphabetical order.**
- When booking holidays it takes too long to sort every thing out because of our all the details are filed.**
- The company is losing out making more money because things take to long to do.**
- Things can easily get lost or miss placed because the staff are taking things out of the files and maybe forgetting to put them back.**

Possible Solutions

One way of solving this problem is to employ more staff so that they can help out with all the files. Also if more staff are employed then the company might make more sales. But this solution won't really solve our problem because its not changing the present system at all and also by employing more staff it means that more wages have got to be given out. So even if they do make more sales by employing more staff there still not making any more money because they are using it to pay the staffs wages.

Another way of solving this problem is to use a computer and have a program that has been especially made to sort out files about the holidays and customers etc. But this software would be too expensive and Air Tours would not be able to afford it. The next best alternative is to use a software package like a database or spreadsheet. The software package could be set up to store data about bookings and customers.

Chosen Solution

I think that the best solution will be to set up a new system on a computer using a software package. I need to decide whether to use a spreadsheet or database package.

Spreadsheets are good for solving problems that involve a lot of numbers and calculations. This problem is about storing and searching through information and doesn't need any calculations so a spreadsheet won't be the best type of program to use.

I think that using a database package will be better because databases are designed to store large amounts of information and let users search through it quickly and easily. I have checked with the rest of the staff at Air Tours to see if this program would be the best one to use and they all agree.

System objectives

The system must be able to perform the following tasks:

- **Allow customer details to be input, looked-up, edited and stored quickly, easily and accurately;**
- **Allow holiday details to be input, looked-up, edited and stored quickly, easily and accurately;**
- **Allow booking details to be input, looked-up, edited and stored quickly, easily and accurately;**
- **Allow holiday details to be searched to answer customer enquires quickly and easily;**
- **Allow flight details to be input, looked up, edited, and stored quickly, easily and accurately**
- **Produce a list showing the tickets, holiday details and money needed to be paid details that need to be sent**
- **Produce a summary report showing customer and holiday details for things done or paid and things not done or paid**
- **Produce reminder letters to customers with overdue payments at the end of the week**

Performance criteria

The following criteria will be used to evaluate the success of the new system:

- **The system must be able to store at least 30 customer records;**
- **The system must be able to store at least 30 holiday records;**
- **The system must be able to store at least 30 booking records;**
- **It must take no longer than 30 seconds to find and display customer, holiday or booking records**

- It must take no longer than 2 minutes to answer customer's enquiries by entering search criteria and finding matching holiday records
- It must take no more than one minute to find and delete a customer, holiday or booking record;
- It must take no more than 2 minutes to find and edit a customer, holiday or booking record;
- It must take no more than two minutes to edit the amount of money still to be paid.
- It must take no more than two minutes to create a new a new customer, or booking record;
- It must take no longer than two minutes to find customers still needing to pay money
- On screen data entry forms must be clearly laid out to make data entry;
- On screen data entry forms must use automatic data validation to reduce data errors on input;
- It must take no longer than 2 minutes to search for customers due to depart on certain date and produce a list that can be printed out;
- It must take no longer than 5 minutes to search for all the customers with an holiday coming up within the next month and produce a summary report on screen;
- Reminder letters to customers with holidays coming up and should be clearly laid out and include all the details of the holiday, tickets and of money that needs to be paid relevant information that needs to be sent to the customer.
- It is difficult to work out how much money each customer has paid and how much money is still to be paid.
- The money is taken before the holiday has been confirmed. This causes confusion and mistakes if the holiday they've paid for is not available.
- Mistakes are made in the 'holidays booked' file.

Current Resources

Mr and Mrs Marshall already have a computer with the following specification:

- **Windows 95 operating system**

- **A Pentium II 200 MHz processor**
- **16 Mb of RAM**
- **A 2 Gb hard disk with 821 Mb of free space**
- **A floppy disk drive**
- **A CD-ROM drive**
- **MS Office 97 Standard (this includes Word 97 and Excel 97)**

Choice of Software

The database packages that I could use to set up the new system are Pinpoint and Access 2000. These packages are available on the computers at school and my PC at home. Air Tours don't have these packages on their computer but they are willing to spend up to enough money to purchase the software and hardware needed.

Pinpoint offers the following features:

- **Data can be entered easily using on-screen questionnaires;**
- **Questionnaires can be designed and formatted quickly and easily;**
- **Databases are built up automatically behind the scenes as data is input;**
- **Queries to search the database can be built up interactively and saved;**
- **A wide variety of graphs and charts can be generated quickly and easily.**

- **Data can be saved in a variety of file formats and used in other applications;**

Access 2000 offers the following features:

- **Common fields can be used to link data tables and set up relational databases;**
- **Data entry forms can be created and customised quickly and easily;**
- **Powerful queries to search the database can be generated using wizards and saved;**
- **Reports can be generated quickly using wizards and formatted very easily;**
- **Tasks can be automated using Macros;**
- **Access 2000 databases can be linked to Word 2000 to generate standard letters;**
- **Customised menu screens can be set up;**

I think that Access 2000 will be the best package to use to set up the new system because it will allow me to create a relational database. Pinpoint does not offer this feature. Setting up a relational database will avoid the unnecessary duplication of data and make it much easier to update information. The staffs at Air Tours don't have much experience with computers so the new system must be user friendly. Access 2000 has more powerful features than Pinpoint for customising a system such as macros and menu screens, which can be used to make it more users friendly. Air Tours don't have Access 2000 on their computer but they are willing to spend any amount of money on hardware and software.

Resource Requirements

Access 2000 will be used to set-up and run the new system for Air Tours. To install and use this software a computer with the following minimum specification is needed:

- **A Pentium 75 MHz processor or higher**
- **Windows 95 or later operating system**
- **A minimum of 24Mb RAM**
- **At least 161 Mb of free hard disk space**
- **A CD-ROM drive**

Air Tours have a computer with the following specification

- **A Pentium II 200 MHz processor**
- **Windows 95 operating system**
- **MS Office 97 Standard (this includes Word 97 and Excel 97 but not Access)**
- **16 Mb of RAM**
- **A 2 Gb hard disk drive with 821 Mb of free space**
- **A CD-ROM drive**
- **A floppy disk drive**

Air Tours have been recommended that they buy the Office 2000 Professional package, which includes Access 2000. This will cost £450. To install and run this software they will need to upgrade the memory in their computer from 16Mb to 24Mb. This will cost £40. Mr and Mrs Marshall will also need to buy a printer so that they can print out things like lists,. I think that a small laser printer will be the best choice because it will produce high quality printouts very quickly. This will cost approximately £350.

The computers at school and my PC at home all meet the minimum specification and already have Access 2000 installed. I will also need a printer. Every computer room at school has a laser printer so this isn't a problem. I also have a small inkjet printer at home that I can use. This means that I have all the resources I need to set up and test the new system.

Table designs

I am going to design two tables for the customers, two for the holidays and two for the bookings. The reason why I am creating two tables for each is because I need to choose one of the two, to use for my database.

The one I will choose is the one that gives the best information.

Customer tables

Table one

Field name	Data type	Validation rule	Description	Typical data
ID number	Number		Number used to identify a member	5
First name	Text		First name of member	Sheena
Last name	Text		Last name of member	Hazard
Address	Text		Address of member	42 Laughton Crescent
Contact number	Number		Contact number of member	0115 9567170

Table two

Field name	Data type	Validation rule	Description	Typical data
ID number	Number		Number used to identify a member	5
First name	Text		First name of member	Sheena
Last name	Text		Last name of member	Hazard
Address	Text		Address of member	42 Laughton Crescent
Contact number	Number		Contact number of member	0115 9567170
Age	Number		Age of member	15
Sex	Text		Sex of member	Female

I have decided to choose the second table because if I want to do some advertising I no who to aim it at.

Holiday tables

Table one

Field name	Data type	Validation rule	Description	Typical data
Holiday ID	Number		Number used to identify a holiday	4
Country	Text		Country of holiday	Canary Islands
Resort	Text		Resort of holiday	Tenerife
Price	Currency		Price of holiday	£430
Accommodation	Text		Accommodation of holiday	Hotel

Table two

Field name	Data type	Validation rule	Description	Typical data
Holiday ID	Number		Number used to identify a holiday	4
Country	Text		Country of holiday	Canary Islands
Resort	Text		Resort of holiday	Tenerife
Price	Currency		Price of holiday	£450

I have decided to choose table one because if a customer wanted to know what facilities there are then I would be able to tell them because I have the information about the accommodations in the first table.

Booking tables

Table one

Field name	Data type	Validation rule	Description	Typical data
Booking ID	Number		Number used to identify a booking	6
Holiday ID	Number		Number used to identify a holiday	8
Customer ID	Number		Number used to identify a customer	2

Table two

Field name	Data type	Validation rule	Description	Typical data
Booking ID	Number		Number used to identify a booking	6
Holiday ID	Number		Number used to identify a holiday	8
Customer ID	Number		Number used to identify a customer	2
Flight out	Date		Date floe out	Monday
Flight back	Date		Date floe back	Friday

I have decided to choose the second table because If a customer wanted to no the date they fly out and return then I would be able to tell them because I will have the information about the flights.

The primary keys for all the tables are all the top left hand corner ID's.