

Background to the problem

Mr Something runs a small business called A Chip off The Old Block-Bluster. Mr Something is the makes of Blockbusters son. He has only left him a little bit of inheritance and wanted him to produce a business that was just as good as his. He currently has a shop in slough High Street. He only gets a few customers a day. He keeps track of people's record manually and would like to use his father's money to set up an electronic system that only requires a few manual entries.

The Current System

Mr Something currently uses cards to manage his business. He has 2 types of cards. 1 card is his business card to hand out to people to show where his shop is, his name, telephone, his email and his fax. The other type of card is a customer card. The customer card has the shop logo on it and the customers name on it. It is a card made out of card and is laminated to protect it from damage. If the customer does not have a card, he issues one to them for a price of 20p if they wish to rent DVD's again. He collects their name, address, DOB and home number. The card can have data printed on it with a permanent ink. It shows when the DVD must be returned by. The ink can be erased using a special spray and a cloth. This is costly and takes some time. It can sometimes irritate the customer depending on how long it takes. He creates the card by designing it on Microsoft publisher and printing it off using a dot matrix printer and laminates it. He also keeps a paper record. It has a table with the same details as on the card and the name of the DVD rented and the date it must be returned by. He writes it by hand using a pen while the customer is renting the DVD. If the DVD is not returned by the date set for return, then he uses mail merge to send a letter to the customer saying that the DVD must be returned by 4 days after the letter has been sent and if not, there will be a higher charge. If it continues then the police will be involved. Mr Something calls it the record sheet. The record sheets are stored in a briefcase that is locked and is stored in a cupboard that is overhead that is also locked. This reduces the chances of burglars getting their hands on the customer's details.

Problems with the system

The current problems with the system are:

- It takes time for Mr Something to enter in the customers details onto the record sheet.
- The laminated cards that he gives to his customers are easily damaged by peeling away the laminated layer

- The cleaning liquid is expensive to buy and therefore makes little profit
- The manual methods take very long which hold up the customer.

The end user's requests

The end user would like:

- a computerised system
- a homepage that can navigate through the whole system easily
- searches that can be easily used
- a window that can search through records
- something that can add files to the records file
- something that can show the charges of overdue DVDs

Possible Solutions

A non-ICT solution could be to use cards. There could be three files, one for members, one for DVDs and one for loans. But this could lead to problems as cards can get damaged as easily as log books, and they aren't very practical. Cards can also get lost, and this solution is quite time consuming. Cards could also be quite expensive.

Word processing and presentation programmes are unsuitable for this solution. Word processors couldn't store the information properly, although a table could be made to store the files. Reports and queries cannot be made on a word processing document. The information could not be structured properly. Presentation software couldn't be used as they are made really for displaying information to an audience. Both of these solutions could not be used to store structured data.

A spreadsheet programme could be used. Rows and tables could be made to store the data. However, this could be quite repetitive. Three different tables would have to be made. Each DVD would have to be repeated every time it was lent. This would be quite frustrating and time consuming.

Using a relational database seems like the best solution for the DVD rental. It can be used to store lots of data and reduce the amount of repetition of it. Queries can be used to extract data quickly and easily. This could be used to find overdue DVDs, solving the problem of undetected

overdue fines. Separate tables can be made easily, which can be linked in a relationship. Wizards can be used to make queries and reports quickly without mistakes. Databases also contain validation tools which stop input errors. Length check can be used on the fields to stop mistakes. Primary keys can be made to number DVDs and members.

Objectives

The system should have the following:

- it should be neat and tidy for easy reading
- There should be a report to show the overdue DVDs and their price.
- Charges should be calculated automatically.
- The navigation should be easy with clearly labelled command buttons.
- The system should be able to save data on customers and DVDs without confusion.