

# Problem Description and Users of System

This project will aim to solve the information handling problems of Mario's Game and Video Masters Rentals.

Mario's Game and Video Masters Rentals is a rental store that rents videos, games, and now DVD's (newly added) and is run by a man named Mario Anderson.

To provide these services information is collected and stored about the items, and the members. Information about each member is written on a card, which is then put in to a card index box, which is sorted out by the member surname, then forename, then member number. Information about the items is put onto a card, which is then put in its case. After each day, a shop assistant writes loans list of all the items that have been rented out, along with the member number and video number, and name.

## **What happens in Normal circumstances?**

When a member wants to rent out a copy, the customer must take it from an empty case from the shelf with the item card inside it. When he/she hands it into the counter, the shop assistant takes the card out and looks at the video number, and then takes the member number from the customer.

If the member has lost their membership card, then they must pay a fee of £2.00, and will receive a new card. The person's old card for the store is destroyed, and the new one is put in the box. The shop assistant then asks the customer how many days he or she will want to rent it for, and writes it on the item card. The shop assistant then hands the item over to the customer. When an item is returned, the shop assistant goes back to the loan list from the date of rental. He or she then crosses it off. Then, he or she puts the case back onto the shelf and the item behind the counter.

At the end of everyday, the loan lists are searched to find out if there are any overdue items. Then, by hand they must write a letter to the corresponding people.

## **What happens in Special circumstances?**

When a new member joins, he must pay a joining fee of £5.00. Their details are stored on the card and placed in the index box in order. The shop assistant then gives the new member a membership card.

When a member leaves, hand in their membership card, and their card in the index box is taken out and destroyed.

When an item is bought, an item details card is filled out and put in the case. The actual item is put behind the counter, and the case with the card inside is placed on the shelf.

When an item is sold because it is not popular anymore, the video card is taken out and destroyed.

## **What Problems do the current system cause?**

The current system causes the following problems:

Members lose their membership cards. They must pay £2.00 for a new one.

Sometimes the cards go missing, so then new ones must be written out, and that is quite time-consuming.

Sometimes, when different shop assistants write out the video card, other assistants may not be able to read the other's handwriting, which leads to huge error e.g. a 4 written could look like a 9.

A member's card or an item card could be misplaced and could take a lot of time to find

It is very time consuming when a shop assistant must look through the loan lists and write the reminder letters.

When customers ask the staff whether a particular title is available, the staff will not be able to know it unless they have a particularly good memory.

# Possible Solutions

## **How could Mr Anderson solve the information-handling problems?**

Mr Anderson could solve their information handling problems by using a filing cabinet to store their information about members and items using detail cards. The advantage of this system is that much more information can be stored using this system. But the disadvantages are that these could be misplaced, lost or damaged, just like the existing system. Unauthorised people can take some records. It would also be quite time consuming.

Another way of solving the problems would be to use a computer to store information about members, rentals, and items.

The advantages of this system are that it can store a lot of data in a small space, searches through it very quickly. But computers can be quite expensive.

There are two ways a computer can be used. You could write a program to solve all the information-handling problems, but I do not know how to write programs on the computer and it is very expensive to pay a programmer and it would be time-consuming. Or, you could use an application package such as a database. This database could store and process all the information about members, items, and rentals

## **What is the best way out of the solutions?**

The best way to solve the information handling problems of Mr Anderson will be to set up a new system using a computer. I have decided to use a computer because:

- Computers can store large amounts of data in a small space.
- The information can be searched very quickly
- Lists and reports about the information in a computer can be produced very quickly and easily.
- There is already a computer that can be used (Mr Anderson has two computers at home, one of which he does not use)

I have decided to do this using an application package because:

- I do not know how to write computer programs
- There is a wide variety of application packages
- Application packages can be changed and customised to suit the needs of the user
- Have used different application packages in the past

The most suitable type of application package will be a database because:

- Database packages are specially designed to store and process information.
- I have used database packages before, so I know a lot more about these as opposed to packages I have never used before

## **What must the new system be able to do?**

The new system must be able to perform the following tasks:

- Allow member details to be looked up, edited and stored quickly, easily and accurately
- Allow item details to be looked up, edited and stored quickly, easily and accurately
- Allow rental details to be looked up, edited and stored quickly, easily and accurately
- Allow item details to be searched to answer customer enquiries quickly and easily
- Produce a report listing member and video details for overdue items.
- Produce reminder letters to members with overdue items.

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

- The system must be able to store at least 10 member records
- The system must be able to store at least 20 item records
- The system must be able to store at least 10 rental records
- It must take no longer than 30 seconds to find and display a rental, item or loan record.
- It must take no longer than two minutes to answer customer's enquiries by entering search criteria and finding matching item
- It must take no more than one minute to find and delete a member, item or rental record
- It must take no more than two minutes to find and edit a member, item or rental record
- It must take no more than two minutes to create a new member, item or rental record
- On-screen data entry forms must be clearly laid out to make data entry easy
- On-screen data entry forms must use automatic data validation to reduce data error on input
- It must take no longer than 5 minutes to search for members with overdue video and produce a summary report
- Reminder letters to customers with overdue videos should be clearly laid out and include all the details of the videos that need to be returned.