GCSE ICT COURSEWORK – TAUQIR SHARIF

Description of Problem:

A leisure centre is a place where people come to play sports or do some kind of fitness training. Leisure centres provide many sporting facilities for people to use such as football, badminton, squash and basketball. A leisure centre is a warm and entertaining place for the public to come and enjoy themselves, some centres even have on site bars to give members a chance to relax after their hard training. Lots of people book into leisure centres every day, the leisure centre needs to keep a check of the people who come in and out of it. They do this by giving all their members a membership card with a special identification number printed on it. They have a log of all the people who come in and use their centre. Their personal files and information are stored in a filing cabinet in the centres main office. This system has many drawbacks for example:

- The files are very hard to gain access to this wastes time.
- They take a lot of time to sort through.
- They cannot be searched for in certain fields such as age, date and time.
- Only a certain number of people can become members at the leisure centre as storage soon becomes a problem.
- The filing cabinets are not very secure and can be broken into by thieves.

This affects the customers, workers and the management. Customers are affected, as the service will be slow. It affects the staff, as they have to do extra work. It affects the management because of the fact that they have to pay more for the manual labour.

Investigation & Analysis of problem and specification of solution:

I went to Kelmscott leisure centre to find out as much as possible about how the business collects, stores and processes data. I spoke to the manager John Reeves and I asked him some questions about how Kelmscott leisure centre stores and collects data, he told me about some of the problems he and his staff faced. He told me that they had six large filing cabinets in their office filled with their member's personal information and data. He explained how they were running out of space and he said that it took a lot of time for him and his staff to serve customers. I asked him if the data was protected and he told me that their office had been broken into three times he gave details on how he had lost lots of money.
I then spoke to a member who was using the gym facilities her name was Anita Navpoor. I asked her what kind of information the leisure centre had collected from her when she had become a member. Anita told me that they asked her all sorts of personal questions like her name, age, date of birth and billing details. In addition I collected a data capulation form from Kelmscott.

To solve this problem I will:

- I will design a system that will help solve storage problems at Kelmscott leisure centre.
- I will design a system that will be quick and easy to use.
- I will design a system that will be secure and be protected.
- I will design a system that will be accurate to stop errors.

Design of Solution:

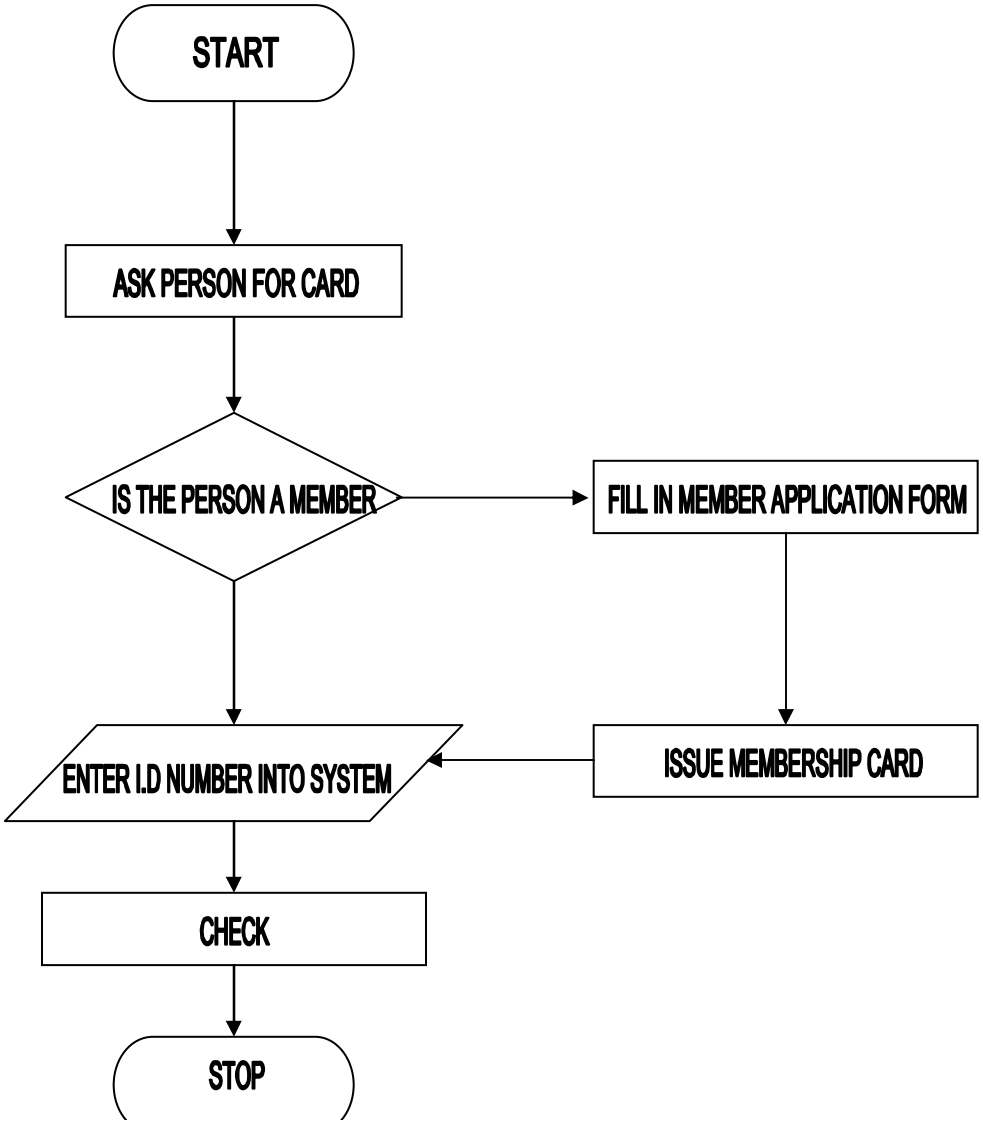
In this coursework I aim to design a new system for Kelmscott leisure centre. I will solve this problem by creating a data capulation form and database for the centre. This will enable staff to sort through people's files quickly and in fields of their choice. For example the staff will be able to search for the youngest or oldest member in the database. People who want to enlist as members at the leisure centre will have to fill out data capulation forms, important information such as billing details will have to be entered twice all other information will be written in block capitals to ensure its accuracy. The data will be then entered into the system by a member of staff and then checked thoroughly by the floor manager or the person in charge. This will minimise errors and also help the accuracy. The data will be stored on the hard disk of the mainframe computer in the building. Only the manager will have a password that will allow him access to all the computers and their information. But staff passwords will only allow access to certain information. Below is a flowchart that I have drawn up to help the user utilise the system effectively.

Advantages

- Computers are very accurate.
- Computers can work continuously 24 hours a day.
- Less paperwork involved, it is all stored and easily accessible from the computer.
- Low risk of data being erased as it can be stored on various backups.
- Not a lot of energy is needed to get data; this saves time and is efficient.
- Data can easily be presented in tables, graphs etc.
- Changes and corrections can be performed at the touch of a button.
- Validation check minimizes the chance of any errors.

Disadvantages

- The hardware and software can be very expensive.
- Employees will need to be trained regarding usage of the computer.
- If the computer crashes or there is a power cut, access to data in the computer is lost.



Resources:

The only software I will be using for the system will be Pinpoint.
I considered using Microsoft Access to create the database for my system but using pinpoint had many advantages, they are listed below.

Advantages of using Pinpoint:

- Pinpoint allows the user to create a data capulation form.
- Pinpoint is easier to use so staff do not need much training.
- Pinpoint allows the user to search for information through the fields in the data capulation forms.

I think that using Pinpoint will be the best solution for my system as it is effective and efficient because of the simple fact that it is very easy to use.

Data Collection, data capture and input:

In my data capulation form I will collect these fields of information.

- Forename and Surnames
- Date of Birth
- Gender
- Address
- City
- Post code
- Telephone no.
- Credit card no.
- Credit card expiry
- I.D. no.
- Membership expiry

I have designed my form in two sections one is to be filled in by the staff and the other section is to be filled in by the person applying for membership. I have designed my form this way to ensure that no mistakes are made and to keep data accurate. Important information like credit card numbers and their expiry dates will have to be filled in twice. A member of staff will enter the data into the computer and after it is filled in the floor manager or person in charge will check it for accuracy.

Data verification and validation:

Data accuracy is very important because if the wrong details are entered the company may lose money, as they will not be able to bill the person. My database will be set up to minimise the possibility of errors. My database will verify by using the most common form of verification called the double entry system. This is when information has to be entered twice and has to be identical on both occasions. My database will not be able to validate, as this will be a manual process.

Data and Program structure:

Field Name	Field Type	Length	Description	Explanation

Evaluation Of Solution:

The system that I created did help solve storage problems. It wasn't quick and easy to use, as I never gave a good documentation.
The system is also secure, protected and accurate in stopping errors. I had problems with giving documentation for the usage of the system as I found it difficult to explain how to use the system. If I had more time I could have written a better documentation.