Identify

The aim for this coursework is to design a new system for an estate agent called Claytons. The database will be designed to hold information about the properties such as number of bedrooms, garden size and price. Currently the company is using a fi ling cabinet to keep the current data, this takes up a lot of space and it is hard for the workers to access or alter the information.

I will need to design a solution for this problem, my system has to be fast and easy to use, and the information sh ould be clear and easy to change. I will need to find out how the staff are currently using their system and I will need to see if the new one will be easier and faster.

The company currently files away all of its documents in a cabinet which conta in all the information about the houses that are for sale or rent. They're all organised by the area that they are in. If any customer asks about buying a house but doesn't specify the area but also asks for something else, all the files have to be studied to find a house meeting the information asked. If information about the area is given then it is a bit easier because only houses in that area have to be searched. Searching for the right houses can take hours because a lot of files have to be searched.

House prices are constantly changing and it isn't possible for the company to manually change the prices for each house. When inquires for a house which has to be between a certain price range is made, many houses cannot be made available because the current price hasn't been updated and the latest price may be out of range. The company is losing a lot of business because it takes a long time to find the right properties for the buyers. The company also needs to employ many extra staff because excessive manual work is required.

The first piece of software I could use is a Word Processor. This is used for typing text, which can be edited rearranged and also printed. The word processor can check any spelling or grammar mistakes and it also contain s facilities such as a dictionary and thesaurus. This type of software is mainly used for letter writing and essays.

The next software item I have chosen to evaluate is a Spreadsheet. This consists of rows and columns of cells which can be used to con tain text, numbers and most importantly formulas. These formulas can be used to calculate figures, look up information from other cells and to carry out validation checks just to name a few. The rows are given numbers and columns are given letters which to gether give the position of the cell. In the formulas instead of inserting direct numbers, cell references are given so that if the number changes all those that are affected automatically change, this minimises any mistakes and makes it much easier for th e user. The information in a spreadsheet can also be able to show a graph or a chart, which will show the progress of a company or any other data.

The next option for me is a Desktop Publisher. This is the use of a computer and specialised software to combine text and graphics to create a document that can be printed out on a laser or inkjet printer. Desktop publishing is a long process involving different types of software and equipment. The original text and graphics are generally produced with software such as word processors and drawing and painting programs and with photograph-scanning. The finished product is then transferred to a page layout, which is in the software most people think of as the desktop publishing software. This type of program allows the user to lay out text and graphics on the screen and see what the results will be. For editing parts of the document, these programs often include word processing and graphics features. I will not use this application because I will not be using graphical pictures.

The final choice of mine is a database program. This is a collection of data organised for storage in a computer memory and designed for easy access by authorised users. The data may be in the form of text or numbers. Relational Databases are types of databases that store information in tables, rows and columns of data. It then conducts searches by using data in specified columns of one table to find additional data in another table. In a relational database, the rows of a table represent records (collections of information about separate items) and the columns represent fields (attributes of a record). In conducting searches, a relational database matches information from a field in one table with information in a matching field of another table to produce a third table that shows the result of the search from both tables.

In my research I discovered that using a database was the more suited application for me to use to solve the problem because it enables me to store data easily, to create forms and records, it's more efficient, cost effective, saves space and is time effective. It also has the ability to keep my system well organised in tables and under suitable field names, queries can be run to search for data that satisfies certain criteria that are set by the user. Other applications are not suitable for my system because they are not suitable to sort out data and run queries like the database does. I need to run queries and have validation checks, which mean that only a database can be used.

A software package is needed where all the data can be inserted. A very popular and user friendly package is Microsoft Access. It will enable me to search and amend my database. It is available at Parmiters School and I have it at home. There are many other packages available but this is the best and most widely used. To type out my instructions to give to the users I will use Microsoft Word which is also easy to use and is available everywhere.

The computer I will need for use with the system will need to be of reasonable speed, with plenty of memory and hard disk space. If the Claytons have a computer of good speed it will mean the users time will not be wasted waiting for tasks to take place and also means that the company saves time and also money

Analysis

To do this coursework I will need to use a Database Program namely Microsoft Access. To collect my data I will be interviewing Richard Pearson, the manager of Claytons. This will help me to decide what to include in my design of my database. This is my interview with Richard Pearson.

How long have you had your own business for?
Along with my brothers I have been running this business for 18 years now.

What does your business involve?
We collect information of properties that are for sale and when enquiries are made for properties, we search for the properties satisfying the criteria set.

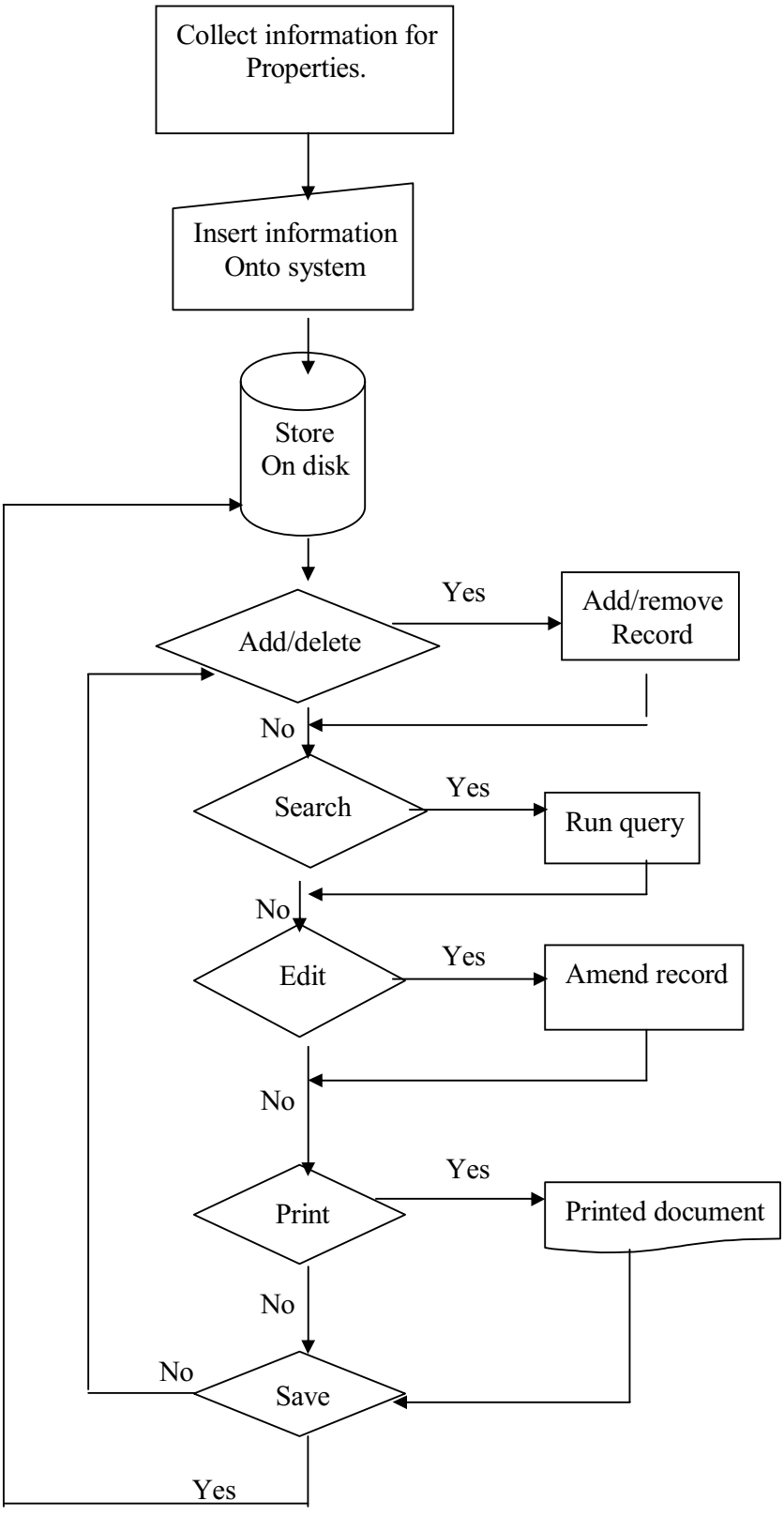
How do you keep a record of the properties, and how do you change the information?
All the information is written on paper and is put into cabinets. The filing cabinets are sorted according to different areas, if any information needs to be changed then one of the staff will have to do it manually.

What do you do when you receive an inquiry for properties?
This depends on whether the area has been specified by the customer, if it has then we find the properties in that area with the required criteria. If the area hasn't been specified then all the areas have to be looked at to find a property matching that specification. This can take a lot of time and the company is losing out, we are losing customers because our service isn't up to standard and at the same time I have to pay the staff for all the manual work they have to carry out.

What advantages do you think the system will have?
The system will be very useful to my company because I will be able to find properties matching the set criteria very easily, the information will be up to date because it is easy to update. This means that time will be saved and the customer will hopefully be satisfied. At the moment I am paying my staff for doing a small task which takes a long time, but with this system their work will be simple and I will save money.

What disadvantages do you think the system will have?
As far as I can see there are no disadvantages in using this system that isn't also a disadvantage in our current system. I am looking forward to using a computer based system.

Flowchart


Collect information for Properties.
Insert information Onto system
Store On disk
Add/delete
Yes
Add/remove Record
No
Search
Yes
Run query
No
Edit
Yes
Amend record
No
Print
Yes
Printed document
No
Save
No
Yes

Design

What must the new filing system be able to do?

The data will need to be stored in an organised way - using tables to present the data in a clear way. A database could do this. The system would need to be user friendly and simple instructions could be provided so that everyone could use it easily and effectively.

The data will be put under suitable field names that make the data clear and easy to use field names corresponding to the data which needs to be entered.
Here are my field names:

ID number- this gives each customer an ID, which when searching for a certain customer, the owner can just search for his ID number and the customer's details will appear on the screen.

Street name- The name of the street, this is usually text

House/Flat number- The number of the property, this is numerical

Postcode - The postcode is a mixture of numbers and text, but they are set out in a particular order.

Town/City- The area where the house is, this is set out in text.

Contact name - The name of the person who needs to be contacted regarding the property, this is usually the owner. This will be in text.

Telephone Number- The telephone number of the owner, this is numerical but is in a particular order.

Type of property - This will be a drop down menu and show whether the property is a semi-detached house, detached house, terraced house or flat.

Number of bedrooms - The number of bedrooms the house contains. This is numerical.

Size of master bedroom (square m)- The size of the main bedroom, the size of other bedrooms isn't considered important. The answer should be numerical.

Size of living room (square m)- The size of the main room, this should be numerical.

Size of garden (square m)- The size of the garden if one exists, this is numerical. If no garden is present then left blank.

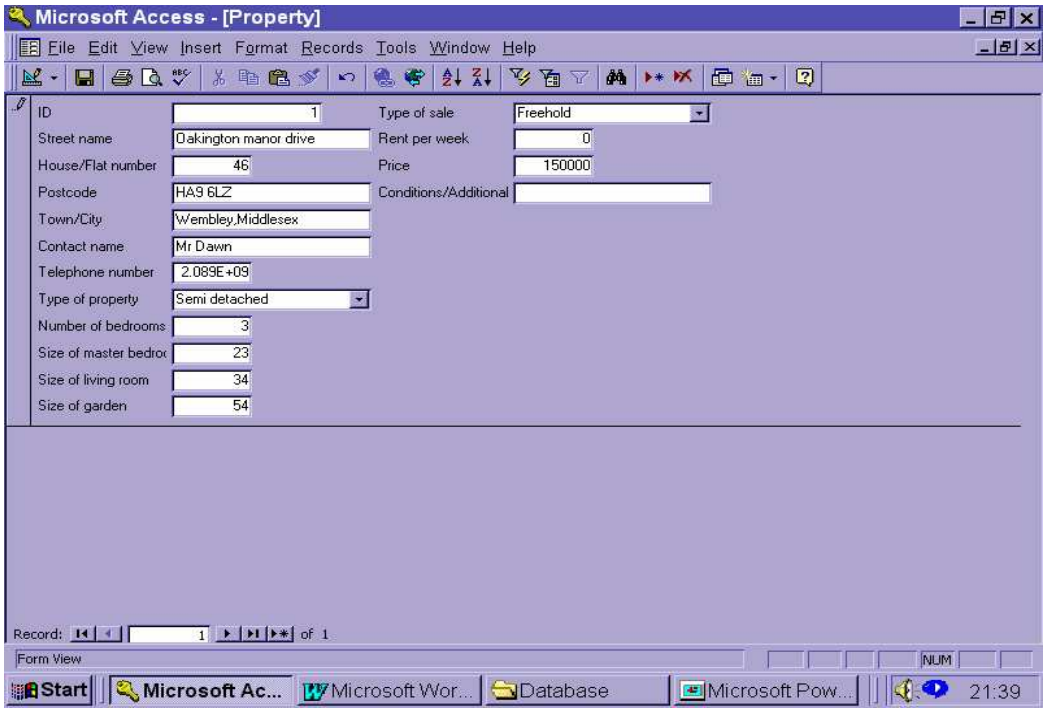
Type of sale- A drop down menu asking whether the property is for rent, lease or freehold sale. The owner could also be considering all options so this section doesn't always have to be filled in.

Rent per week - The asking rent per week, this doesn't have to be filled if the property is for sale. This is numerical.

Price- The price of the house, this also doesn't need to be completed if the house is only for rent. This has to be numerical.

Additional information - If there are any conditions or restrictions regarding the property then they can be put here. For example if the house is on lease then a brief outline of the conditions should be put here. The information here can be a mix of text and numbers.

Implement



How to use the system

Enter the details of the properties that are for sale, give all the required information, and update the information on a frequent basis.
The data can be analysed by viewing different quer ies and reports. When a customer asks for a certain item about the sale of a property, then select the item and it will show the information required in a table.

How to use the database

- At main screen double click on Ms Access
- When inside the database enter all the data onto the database into the form
- The information should go onto your tables
- Make a suitable name for your table
- You can move across the cells by using the arrow keys
- To make a query go to queries and select the criteria for your query
- On the top, click on Query and select run
- This will show you the queries that you have selected.
- Do the same for reports

- If you would like to make a macro then open macros and choose a list of things that you would like the computer to carry out, then you c lose it and open it again and it will do as you told it to do.

How to insert data onto a system

- Using the arrow keys or cursor, move the box you wish to type in and then type the information you want
- Then using the arrow keys move to another box and repe at the above procedure
- If you make a mistake in the box double click on it and edit the mistake
- Repeat the above process until all the information has been entered into the system

When I first investigated this project I decided that I should evaluate the system by comparing it to the following points:

- If it works properly
- Whether it is organised or not
- It must be able to save data
- It had to be accurate
- Must be faster than the previous method
- The system has to be easy to use.
- The system has to be easy to search.

The testing shows that the system works correctly, as I tried with several different things and it always gave me the correct answers. My system took around half a minute to add a new entry and the same task took quite a few minutes to add a ne w entry with the old manual system, and the records in the manual system can easily be misplaced. However, my system does not find customers if their names have been typed incorrectly. Even though I expected this to happen it did not cause any confusion or problems. Therefore I find that spell checkers very efficient which find close suggestions to the one typed out.

The Estate agent is booming now, all the workers have easy tasks, the owners are saving money and the customers get what the want efficientl y and quickly. The owner was delighted, as this was what his business needed, the staff do not have to go through a lot of file and record to find some information.

Due to the above explanations I think that my system is user friendly and easy to use, this is what the company required and has been provided. The people who are going to use the system are happy and have been trained to use the system and are building the system with all the data about the properties they are agents for. It has become easier for them to amend any data, this will mean that the information in the database will be up to date and the customers will have all the latest information.