Database Coursework

Identify

The estate agency Halletts is an experienced business in Thatcham and have not yet benefited from a computerised system. They are now looking for an efficient database system for all the houses for all the houses they have for sale.

Estate agency though is not really that simple. To run the business successfully with a computer you need a minimum of three database systems, but ideally you need four. You need one system for the houses you currently have for sale. You need one for all the houses you have sold. You need another one for all the houses that have been taken off the market or put up for sale with another estate agency (these are called 'take offs'. You also (if you find it necessary) have a system for all the people on your mailing list.

All this is too complicated for the project that I am doing, so I have decided to use one system for houses the agency have for sale and once they are sold, ideally they should be transferred onto another database but because I do not have another one, I will just take it off the system.

The current system works by employees going to the houses for sale and taking down all the details of that particular house and writing it down on a particular form. Then, the employees go back to their headquarters in Newbury and process the newly obtained information about the house into another form. This form is then put into a filing cabinet which is sorted into towns and villages and then alphabetically by the owners surname. When the house is sold, the previous file is taken and the new name is entered and then filed into a different cabinet alphabetically by the new owner's surname. This information is used for when customers enquire about a specific house for sale. The manager of Pearce & co would like to keep the same sort of data for the same sort of reason, but just on a more efficient system.

Seeing as this company is new, they have not had time to buy a computerised database system so it is being run manually at the moment. The manager though, wants to upgrade as soon as possible because:
1. He is concerned about the time the employees spend on looking up information for the few houses they have for sale at present and then entering the information into their system. Business is going well and their market is rapidly increasing therefore employees are going to spend longer looking up information for houses because more and more houses are being put up for sale with their company.
2. He is worried about the presentation of the records seeing as some of the employees' handwriting is not up to his standard.
3. Another worry for the manager is the possibility of fire or theft. Manual database systems use paper and filing cabinets, which can easily be lost by means of fire or theft.
4. All these unnecessary filing cabinets are very space consuming.

Computerising the system will solve all these problems plus bring a few more benefits to the company. For example:

1. Using a computerised database system, with software like MICROSOFT ACCESS and hardware such as a computer, monitor, printer, and keyboard, the process of obtaining and entering information will become simpler and faster than in a manual system because information can be obtained simply by clicking on a button.
2. Computerising the system will also mean better presentation by using a universal font such as *New times Roman* or *Arial,* which is easier to understand than anyone's writing
3. Backup tapes can be taken for a computer in case the system is stolen or burnt down. That means only the hardware is lost but not the information because it can easily be loaded up to the new hardware, therefore minimum information is lost.
4. A Company can have one computer to store all their information although the more information is added the more computers will be needed. Even though, computers are far less space consuming than filing cabinets, therefor Pearce & co can use the extra space for larger working spaces or even fit in an extra member of staff.

The best software to use in this database situation is MICROSOFT ACCESS. MICROSOFT EXCEL and MICROSOFT POWERPOINT can also be used as well but is not nearly as effective as MICROSOFT ACCESS because MICROSOFT ACCESS can be used to file the input information into sorts. These sorts can then be saved into queries so that particular sort doesn't have to be entered in every time certain information is needed. MICROSOFT ACCESS can also give a range of different Forms, Tables or Reports at a click of the mouse using macros. MICROSOFT EXCEL cannot do all these things. EXCEL can only put information into a spreadsheet and can be saved as an individual file for 1 spreadsheet. That can be very space and time consuming if information is being looked up. MICROSOFT POWERPOINT is also not as good as ACCESS because POWERPOINT is mostly used for presentations, but it would be second best for this particular job, after ACCESS

INPUT Hardware	PROCESS Hardware	OUTPUT Hardware
Mouse – to navigate my way around the computer	CPU – to make sure the computer is actually working and storing the information	Monitor - to display the information put into the database
Keyboard - to enter the required information into the system	RAM – used to temporarily store information in the computer	Printer – Is needed to get a hard copy of the information entered into the database

Analyse

At the moment, the system, which Halletts uses to record their information for all the houses they have and have had for sale, is recorded manually. Employees go to the houses that are being put up for sale and record all the information about that house into a form. That form is then taken back to their headquarters in Newbury and then that form is put into a filing cabinet, which is sorted into different filing cabinets for each village in the Newbury area and is then sorted alphabetically by house address. When a customer enquires about houses in a particular village, the information can be looked up by going to the relevant filing cabinet and the writing down all the houses there are for sale.

The Data included in the system will be as follows.

Data	Type	Characters	Example
House ID	Counter	Unlimited	01
**House Price	Numeric	Unlimited	£250 000.00
Location	Text	Unlimited	Cold Ash
Vendor Last name	Text	Max 30	Smith
Vendor first Name	Text	Max 15	John
Vendor Tel number	Numeric	Max 15	01635 567483
Date put up for Sale	Numeric	Max 8	16/01/99
Property type	Text		
No. Of rooms	Numeric	Max 2	14
*No. Of Bedrooms	Numeric	Max 2	05

*Number of bedrooms is put in so that the potential Buyer can tell the estate agent how many bedrooms he wants to have in his house. This information can then be entered into the search.
**House Price is put in so that The potential Buyer can tell the estate agent the maximum price he wants to pay and this information can then be entered into the database search aswell. A suitable house can then be found

In my system, collecting the data is collected and processed in the following way:
1. Employees go to the house for sale with a laptop and enter all the information into a form with the field names specified above.
2. The employee then returns to their headquarters in Newbury where the laptop is linked up to their network and then the loaded from the laptop onto their proper system.
3. Then, relevant Queries and forms can be made to suit the customers needs
   I think this is the best way to go about the job because:
- Telephone conversations can be difficult to understand and certain information can be misheard.
- E-mailing the information from the laptop requires a telephone port or a very advanced laptop, which can be very expensive.
- Manually filled in forms have to be re-entered into the system which uses up valuable time.

The present manual system works with forms filed into a filing cabinet. This can be very slow in entering (input) and obtaining (output) information. This computerised method is good because it is faster than any other method available, including e-mailing it back to the headquarters because like I said, e-mailing the form straight to the headquarters would need an advanced laptop, which can be very expensive. My method of obtaining information is best suited for the job in my opinion, it's easy, fast and cost effective.

Input information into the database E.g. Field names, datatype.

| Input |

Process data by entering it into tables and forms and sorting it by using queries.

| Process |

The output is the hard copy of the Database (the print out).

| Output |

Objectives for this Project

1. To provide a quick and easy way to enter data about houses into the system, using tables and forms.
2. To use validation checks to make sure all data entered is valid, and limit errors
3. To present data in an organized way.
4. To create a way of accessing data quickly and easily, using certain criteria.

Implement

This following table is the way in which all my data will be stored. It is also in the format that queries will be stored in.

| ID	House Name	Price	Location	Vendor last name	Vendor first name	Tel Number	Type	Rooms	B/rooms
1	7 Speedwell	£143,950.00	Thatcham	Baily	Mary	1635867549	Mid-Terrace	8	3
2	9 Ashgate	£249,950.00	Thatcham	Haggarty	John & Samantha	1635867204	House	10	4
3	17 Bath road	£225,000.00	Thatcham	Page	Domonic & Sara	1635874523	House	11	4
4	Russets	£235,000.00	Ashmore Green	Dunn	Ben& Jennifer	1635203466	Bungalow	9	3
5	56 Violet close	£249,950.00	Thatcham	Seward	John	1635868451	House	12	4
6	24 Roman Way	£249,500.00	Wantage	Ridgwell	James & Jinny	1235769289	House	12	3
7	Greenacres	£599,950.00	Hermitage	Goodman	Megan & Edward	1635205467	House	16	6
8	Marchwood	£330,000.00	Cold Ash	van Vuuren	Sarel & Adri	1635863901	Bungalow	10	4
9	4 Bennet Close	£250,000.00	Newbury	Byng	Chris & Val	1635552923	House	9	3
10	Foxlea	£550,000.00	Cold Ash	Coulson	John	1635200212	House	14	5

Queries can then be done in the following ways:

This is a query for houses with 3 bedrooms.

ID	House Name	Price	Location	Vendor last name	Vendor first name	Tel Number	Type	Rooms	B/rooms
1	7 Speedwell	£143,950.00	Thatcham	Baily	Mary	1635867549	Mid-Terrace	8	3
4	Russets	£235,000.00	Ashmore Green	Dunn	Ben& Jennifer	1635203466	Bungalow	9	3
6	24 Roman Way	£249,500.00	Wantage	Ridgwell	James & Jinny	1235769289	House	12	3
9	4 Bennet Close	£250,000.00	Newbury	Byng	Chris & Val	1635552923	House	9	3

This is a form putting all the information into one form where buttons can be clicked to perform a specific query. In this case "number of Bedrooms" will have to be clicked and then "3" will have to be entered to activate the same query as the previous one.
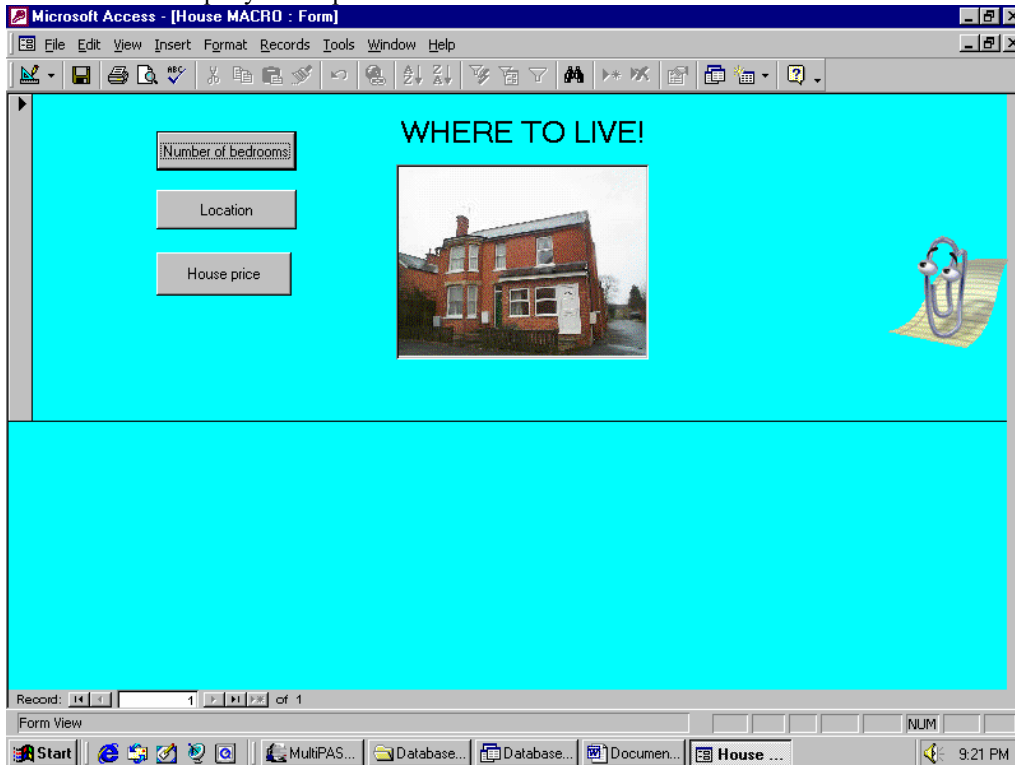
Another query can be neatly displayed in a form as such, this time for price (you can make a price range in a query by putting in the following formula: ">=[enter min price?] And <=[enter max price?]"
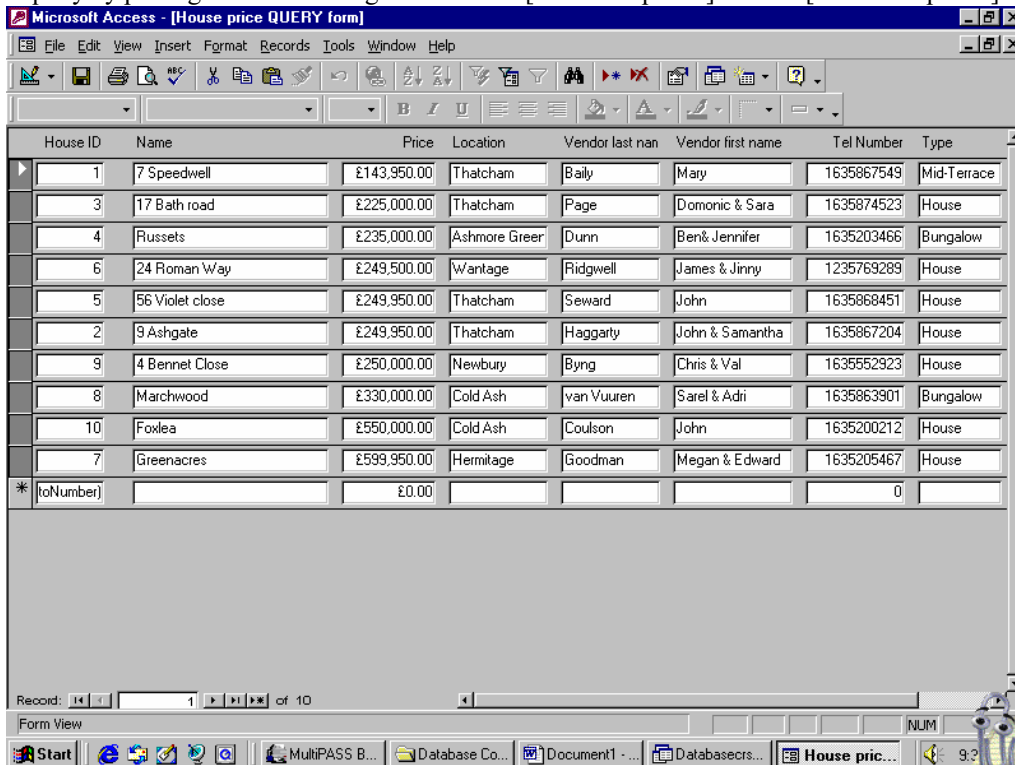
Another way of displaying information about all the houses for sale is by means of the following form:

I have spoken to my end-user and he has decided that for a form which displays all the houses on sale, he would like the form above, and for queries, he would like a "button sheet." So now that I have tested it, I can start making the final database.

Evaluate

My project has several good and bad points for my end user. Here are all the things I consider good points about the Database I set up.

Good points about my Database

- Queries have been produced – This helps particular data to be collected quickly, without having to browse through all the information to find the records that you need.
- Forms have been produced – This helps so that data can be entered into the relevant fields easily and quickly. It also makes it easier to access the data for the end user, and makes it more presentable, as it is shown in form view, instead of tables.
- A switchboard has been created – This allows me to access 3 different queries from a single form. This makes it even easier and faster to search for information.

<u>Weak points about my database</u>

- No reports have been made – This is a good thing to have because, hard copies of information can be made. Seeing as this database is for an Estate Agent, not me or my end user really see a need for this, and customers can take away brochures of particular houses.

<u>Have I met all the objectives set?</u>

<u>Objective 1:</u> To provide a quick and easy way to enter data about houses into the system, using tables and forms.

- I have achieved this by setting up forms

<u>Objective 2:</u> To use validation checks to make sure all data entered is valid, and limit errors

- I have also created successful validation checks, such as number fields, and limiting the number of characters in each field.

<u>Objective 3:</u> To present data in an organized way.

- I have achieved this as well by using structured tables, forms, and a switchboard.

<u>Objective 4:</u> To create a way of accessing data quickly and easily, using certain criteria.

- I have achieved this by setting up queries using macros, and have also put this into the switchboard. This means houses can be found according to certain criteria, like price range.

As you can see, I have met all the original objectives set by me and my end user.

My end user suggested that one possible change could be to create reports. This would mean that hard copies can be printed off. He said that instead of having a separate system for brochures, we can use these reports as brochures. I then explained that we will need much more information on houses to be able to create that, like description, directions and size, if we wanted it to look like one of their current brochures.