A2 ICT

ICT6 PROJECT

LAURA ROGERS 13.5

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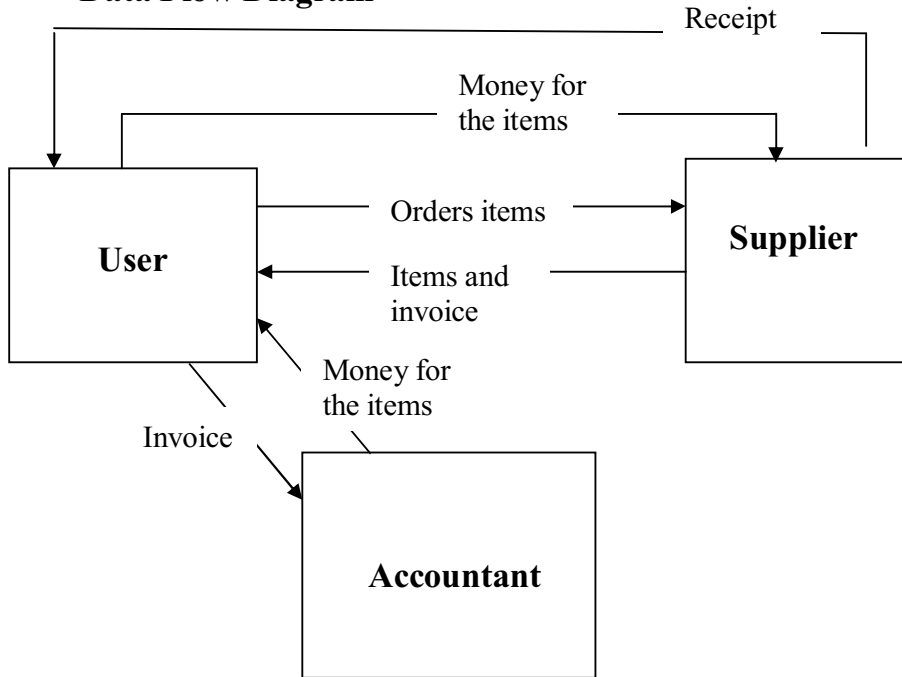
Analysis

Background

The user is my mum who is a Church administrator and the problem is that she has to order lots of different equipment that the Church uses. Most of the information is easily lost and a record needs to be kept of what they order each time. Also the bulbs and batteries are ordered from lots of different companies and she finds it hard to keep track of the different companies she needs to contact when she needs to purchase equipment. The church is also a registered charity.

Description

My Mum deals with typing up letters and notices, ordering equipment that needs to be ordered, photocopying, etc. At the moment the details of the suppliers are kept in files, in the office. Also they have to use separate sheets when amendments or additions are made to the list of suppliers. So when they need to order some equipment they have to find the contact details for the company that supplies that equipment and contact via phone, e-mail, fax or an order form. Then when the equipment arrives they are sent an invoice at the same time and those are photocopied and put in the relevant file and the original is sent to the church accountant.

Input	Process	Output
* Supplier details. * Equipment details. * What needs ordering and how much (regarding bulbs, batteries, stationary)	Find out what needs to be ordered. Find suppliers details. Fill out an order form.	* Order forms containing items that need to be ordered.

Data Flow Diagram

Receipt

Money for
the items

Orders items

| User | | Supplier |

Items and
invoice

Money for
the items

Invoice

| Accountant |

Supplier data

Data Item	Example	Type	Length	Restrictions
Name	Mail Print Ltd	Text	<=25	Presence check
Address	25 Wren Road	Text	50	Presence check
E-mail address	clive@hotmail.com	Text	50	
Telephone No	07145 220145	Text	20	Presence check
Fax No	020 8330 3222	Text	20	Presence check
Items supplied	Projector bulbs	Text	50	Presence check
Account Number	2511423655	Text	50	

Item Data

Data Item	Example	Type	Length	Restrictions
Item Name	Bulbs	Text	50	Presence check
Product Code	1370018	Text	50	

Problem

At the moment all the details of the suppliers are kept on sheets in a filing cabinet and any amendments have to be done on a separate sheet and when a suppliers details need to be found my user has to flick through the sheets to find the right information before ordering anything. So this wastes time that could be spent doing other things. Also some of the sheets could easily get lost if they weren't put away properly.

User Requirements

These are the requirements for my new system:

* The new system must be quick and time saving so that they don't have to spend ages flicking through lots of sheets of details to find the relevant information. For example a supplier's telephone number.
* To find details of a supplier that supplies a particular item.
* To find out what items are supplied by a particular supplier.
* It must be more efficient, so it must be quicker and when a query is performed then the results should appear immediately.
* My user should be able to update the information about the suppliers without any problems.
* To maintain details of suppliers and the items they supply.
* To produce a headed letter to a particular supplier.

Hardware and Software

* My user has Windows XP so they won't have to upgrade their hardware to use my system.

* My user has Microsoft Office XP so they won't have to upgrade their software to use my system.
* My user has an up to date system, so they won't have to upgrade it to use my system.

Other Constraints /limitations

There aren't really any constraints as I see my user most of the time and school work and jobs aren't really a big problem that I would need to deal with.

User's ICT skill levels/experience

* My user has quite high level ICT skills but not high enough that they wouldn't need a User Guide.
* My User Guide will be fully detailed using a technical approach that suits the needs of my user.

Performance criteria – quantitative and qualitative

Quantitative

Criteria	Current	New
Finding a suppliers address	It takes several minutes at the moment	The info should be returned in less than 5 seconds.
Finding details of a supplier that supplies a particular item.	It takes several minutes at the moment	The info should be returned in less than 10 seconds.
Finding details of what items are supplied by a particular supplier.	It takes several minutes at the moment	The info should be returned in less than 10 seconds.
To produce a headed letter to a particular supplier.	It takes several minutes to fill out an order form.	It should take less than 1 minute to produce a headed letter to the supplier.

Qualitative

* The new system should be reliable. If there is a problem then there should be a section in the program where they can find help to solve the problem.
* The new system should have the capacity to be able to store as much data as is needed as well as having data added to it.
* The system should easy to use. There should be an online help system.

The New System

The new system will allow my user to store, add and update a list of suppliers and the things they supply. Also it will allow my user to search for suppliers details when they are needed. Although the current system dealt with placing orders, my new system will just focus on a supplier management system which will also allow my user to create a headed letter to a specific supplier.

Design

Possible solutions

One possible solution would be to go to somewhere like PC World and buy a program that deals with managing details of suppliers and what they supply. The problem with this would be that it may not be suited for the business and it could cost a lot of time, money and effort later on. The package may not be compatible with the existing software and hardware that my user already has. The package may not be easy to learn how to use. There may not be technical support available and if there is it may be expensive to my user. The package will also need to be quicker when it comes to carrying out searches and critical operations.

Another solution would be to create a database which can hold all the information about each supplier and what they supply to the company. The system is compatible with the existing hardware and software. The system comes with an online help system and a manual. Also it is easy to learn how to use. There is technical support available and it isn't expensive. The package won't be expensive. When performing searches the system will give the results immediately.

We could get an ICT consultant to build a system for my user. The problem with this is that it could be expensive and time consuming for my user and for the person building the system. The system may not be compatible with the system as the consultant may build the new system on his computer which may have different hardware and software to that of my user. The technical support would be expensive and hard to come by as my user may not be able to get in touch with the consultant that built the system.
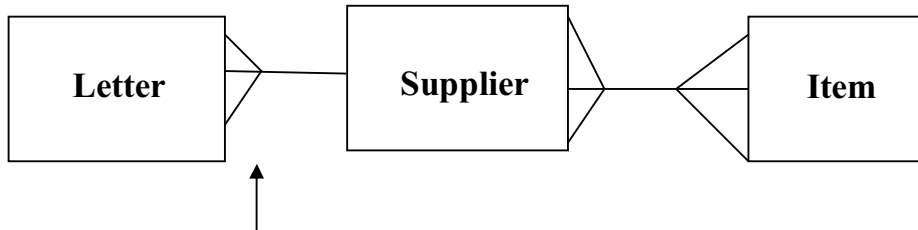
As one of my user requirements is to create a headed letter to a particular supplier I need to evaluate a word processing package such as Microsoft Word. This package will allow me to do a mail merge with Access to create a headed letter to a specific supplier when it is needed.
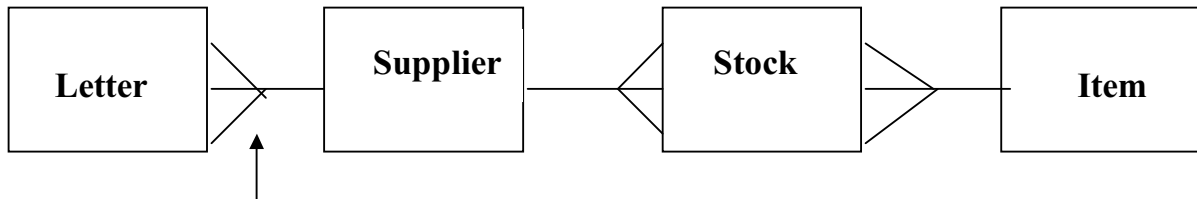
Chosen solution

My chosen solution is to create a database to hold details of each supplier and what they supply. I have chosen this solution because my user will be

able to add, edit and delete data in the database and also allow my user to create a headed letter to a particular supplier. Also a database system will be able to fulfil the requirements of the system and my user's requirements.

Entity Relationship diagrams.

This is my first attempt at an entity relationship diagram and I have a one - to – many relationship and a many – to – many relationship. A many – to - many relationship is unacceptable in a normal database so I have to add a link table between Supplier and Item to create two, one – to – many relationships.

This is my second attempt at an entity relationship diagram and I have three one – to – many relationships which is acceptable in a normal database.

Table design
Supplier table

Data Item	Example	Type	Length	Restrictions
Supplier ID (primary key)	1	Auto number	2	Presence check
Name	Mail Print Ltd	Text	25	Presence Check
Address	25 Wren Road	Text	50	
E-mail address	clive@hotmail.com	Text	50	

Telephone No	07145 220145	Text	20	Presence Check
Fax No	020 8330 3222	Text	20	
Items supplied	Projector bulbs	Text	50	Presence Check
Account Number	2511423655	Text	50	

Item table

Data Item	Example	Type	Length	Restrictions
Item ID (primary key)	5	Auto Number	2	
Item Name	Bulbs	Text	50	Presence Check
Product Code	1370018	Text	50	

Stock table

Data Item	Example	Type	Length	Restrictions
Supplier ID (primary key)	1	Number	2	Presence Check
Item ID (primary key)	5	Number	2	Presence Check

Letter table

Data Item	Example	Type	Length	Restrictions
letter ID (primary key)	1	Number	2	Presence Check
Description	'This is a letter to be sent to a particular supplier'	text	32	Presence Check
Letter	Letter to supplier	hyperlink		Presence Check

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Testing Plan

Implementation

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Testing

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User guide

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Evaluation