19 April 2010

Database Coursework

Mahamed
[Pick the date]

Write up

Identify

Background Information

Bobbies Bookstore is a new bookstore based on 90 Birmingham roads. The bookstore opened few months ago. The company takes its name from Bobbie, the Greek god of Carrots. Bobbie's book store markets its products under its own brand as well as Bobbie Read Store, Bobbie Learn, Brother Bobbies Books. The company's business will be on local level..

Bobbie's book store wants to deliver high quality books and services.

Bobbies Book Store opened 2009/10/12.

The company's board consist of 6(key) members

- Manager (Mr Bobbie) (Real user)
- Vice Manager (Mr Carrot)
- Chair man (Mr Wood)
- Secretary (Mrs Paper)
- Vice Secretary (Mr Folder)
- Treasurer (Mr Coin)

The real user is the employees and the manager (Mr Bobbie).He(manager) is the company's key person he is also the person that ordered this project

The company's current problem is:

- The company is new
- The company has not recorded documents before
- The company has constantly new books
- The company have no database available

The reason why these problems have arisen is because the company is new. The company has not had the opportunity to do something about the arisen problems.

Statement of the current problems

"The company is currently facing difficulties with accounting books, services and other data. We have no current system to support accounting or recording the companies' data/information. The company needs these problems to be solved as soon as possible, as we are ready in all other aspects to go in business. As an outcome of an not working accounting system, could lead to Money losses and unstable company as well as bankruptcy .The outcome of an not working system is a serious threat to the company's future and our chance to compete against other companies. As the companies head person I want you to create a working system to meet these needs.
The system must include the attached User Requirements below.
Your estimated time scale to finish this p roject is very short, as the company is losing valuable business time. You have approximately 7 working days. This time can't be exceeded. You should have done any necessary error checking before the system can be introduced. You are the person in charge for this project and the person responsible to make sure that the estimated time scale is not exceeded."

Objectives/user requirements

- **Working database**
- **Include all necessary information**
- **Produce rapports**
- **look up data(Queries)**
- **Produce Forms**

- **Be user friendly**
- **Be printable**

Objective	Explanation
Working Database	*It must work correct and mange to do the tasks expected. It must be error free as well. This is important.*
Include all necessary information	*This means that it must hav e all information/data to work. It must for example customer names and address. This means also that it must be self existent.*
produce reports	*This means that it must be able to produce reports.*
look up data(Queries)	*This means that the user must be able to search for data in the database. The user wants to do complex searches such as searching for data that has two or three criteria.*
Be user friendly	*This means that it must be easy and relative straight forward to manipulate.E.x* • *should use drop down lists* • *it should use LOOK UP* • *it should do searches automatic*
Produce Forms	*This means that it must be able to produce forms*
Be printable	*This is means it must be printable to A4 or A3. This is a problem with many databases so the designer m ust consider this objective*

Consideration of Solutions

Application	Advantages	Disadvantages
Paper /Fillet cabinet	• Can be done by everyone • No ICT skills needed • Cheap	• Takes long time • Data can't be copied • Is not accurate • Needs storage place? • Very difficult to work with • Hard to update
Web-Page	• Easy to access • More graphics	• Hard to make • Hard to use • Cannot produce graphs • Cannot perform calculations
Database	• Good formatting features • Can be used for templates • Can sort large data • Can perform complex searches automatically • Offers good automation features • Supports User Interface/Menu	• Cannot produce graphs • Can only perform limited calculations • Complex to develop and maintain • Hard to use by people
Spread	• Good formatting features • Can be used for templates • Can sort and search data • Large range of formulas for performing complex calculations • Can produce graphs	• Complex searches limited and must be physically created each time • Requires knowledge of ICT to use • Page Setup can be complex for printing • Need basically mathematics • Needs basic math

sheet	• **Good for large computations** • **Offers good automation features** • **Supports User Interface/Menu** • **Relatively easy to develop and maintain**	**knowledge**

Paper and calculator

This can be done if the company uses paper and pen as well as fillet cabinet. This alternative does not include that the company has a working computer system the company records data in papers sorted by name this data will be copied as hard copy and it will be used when the

company wants to update the data. This way the company would have necessary data recorded and updated although it's hard and time consuming. In addition to all that the company would need a cabinet/store room to store the papers.This alternative doesn't cover any (few) of the user requirements.

Web-Page

This alternative would include that the company makes a new web-page or uses an existing web-page. This alternative would also include that the company has a working computer system. And in addition to that a web-page making program as well as a web-browser.
The company would need to store the data online and update the data via the Internet. The data would be entered in a web-browser.
This alternative is good and easy to update. Although this alternative doesn't cover all the user requirements, but most of them.

Spreadsheet

This alternative is similar to the database but it can be done by a spreadsheet editing program. This alternative requires that the company has a working computer system. And in addition to that a Spreadsheet making program. It will also include that the company purchases a spreadsheet editing program. The data would be entered to a spreadsheet window . Although this alternative doesn't cover all the user requirements, but most of them.

Database

This alternative is similar to spreadsheet but more sophisticated and it's more suitable for handling with data. This alternative includes that the company has a working computer system with database making software.

The data would be entered into designed fields and tables by using a computer system. The data entered can be converted into many different things such as rapports and forms as well as searching for specific data. This alternative does cover all the user requirements and it's the most suitable application for this kind of project.

Filing Cabinet *(Paper and pen)*

Advantages:

- No IT skills needed.
- No money wasted on training staff.
- No software needs to be purchased
- No money wasted on buying hardware(computers)

Disadvantages:

- Low security.
- Simple for unauthorised access break-in.
- Very time-consuming.
- Could take up lots and lots of space.
- Not environmental friendly

Adobe Dreamweaver CS4 (Web page)

Advantages:

- Easy to access.
- Easy to use.
- Has many different designs
- Easy to update
- More public

Disadvantages:

- Is slow when its large data
- Hard to create and maintain
- Can't relate data
- Software needs to be purchased (very expensive)
- Needs internet
- Needs trained staff to access/manipulate it.

Microsoft Access *(database)*

Advantages:

- Easy to find information.
- Lots of storage space.
- Easy to view files.
- Easy to read.
- Can be made very secure.
- Has many features
- Relates data
- Many options(input masks and so on)

Disadvantages:

- Difficult to make.
- Needs trained staff to access it.
- Software needs to be purchased

Microsoft Excel (*Spreadsheet*)

Advantages:

- Simple to design and make.
- Easy access.
- Easy to use.
- Sorts data

Disadvantages:

- Can't handle large data
- Can't relate data
- Software needs to be purchased

Objectives	Paper and Pen	Web-page	Database	Spreadsheet
Working database				
Include all necessary information				
Produce reports				
Produce Forms				
Be able to look up data				

Be user friendly					

Comparison

When I compared the different solution to this project a looked at how well they meet the User Requirements and the Disadvantages to that certain Solution. I also compared this in the tables above and it was obvious that the Database was the best solution. It did cover all the user requirements and it had many advantages and few disadvantages. The database was far better than all other solutions. And I have chosen to apply database as the solution to the company's problems. This system is used by hundreds of companies to keep records up-to-date and its secure. This gives us a further reason to apply the database as a solution.

ANALYSE

Hardware:

- Intel® Viiv™ Core™ 2 Duo E6320 Processor (2,6 GHz,1,700MHz,32MB cache)
- Genuine Windows Vista™ Home Premium - English
- 2048MB 667MHz Dual Channel DDR2 SDRAM [2x1024]
- HP™ 24" Black Wide Flat Panel (E207WFP)
- 500GB Serial ATA RAID 0 Stripe [2x160GB 7200rpm drives with DataBurst™ cache]
- 16X DVD+/-RW Drive
- 256MB nVidia™ GeForce 8600GTS graphics card
- Printer
- Ink (colures)
- Keyboard-mouse

This high performance workstation has the ability to design, edit and make the Database with ease.

.

The PC will be used by the employees and managers, mainly the emploooyes to edit, retrieve and use information in the database.

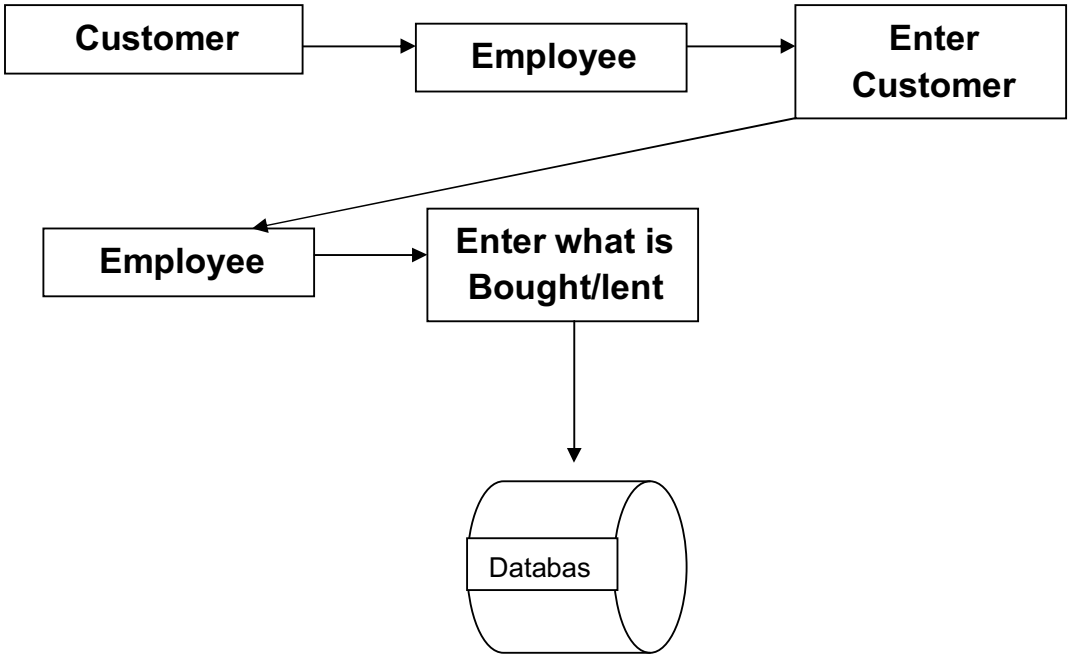
Software

- Windows Vista™ Home Premium(plat form)
- Necessary drives to additional hardware (mouse,keyboard,USB sticks)
- Graphic software
- Web-browser
- **Microsoft Access 2007**

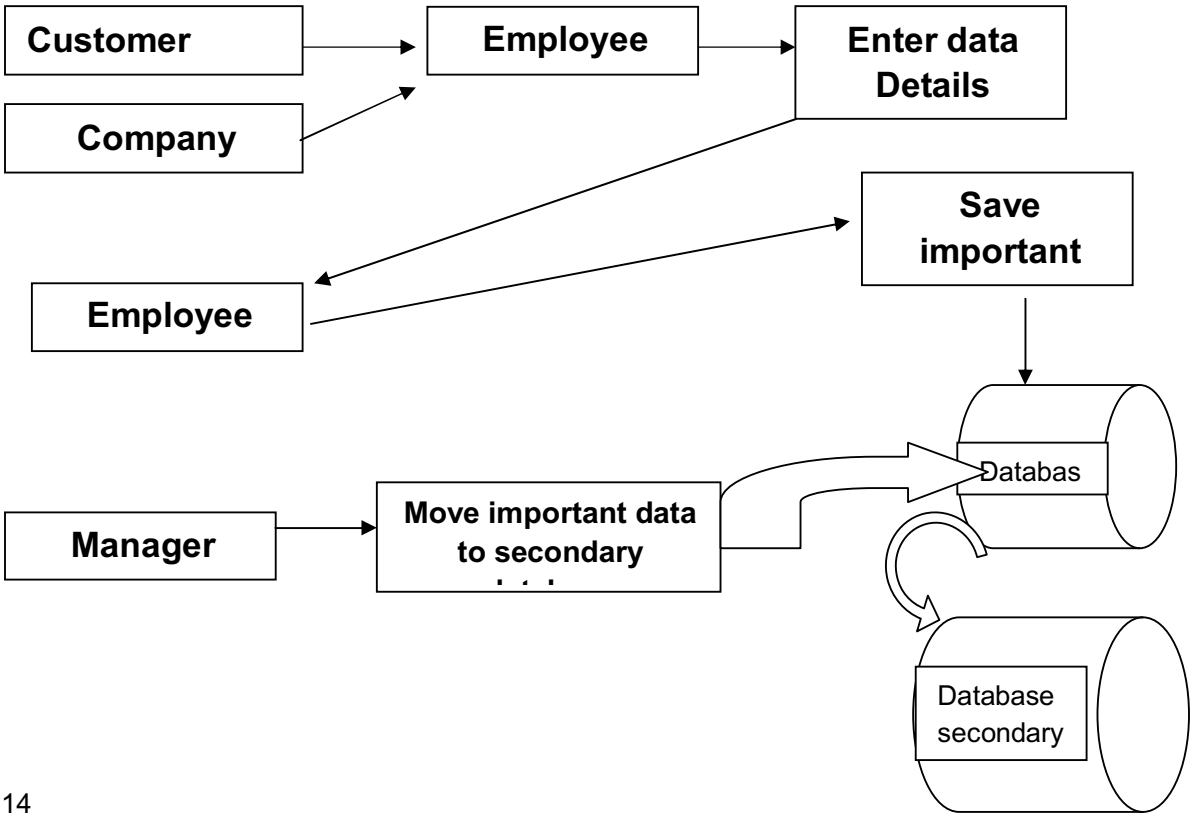
The software that will be used for the creation of this Database will be Microsoft Access. Access is an excellent database creating software, which may not be very easy to use but once made the outcome is absolutely fantastic.

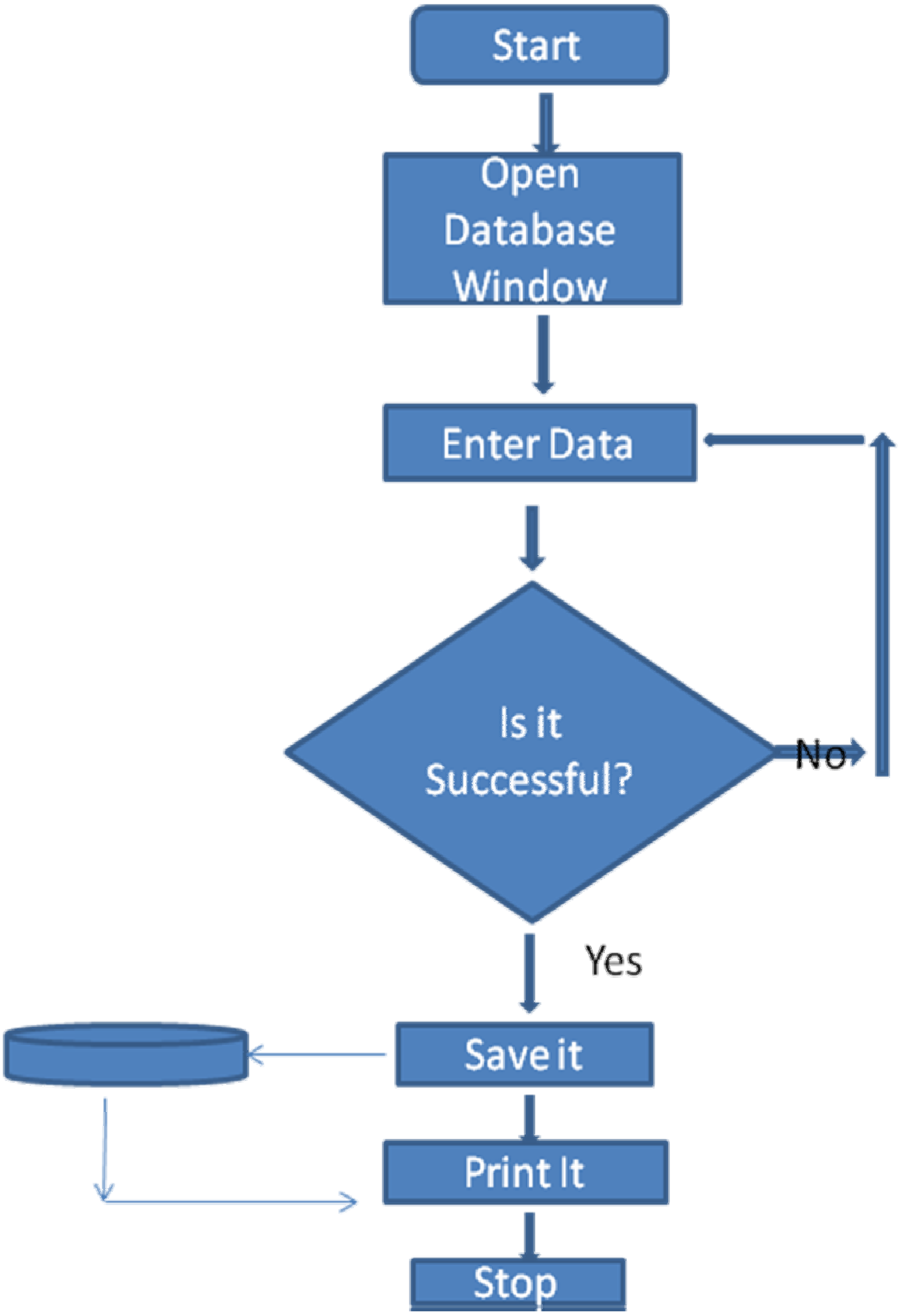
Data collection

Every time a customer buys something their details will be entered into a database.



General data flow




Start
Open Database Window
Enter Data
Is it Successful?
No
Yes
Save it
Print It
Stop

What information do I need to gather and where will it come from?

The data will be collected when customers buys/lends books from our company. When the data has been collected it will go onto the database once a day
We have chosen once a day because we have seen the needs , and they are big.

The collected data will consist of numbers and word s, everything from book names, prices, customer age, and genre to taxes. The information we collect will be in hard copy.

Information from the company like prices and book names and information about the company itself will come from the companies head off ice (the company)

When all data is collected it will be processed by database program (Microsoft Access)

The data required to assemble this database carrying information about books and customers.

Much of the information will come from the company itself such as

- *Books available*
- *Books reference number*
- *Area*
- *Book prices*

But some of the information will come from customers such as

- *Name and surname*
- *Age*
- *Address*
- *E-mail*
- *Gender*

Data Manipulation

The tables in the system will be Books, Books Price, Customers, and Sales

Table 1	**Books** [Reference No, Book Title, Author, Supplier, Gender, Area]
Table 2	**Books Price** [Reference No, Purchase, Selling Price, Closing Stock]

Table 3 **Customers** [Customer name, First name, Surname, telephone ,Address 1, Address 2,Postcode,E-Mail, City]

9 Reports and. 6 Queries to be produced.

Output

The primary way to present the output will be the Monitors.
This will be used by employees and customers.
The secondary way to present the output will be the A4 paper.
This will be used for the invoice.

And finally the poster will be used for advertisement and notifications

1. *Monitors*
2. *Posters*
3. *Paper (mail to customers)*

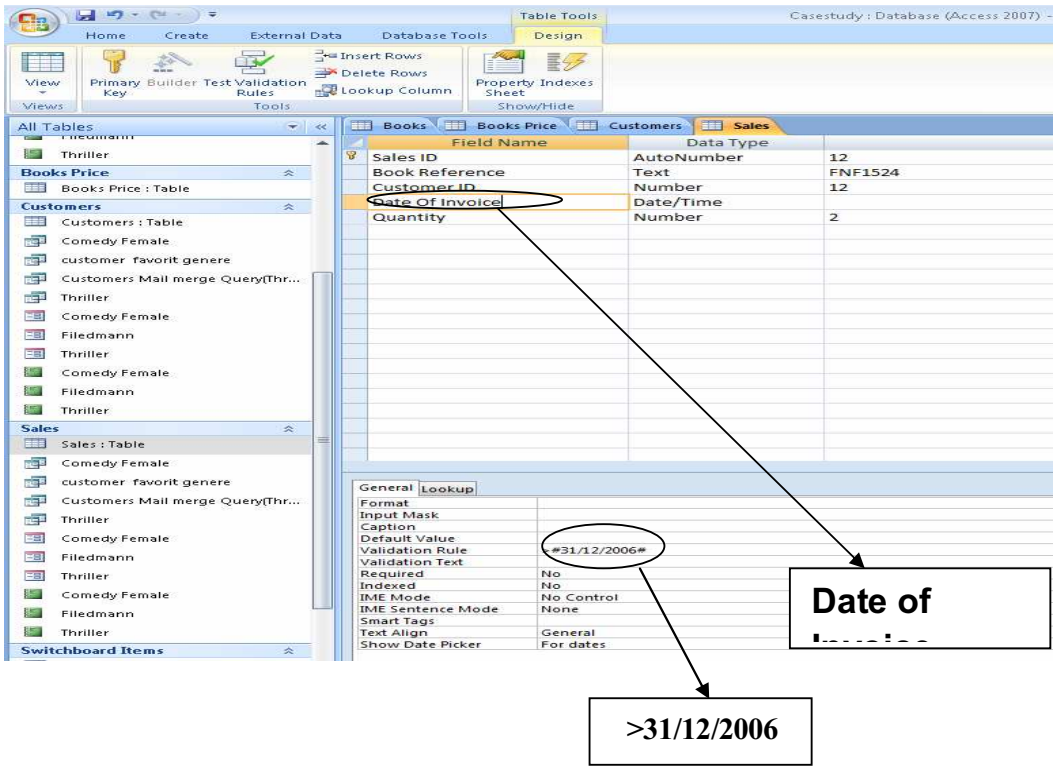
4. *Speakers**

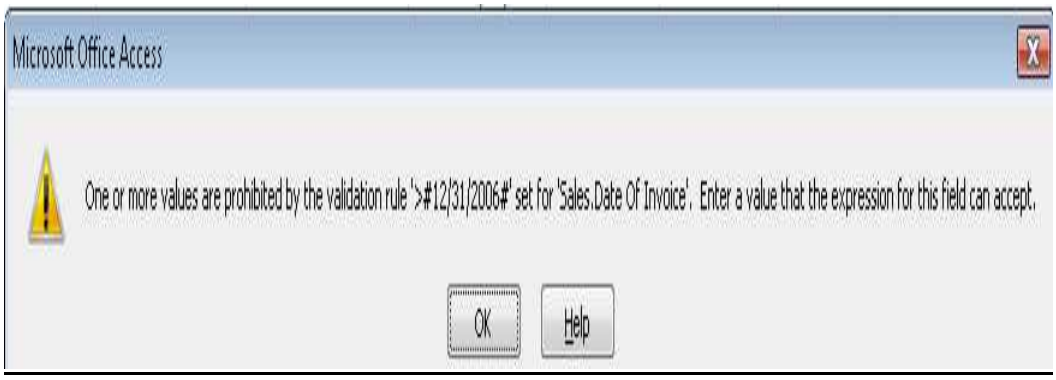
*Additional to the monitors

1 2 3

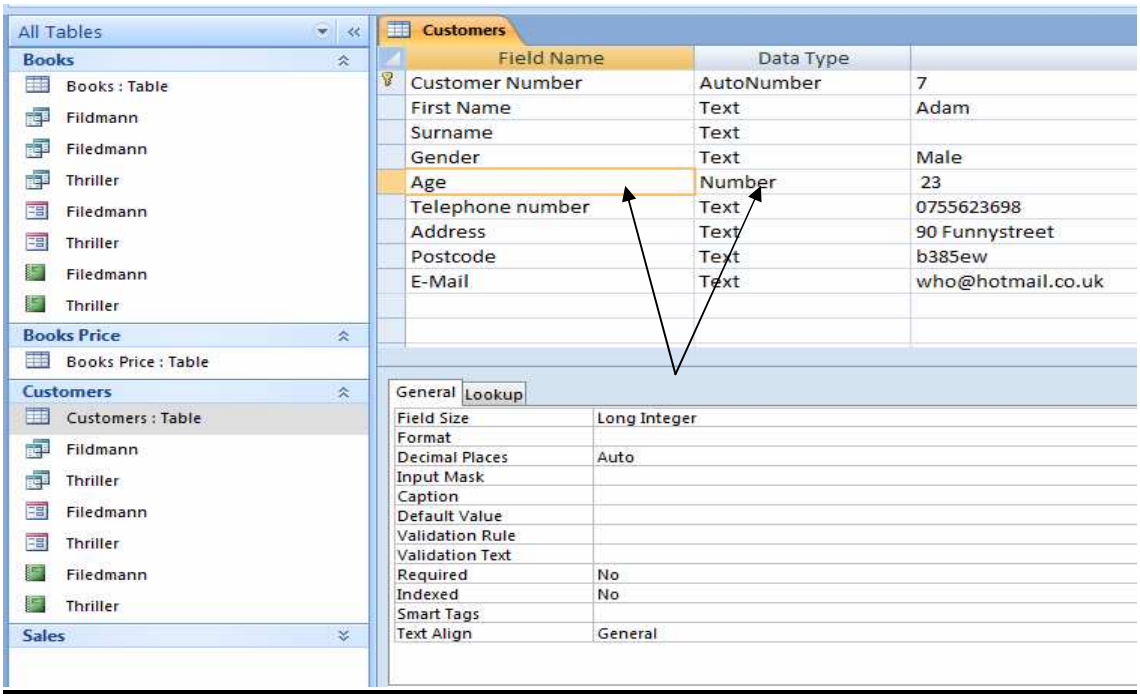
Data validation

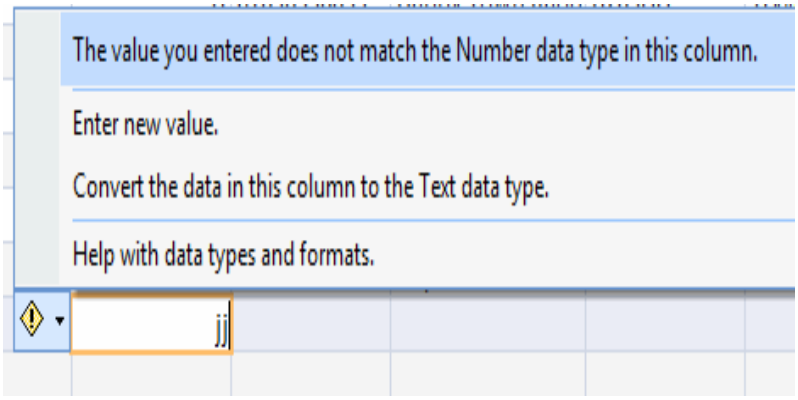
I will set a data validation on the date so that no date before 2007 can be inputted into the database , I will do this by entering this code ">31/12/2006" into the database when making the table for the customer date of purchase. This will help as people will not be able to enter data older than 2007 so the managers can use the information knowing it has been inputted in the year 2007 or later.





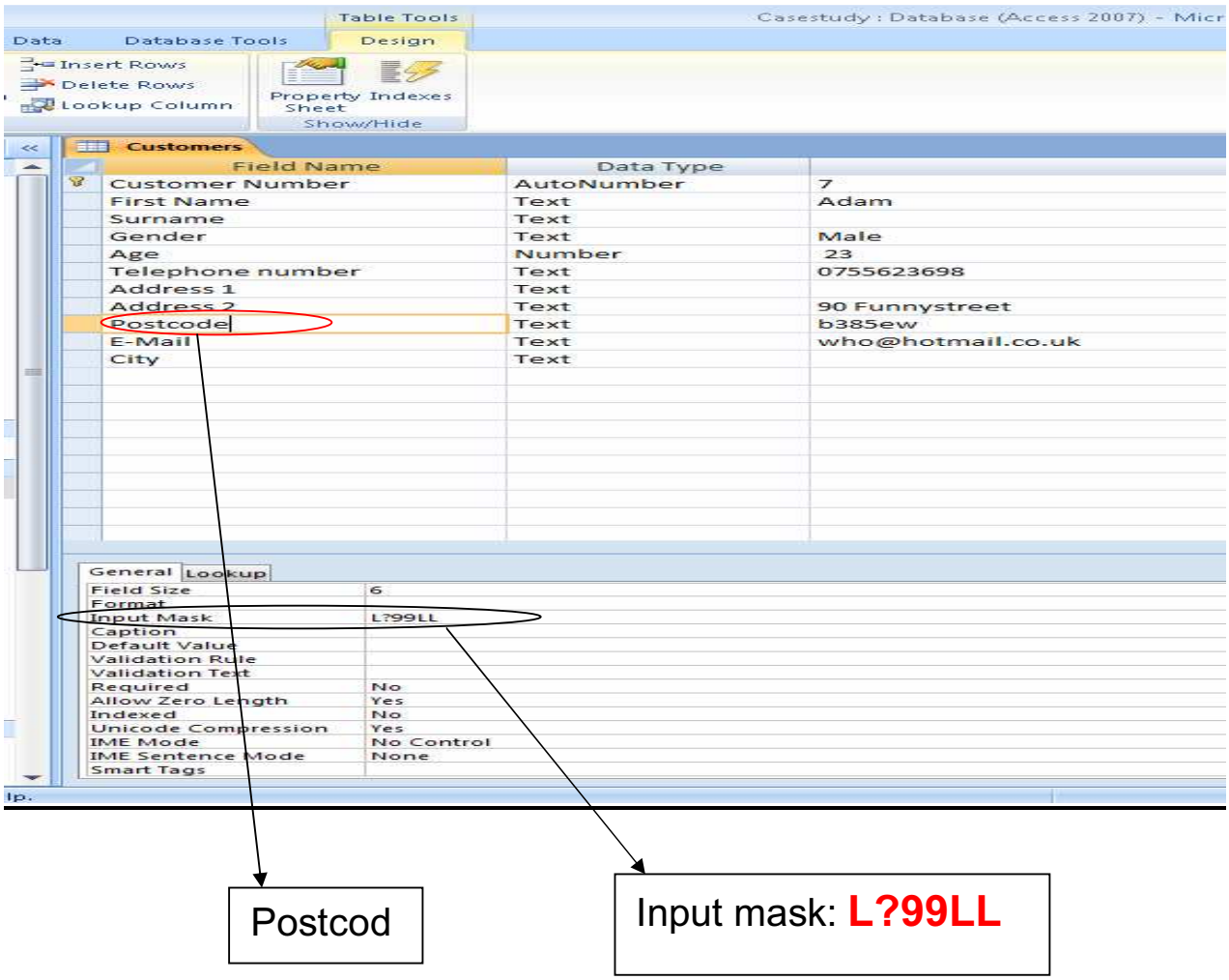
When we don't want people to enter invalid data.
We use data validation that restricts the data that can be entered.
E.g. at the age column, we don't wan t people to enter **text** there, so it would be good if we restricted the data type that can be entered to numbers.





Input mask

I don't want people to enter invalid postcode so I use an Input mask. This mask will make sure that letters and numbers are at right places. I will use this mask (L?99LL) . It will allow any letter and then any letter or number, then it will allow any two numbers, then it will allow any two letters. This is the format that all postcodes have.

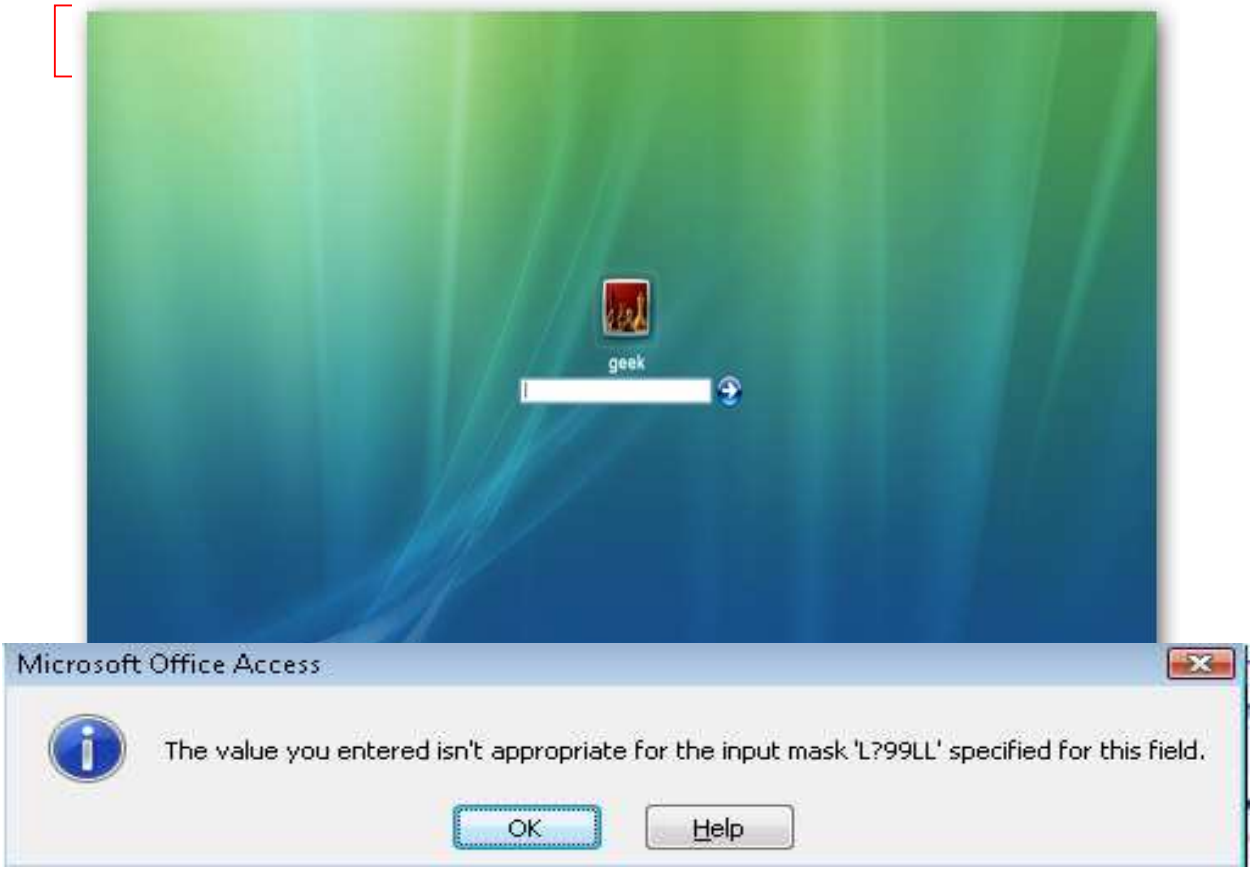


Error message when wrong postcode is

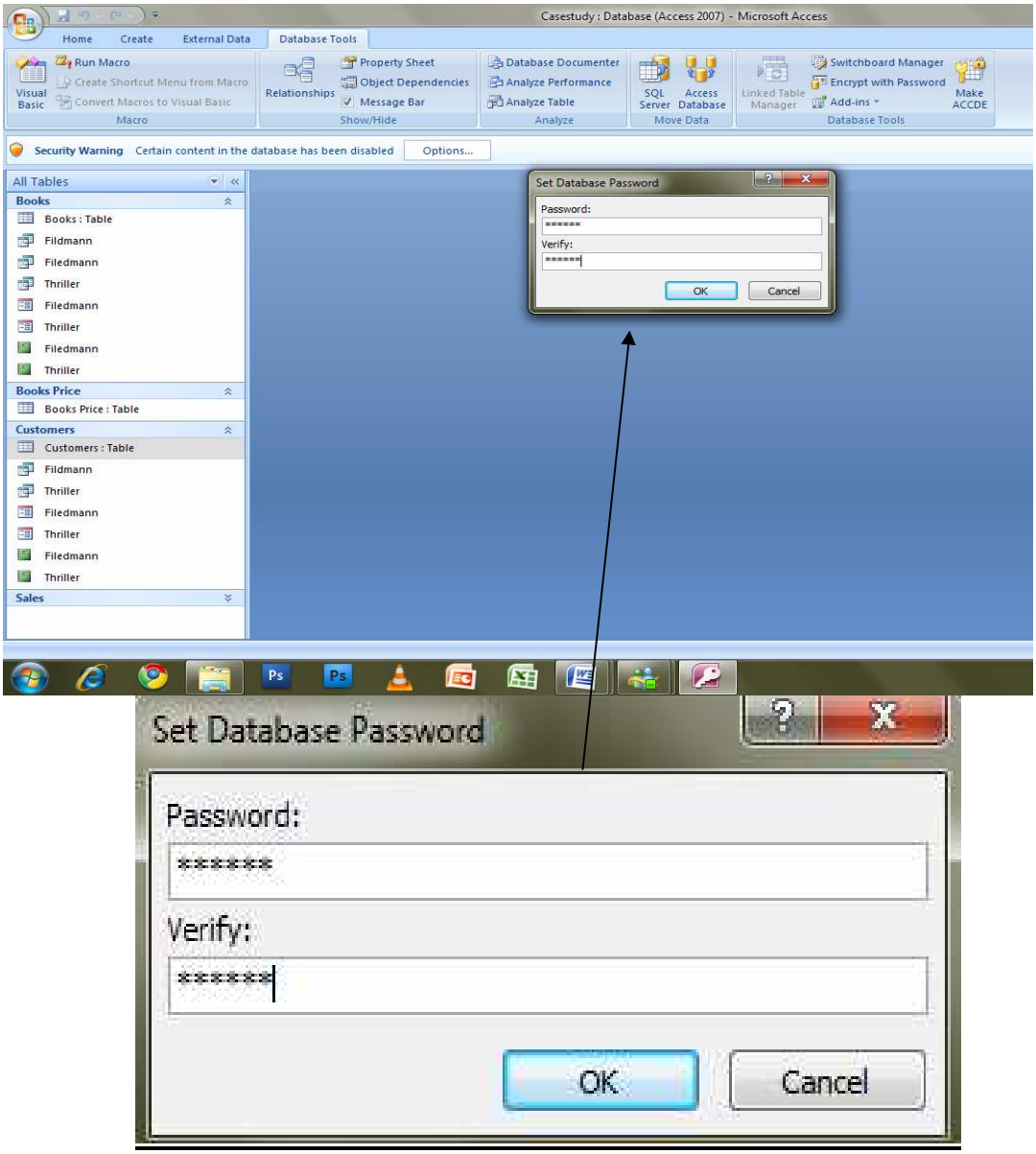
How will the data be secure?

Software

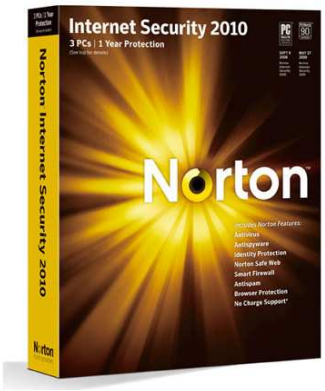
One way to keep my data secured is to prevent other accessing it by using passwords. This can be done with Microsoft Access, as it has protect function(protect sheet function). Windows Vista™ Home Premium also provides this function (log in password).

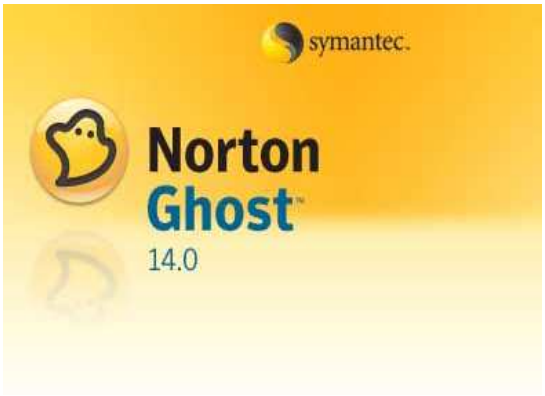


Microsoft Access Protect function



I will also use Antivirus Program to prevent viruses and hacks. And I will use Norton Ghost as additional Program to the antivirus, In case of system Crashes so that I can obtain data in system crashes.





Physical

The company will use electronic locks. The second thing the company will use is Id-cards as part of the electronic locks. These id -cards will be used to access offic es or the company's documents. The co mpany will also use some kind of Monitoring as part of the data securing. To secure the data from disasters I will use AUTOMATIC FIRE ALARMS to prevent fire risks

Backup

I will use Databases so I can back up my data, as it is big businesses I will Use 3 hard drives each on 500GB Memory to back up. The idea is that the company would have all information saved on these hard drives .the companies' computers would work in network and all the documents will be saved in the end of every working day on these hard drives .the hard drives will also operate 24hours a day. And the company will Install Antivirus Program as it reduces the risks of Data -loses. And in addition to that the company will Install Norton Ghost As it will help to prevent data loses in system crashes.

Hardware (backup)

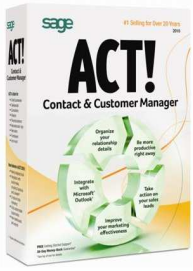
- Hard drives*
- USB sticks

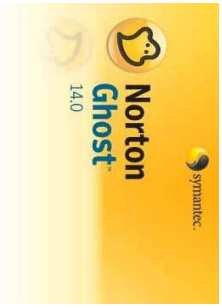
**3 Hard drives, each on 500 GB*

Software (back up)

- Recovery software
- Software to operate the databases
- Norton Ghost
- Antivirus*

*prevent/reduce risk of data loses

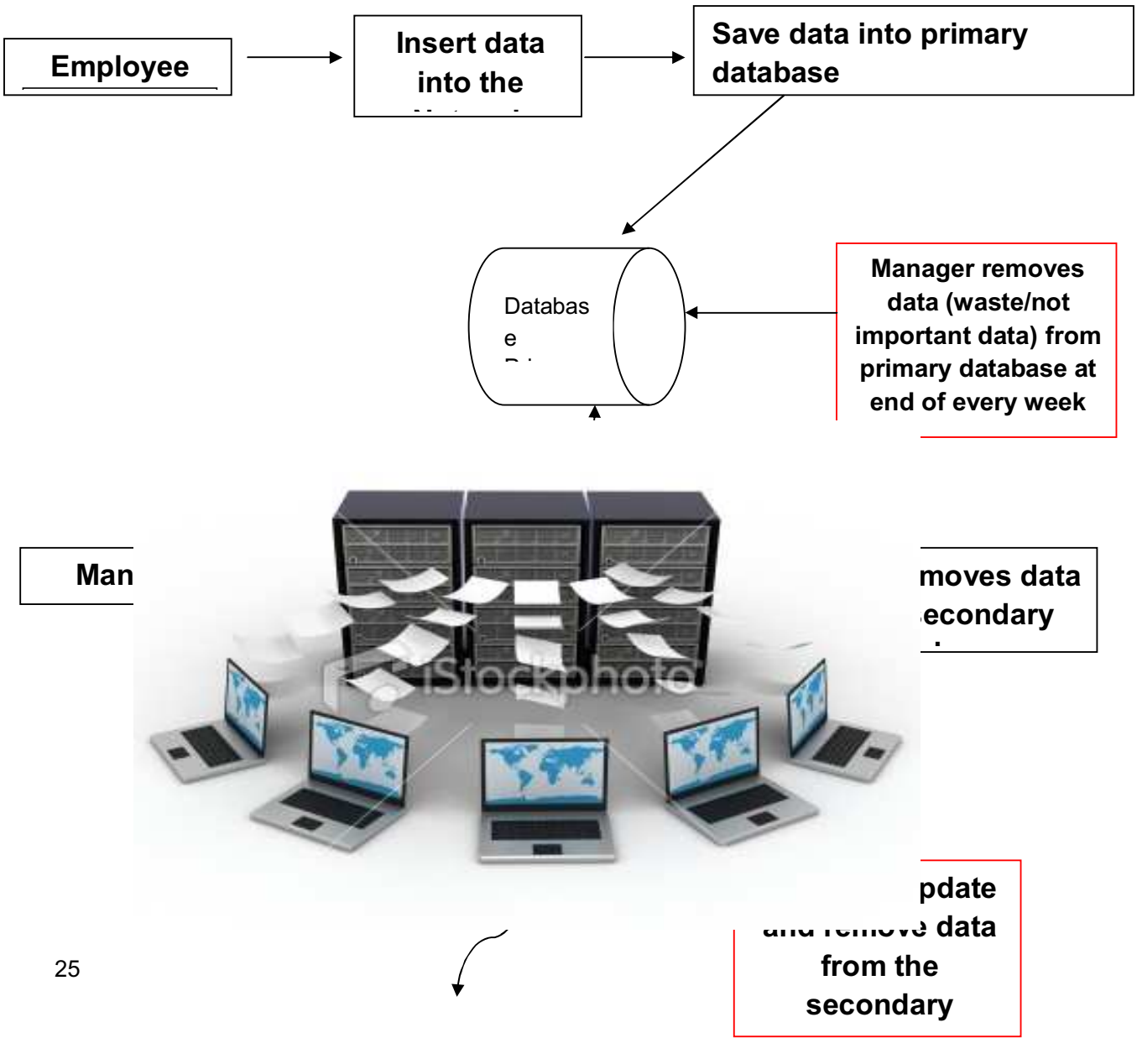


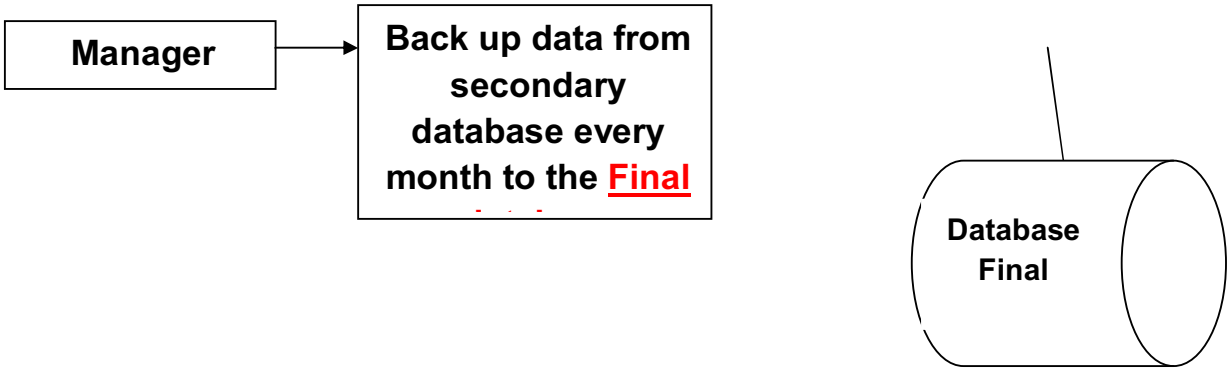


Strategy

Data will be saved to the primary Database after every working day by employees. The data in the primary database will be sorted and all important data will be move to the secondary database by the manager at the end of every week, he will also delete waste data and non wanted data .the manager will move and back up all of the data he wants to keep to the Final database once a month .The person in charge to make sure that the database is updated and backed up is the manager Mr Glasses. This strategy is much better than just save all data to the two database immediately , it will save space and time.

3 databases in network

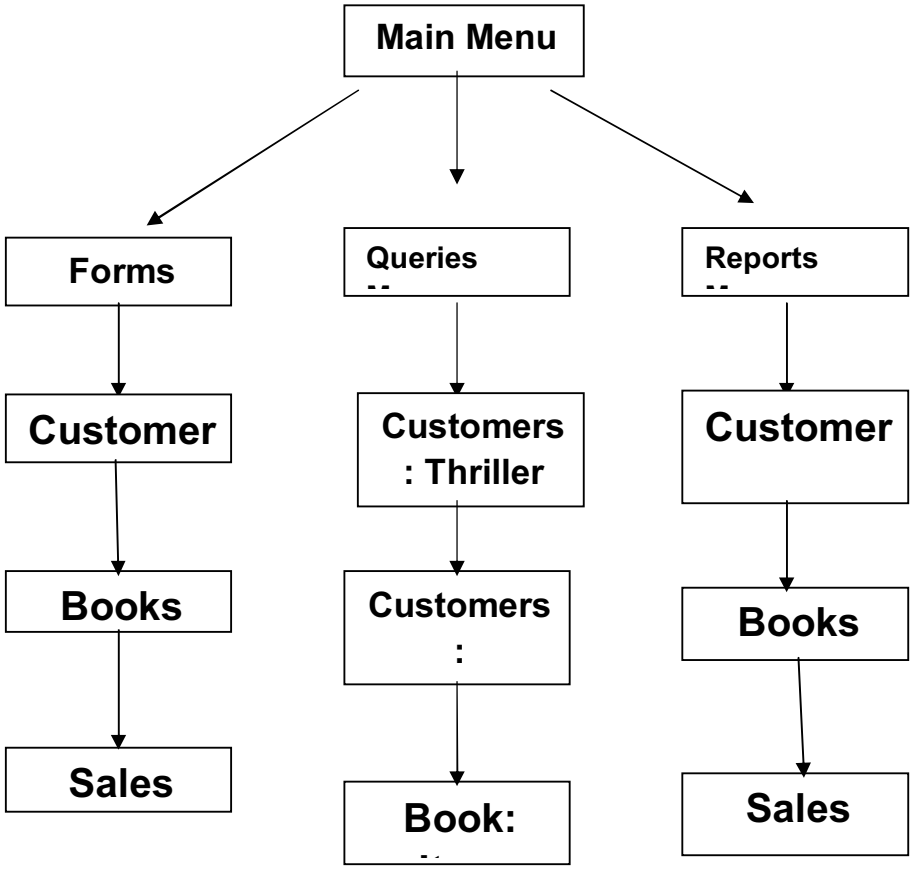

Employee
Insert data into the
Save data into primary database
Databas
e
Manager removes data (waste/not important data) from primary database at end of every week
Man
moves data
econdary
pdate
data from the secondary


Manager
Back up data from secondary database every month to the Final
Database Final

Design *(refer to hand drawn designs)*

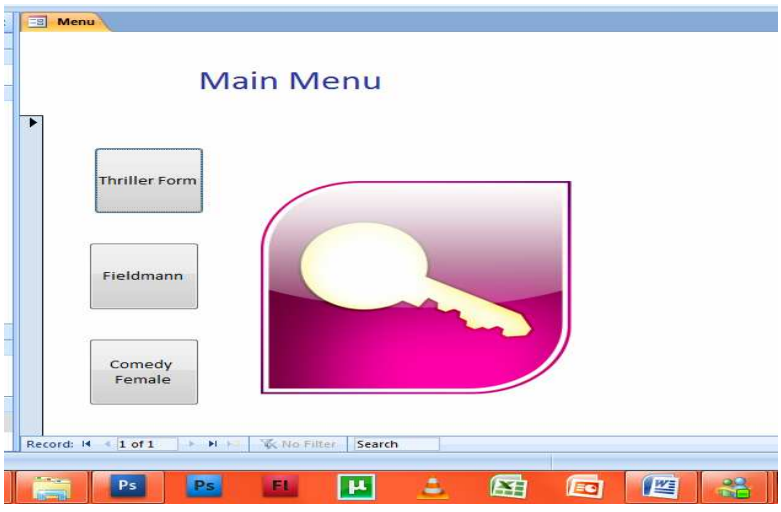
	Person 1	Person 2	Person 3
Design 1	This design is very good. I found it very attractive and nice.	This design is awesome and beautiful. its very clear and simply	This design is okay
Design 2	Thus design is not so good it doesn't show much info and its very empty	This design is not that good. it looks empty and dull	This design have a lot of space empty and it looks not so professional
Design 3	This design is okay it shows clearly and its understandable	This design is okay but it should be more space left out	This design is not good. I don't like it

Menu Structure Diagram

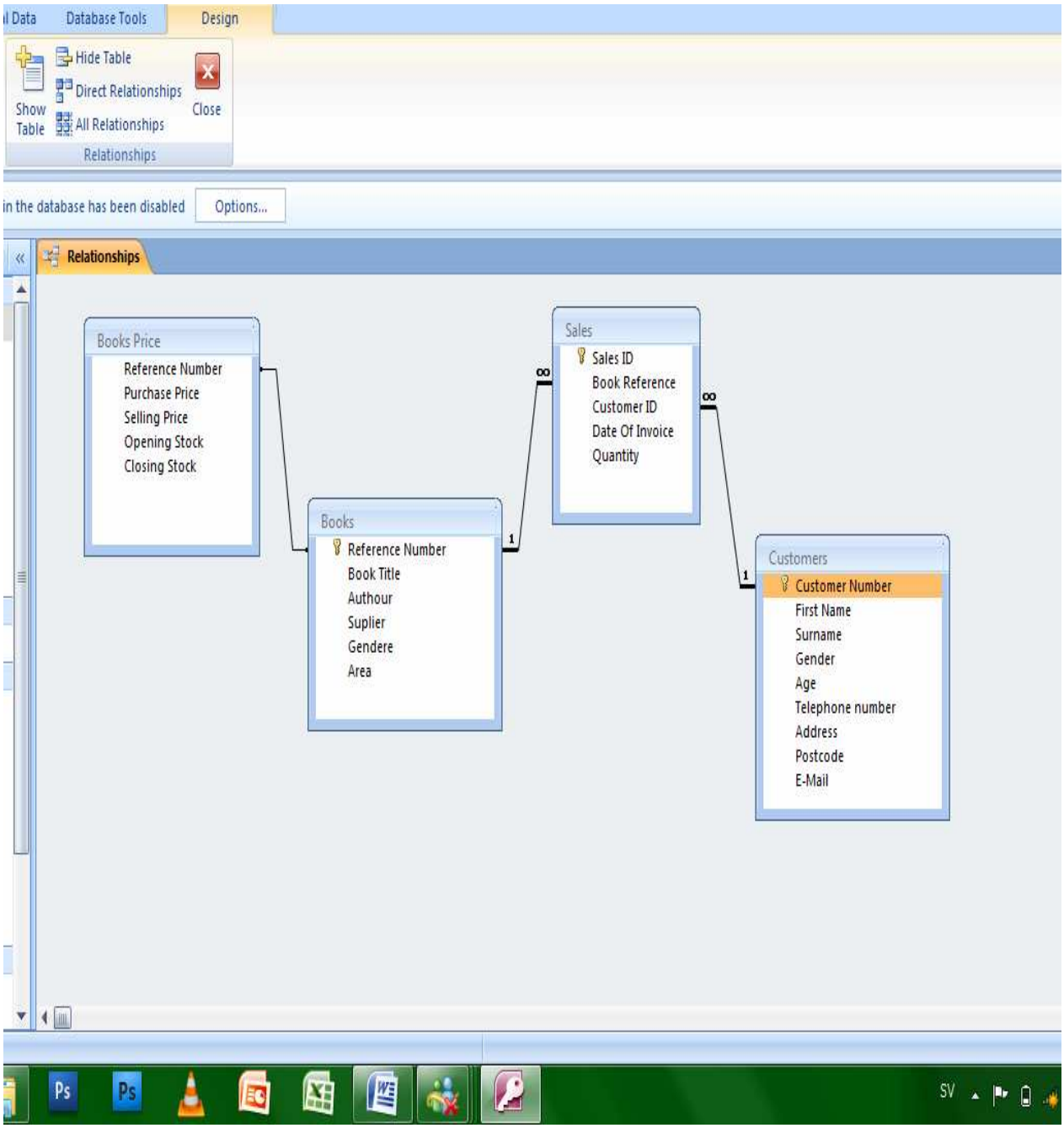


A menu structure Diagram is very important as it structures the database and is planned ahead so if mistakes are made they can be traced back along the line. Also the menu structure diagram helps people decide what to do next in the design of the database.

Table structures and Relationships identified

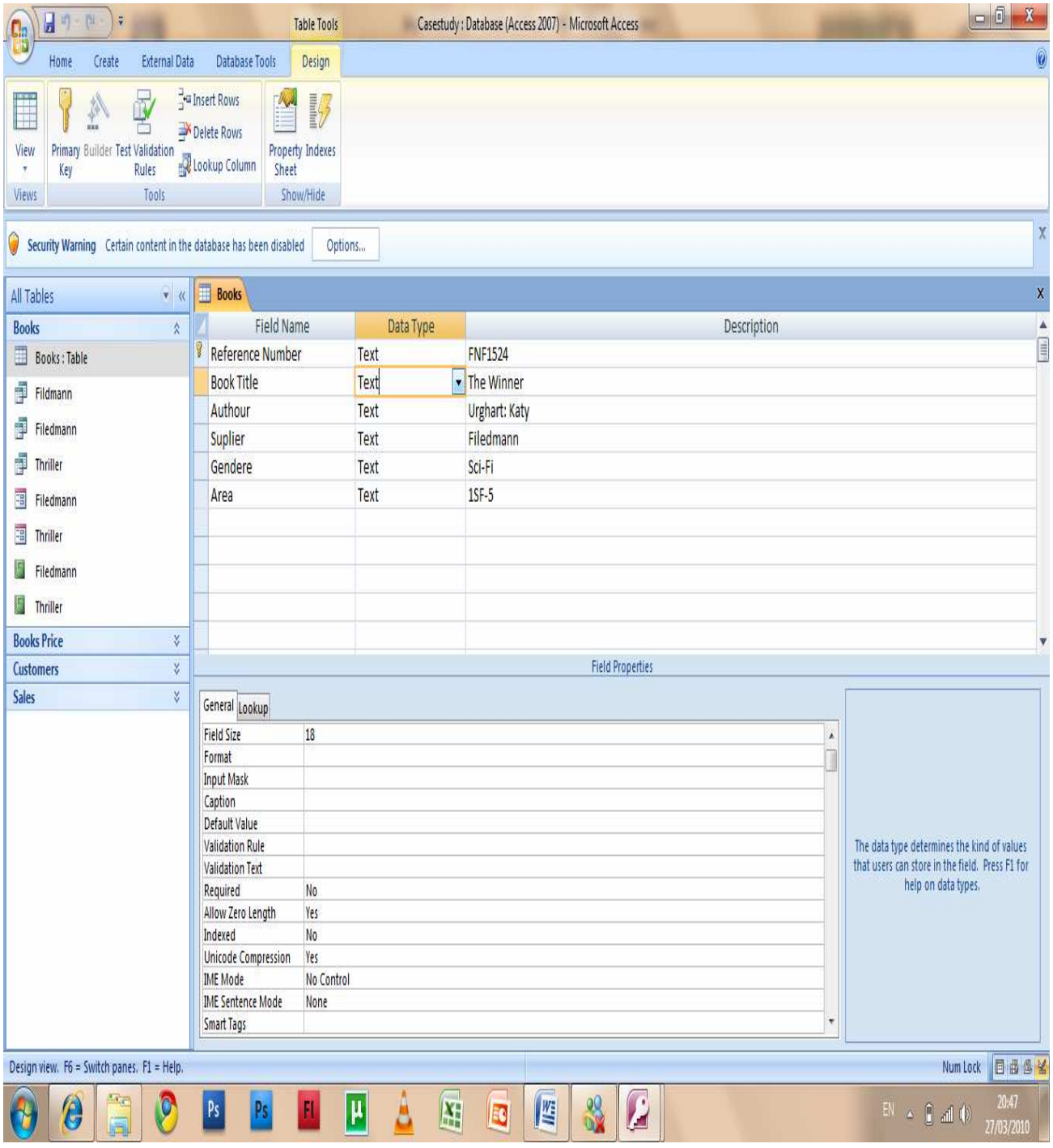


Below is a screen shot of the relationships. As you can see below there is 1 to many customers to Sales, and there are many payments to 1 Books. The sideways 8 represents infinity.

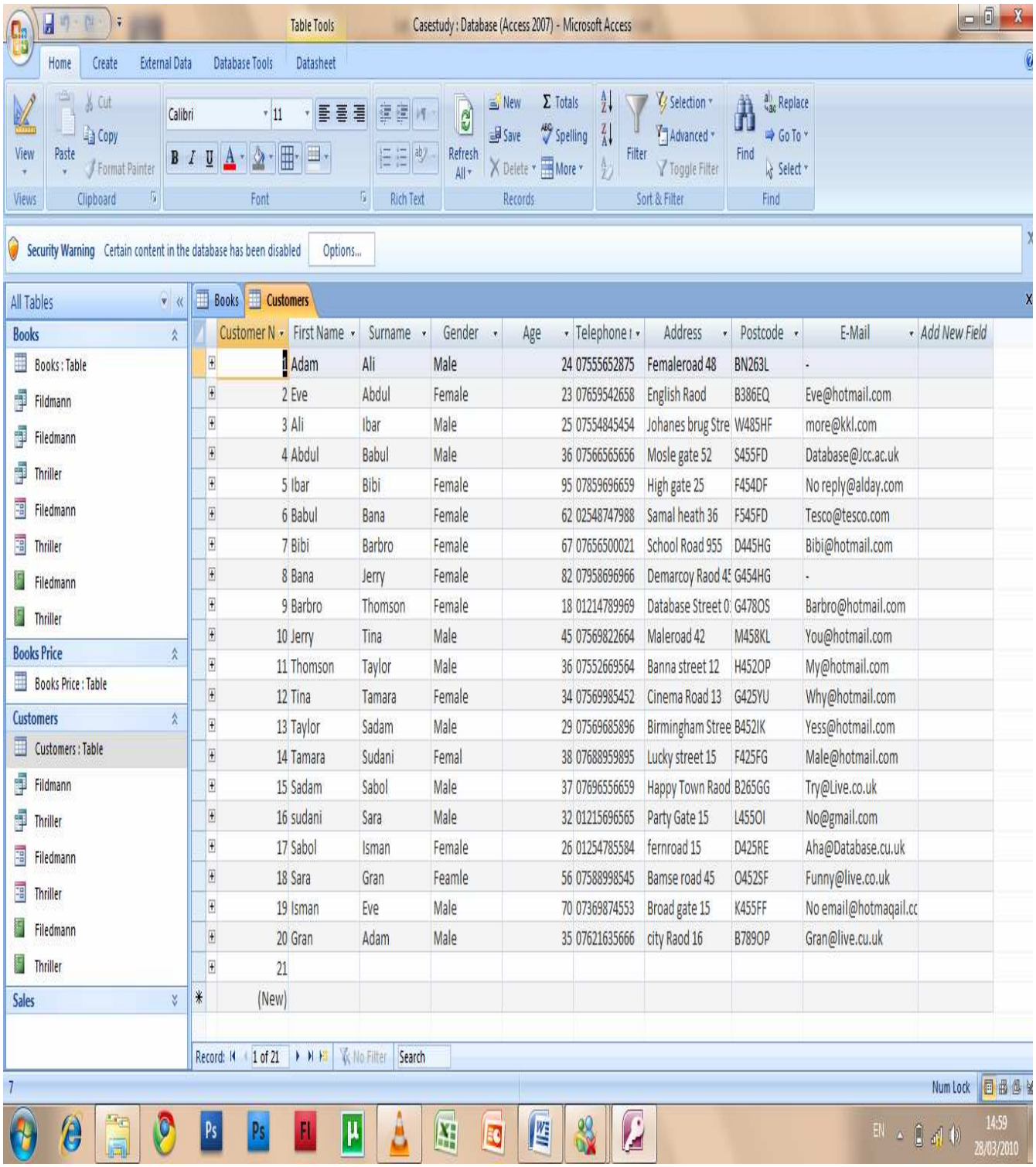


Implementation

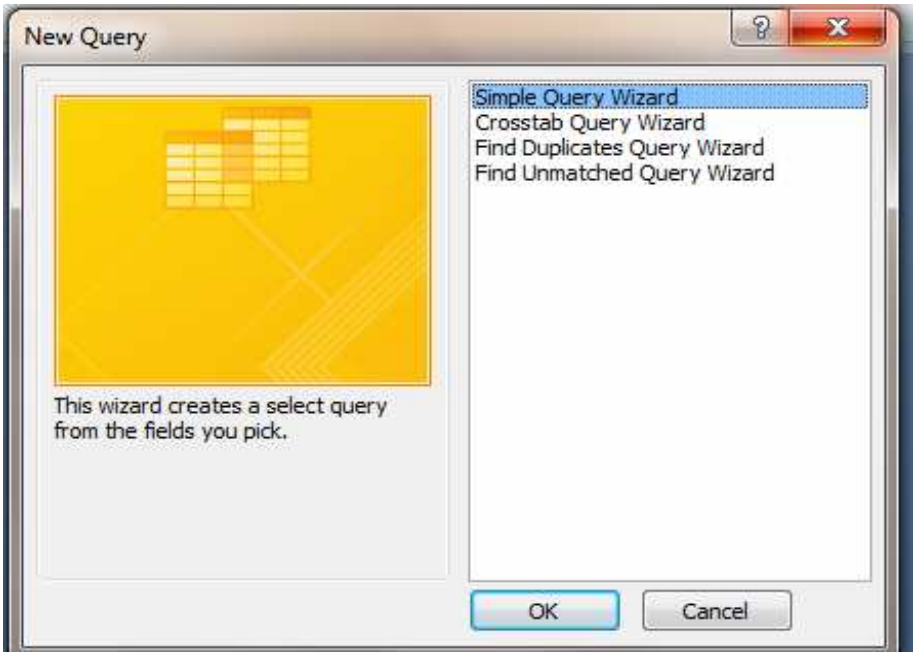
1. Open Access windows and create the database. Create new tables. Name the new tables as appropriate. Create and design (field names, field types, field length) the new tables by going to the design menu (right click on the tables).



2. Insert data in the tables under appropriate fields.



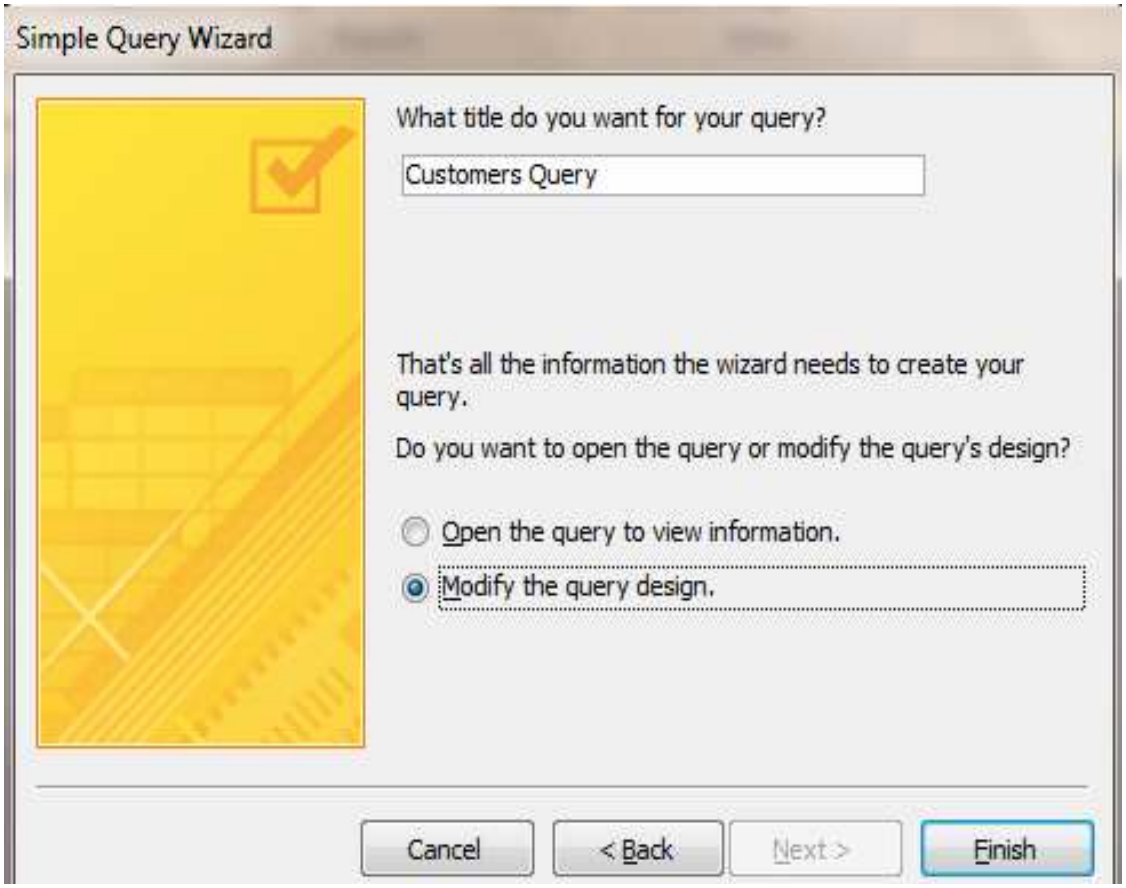
3.when all data are inserted in the tables , start doing the QUERY By going to the Create Menu(QUERY WIZARD).

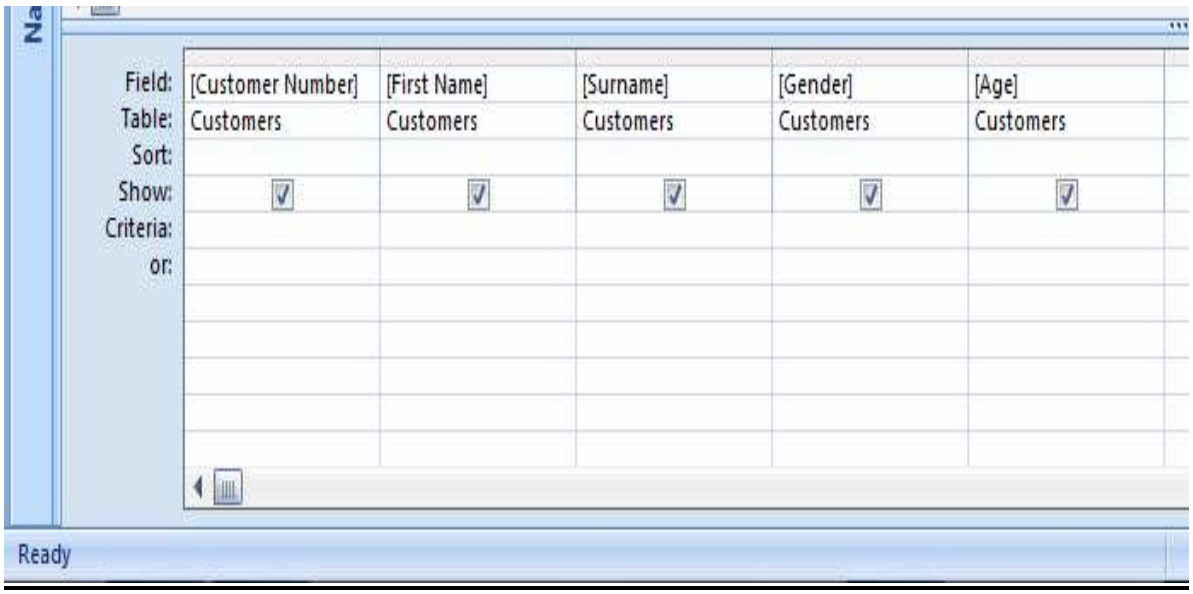


Chose the tables u want to do query on.

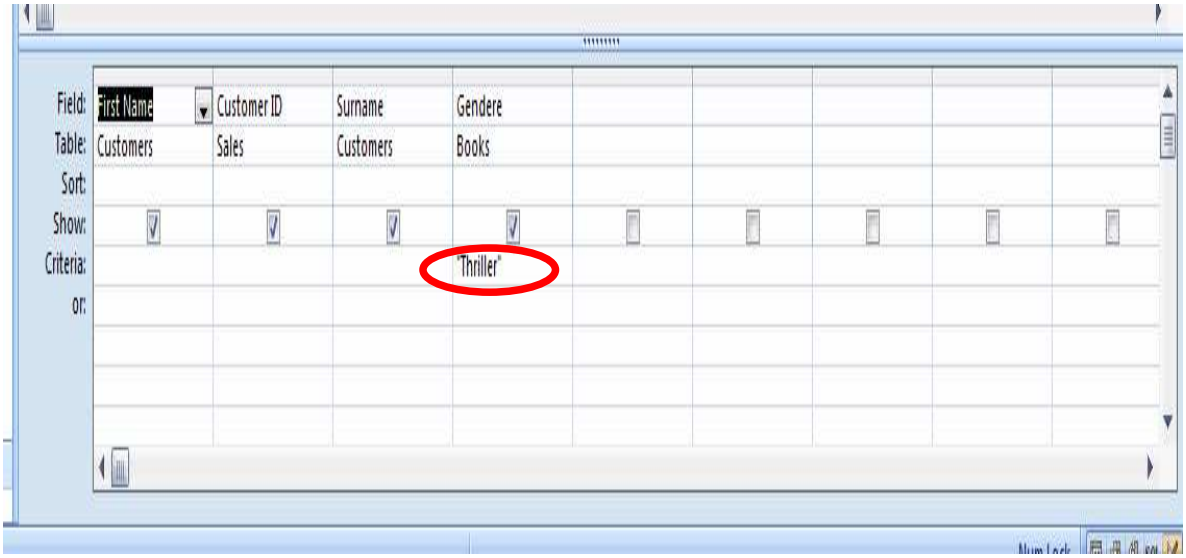
Simple Query Wizard
Which fields do you want in your query?
You can choose from more than one table or query.
Tables/Queries
Table: Customers
Available Fields:
Telephone number
Address
Postcode
E-Mail
>
>>
<
<<
Selected Fields:
Customer Number
First Name
Surname
Gender
Age
Cancel
< Back
Next >
Finish

3,

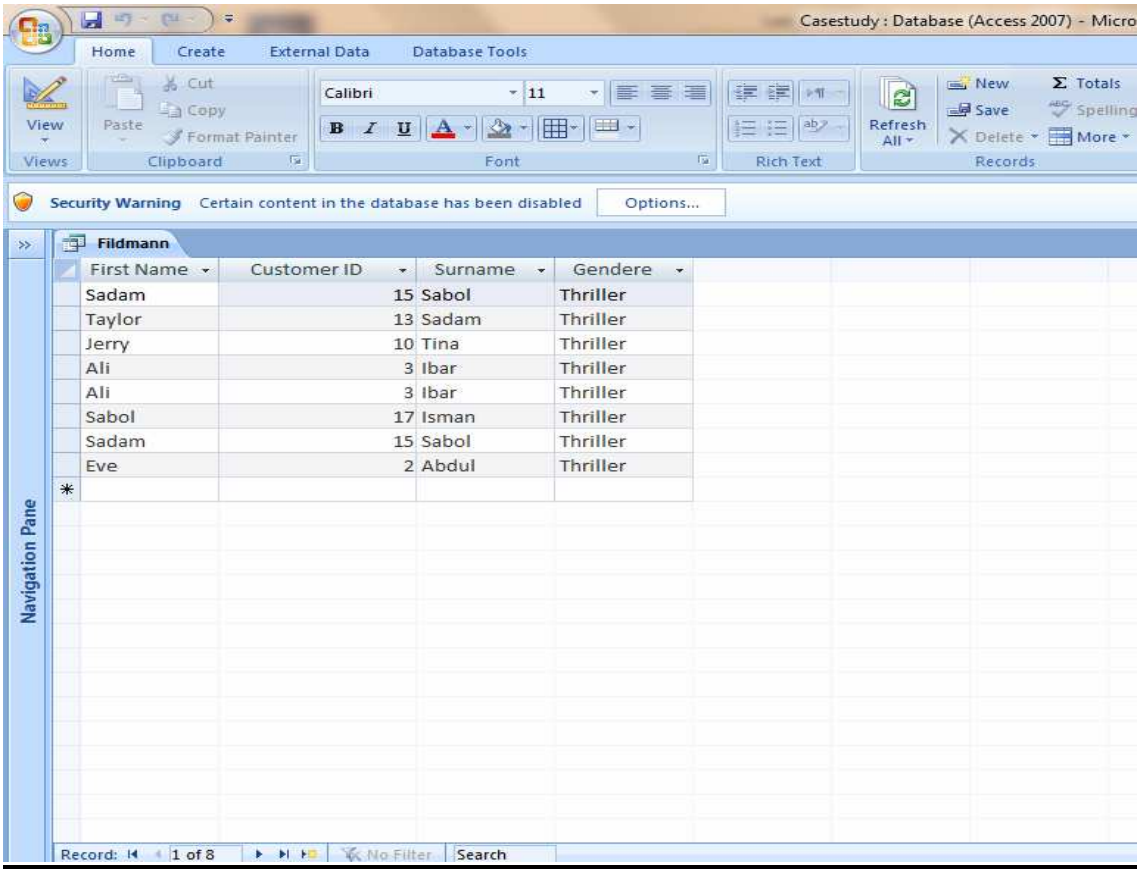

Simple Query Wizard
What title do you want for your query?
Customers Query
That's all the information the wizard needs to create your query.
Do you want to open the query or modify the query's design?
Open the query to view information.
Modify the query design.
Cancel
< Back
Next >
Finish


Field: [Customer Number] [First Name] [Surname] [Gender] [Age]
Table: Customers Customers Customers Customers Customers
Sort:
Show:
Criteria:
or:
Ready

3. Insert the criteria's you want to search for.

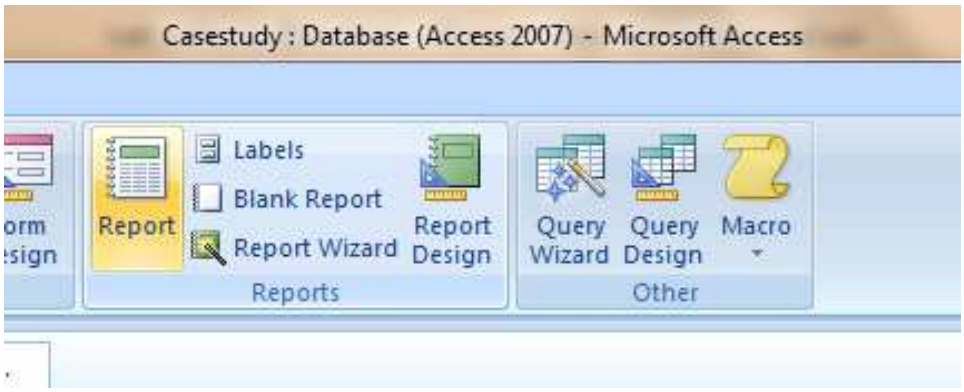


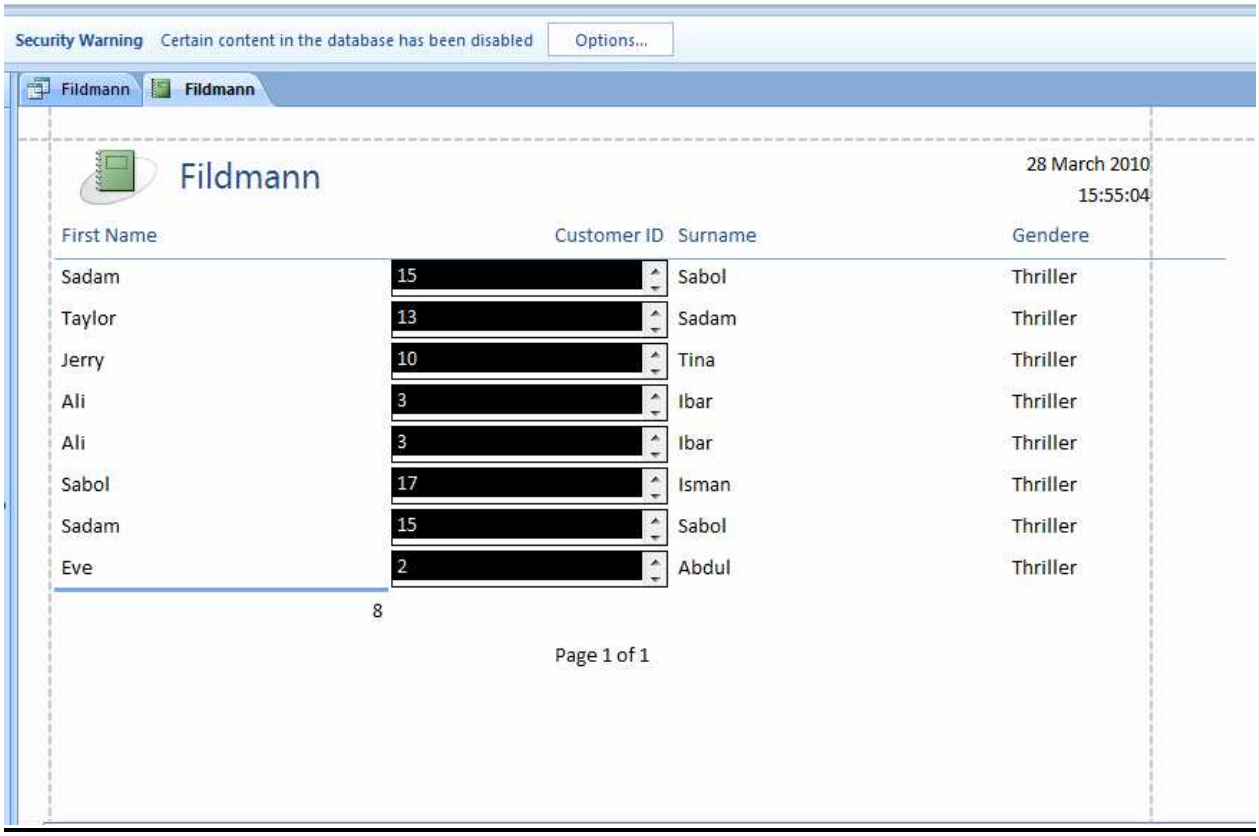
Open the query.



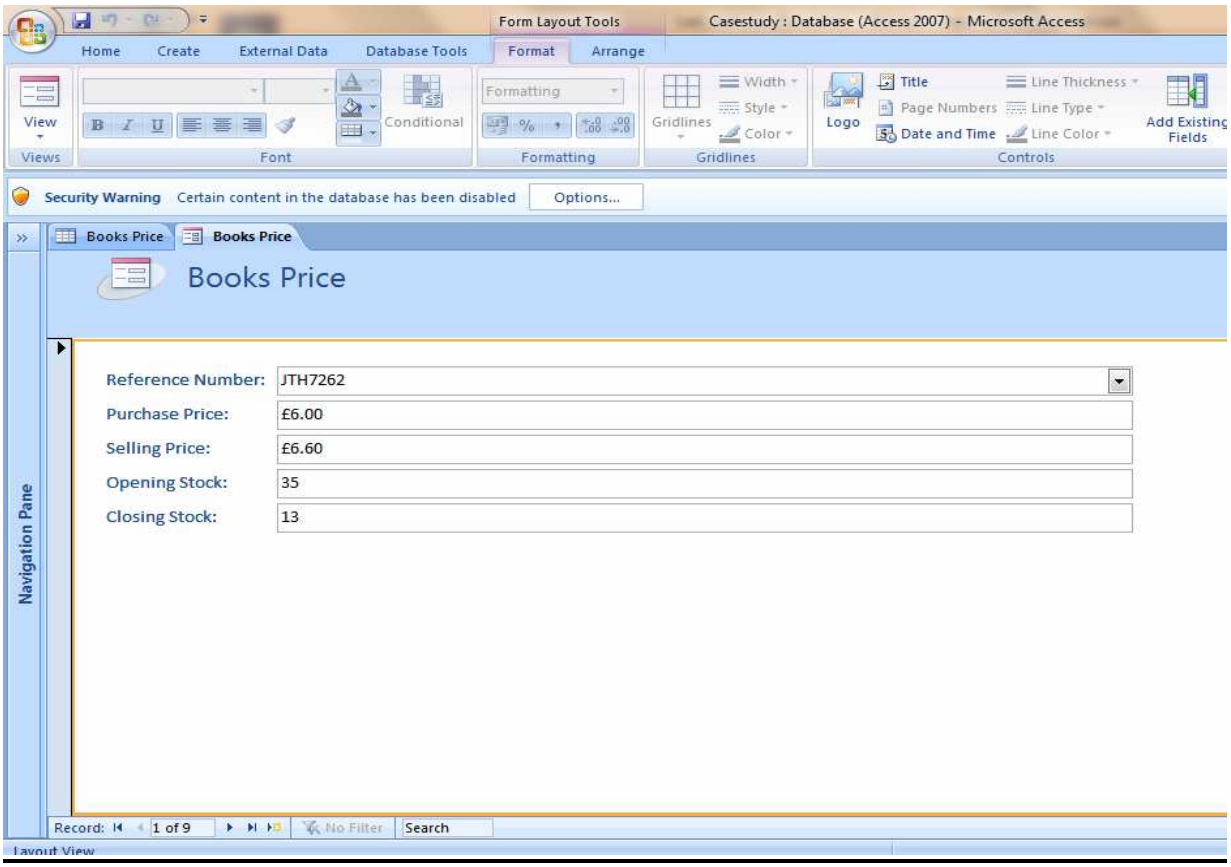
First Name	Customer ID	Surname	Gendere
Sadam	15	Sabol	Thriller
Taylor	13	Sadam	Thriller
Jerry	10	Tina	Thriller
Ali	3	Ibar	Thriller
Ali	3	Ibar	Thriller
Sabol	17	Isman	Thriller
Sadam	15	Sabol	Thriller
Eve	2	Abdul	Thriller

4, Create the Reports by going to create menu and choose Report.

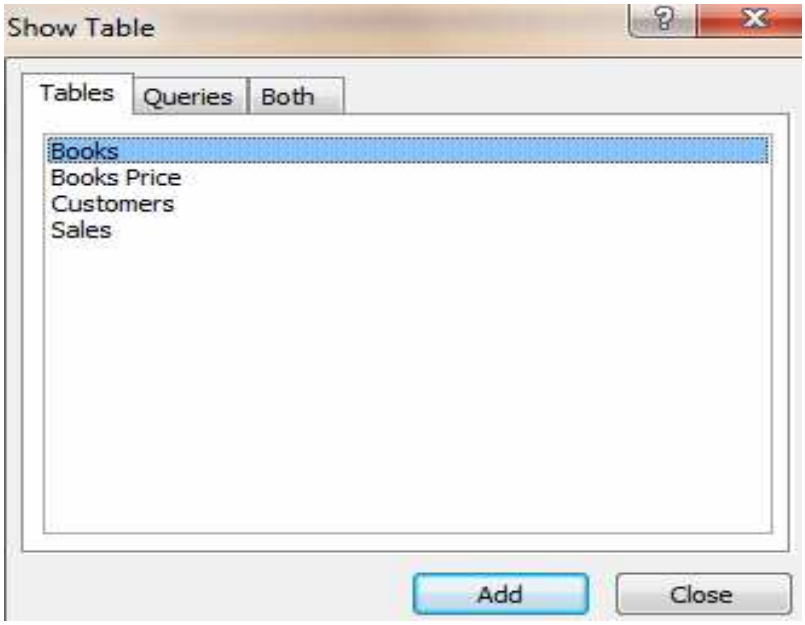




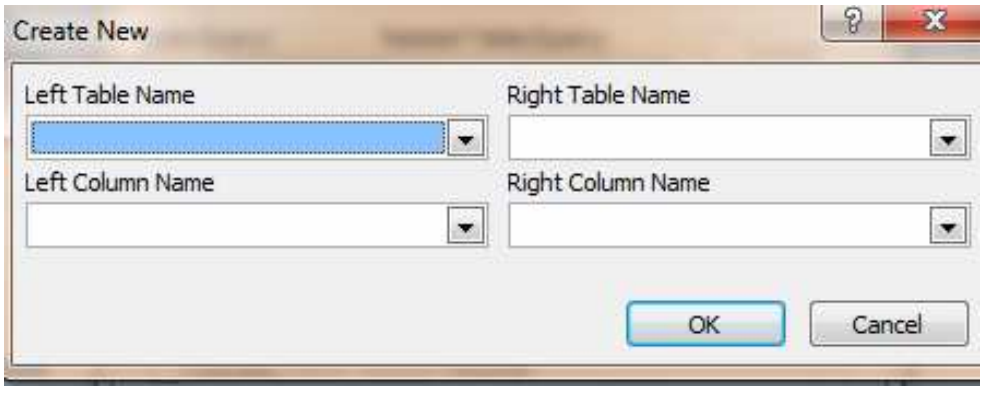
5, Create the FROMS by going to the create menu and choose FORM



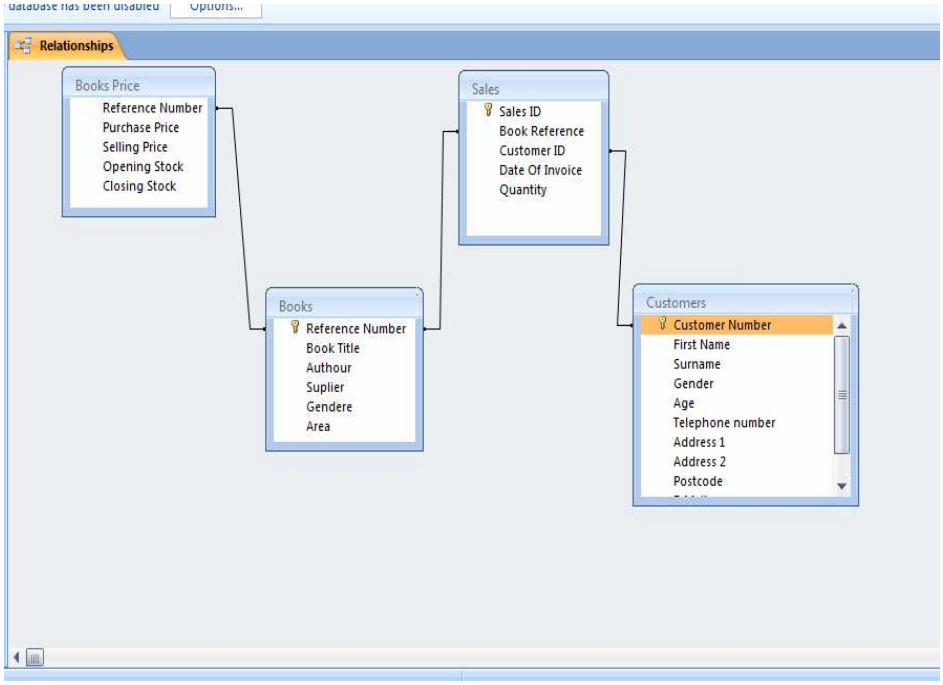
6, create the relationships by going to the database tool menu and chose relationships. Import the tables,



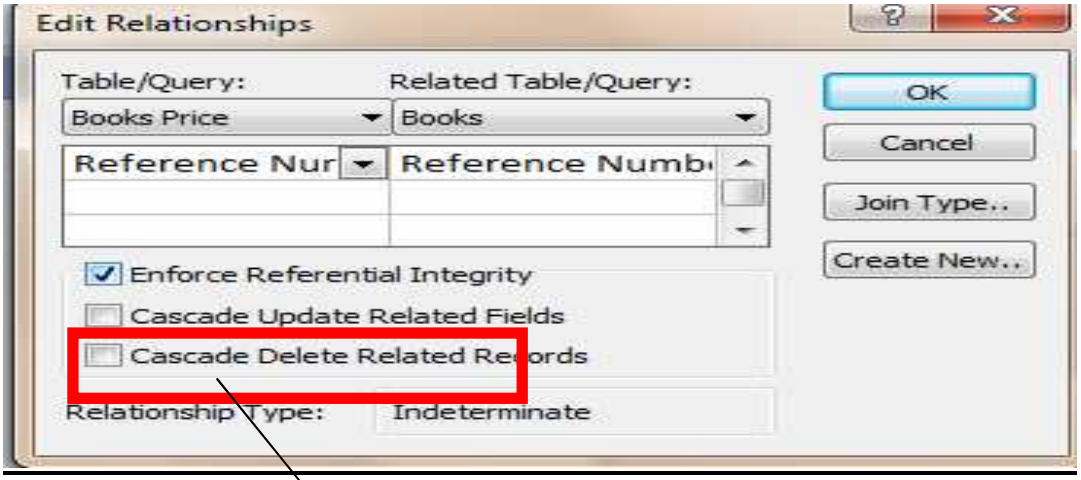
GO TO EDITRELATIONSHIPS AND CREATE THE RELATIONSHIPS BETWEEN THE TABLES



Add the fields from the tables u want to create a relationship between.

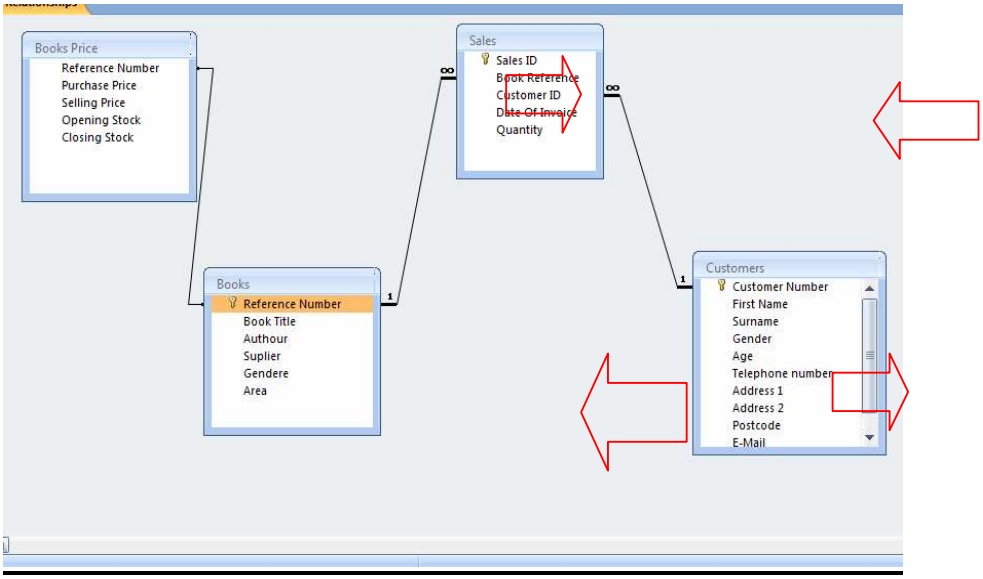


<u>There is only 1 to 1 relationships between the tables.i want to have 1 to many relationships between Books and sales, and sales and customers</u>



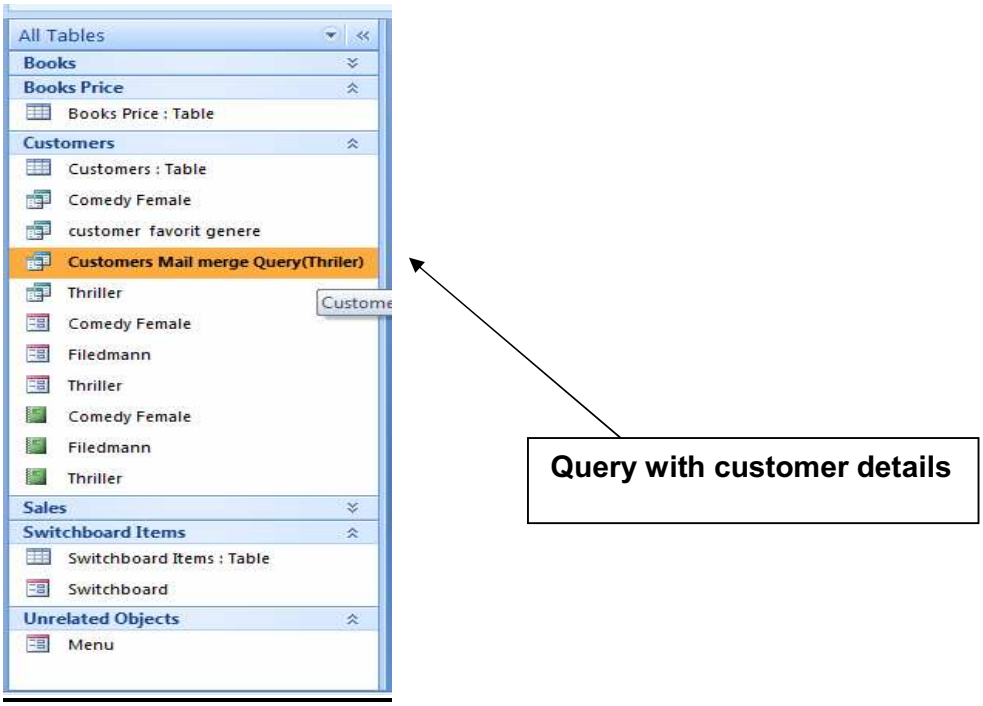
Creates 1 to many relationships

Applied this to the tables i wanted 1 to many relationship between.

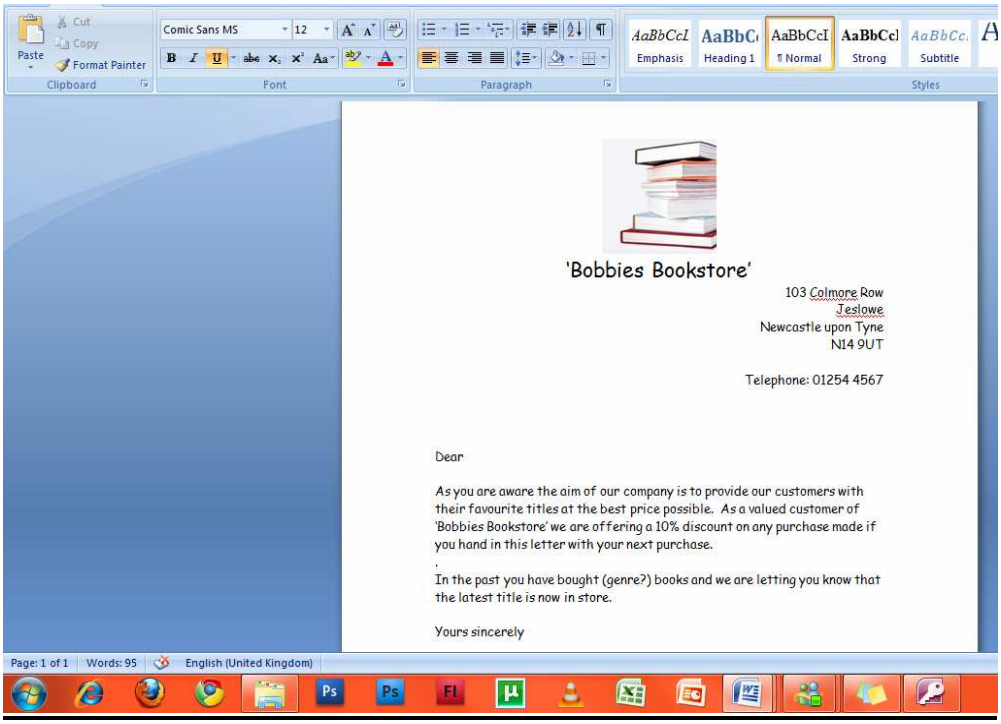


Mail merge

1.Create a query that contains the necessary details, name it and save it.



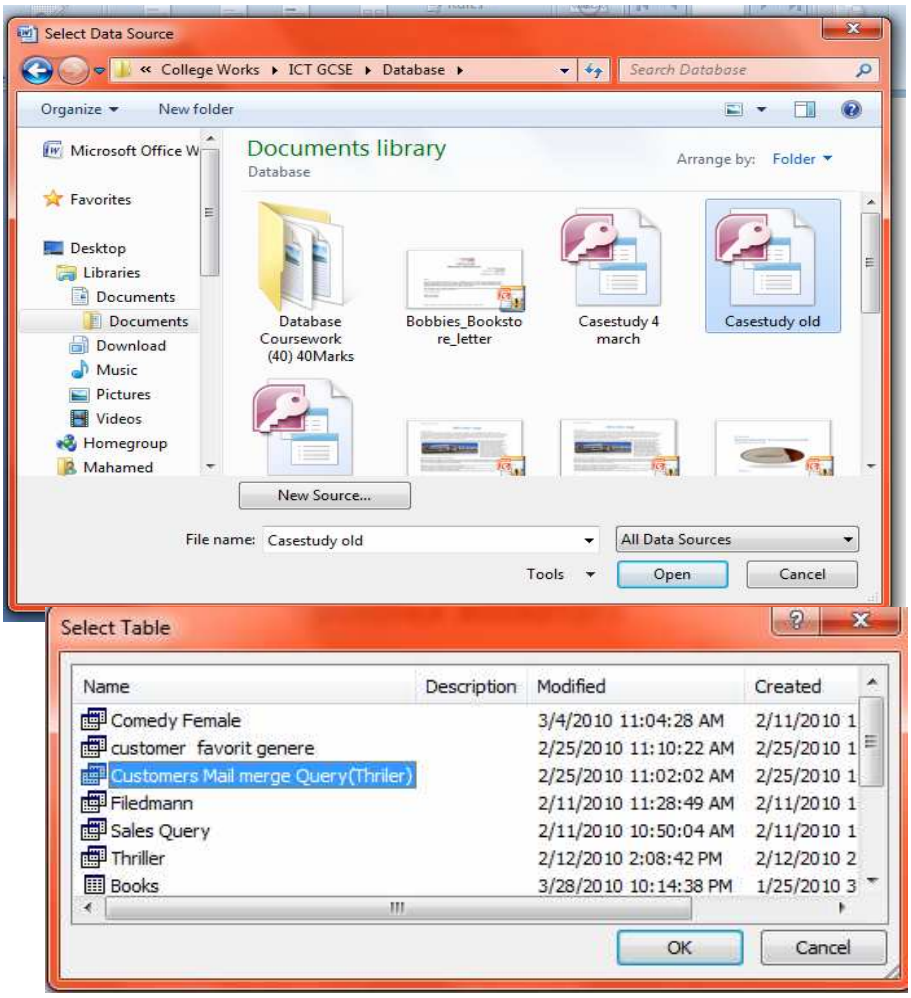
2. ***open the letter from MOODEL(bobbies book store letter)***



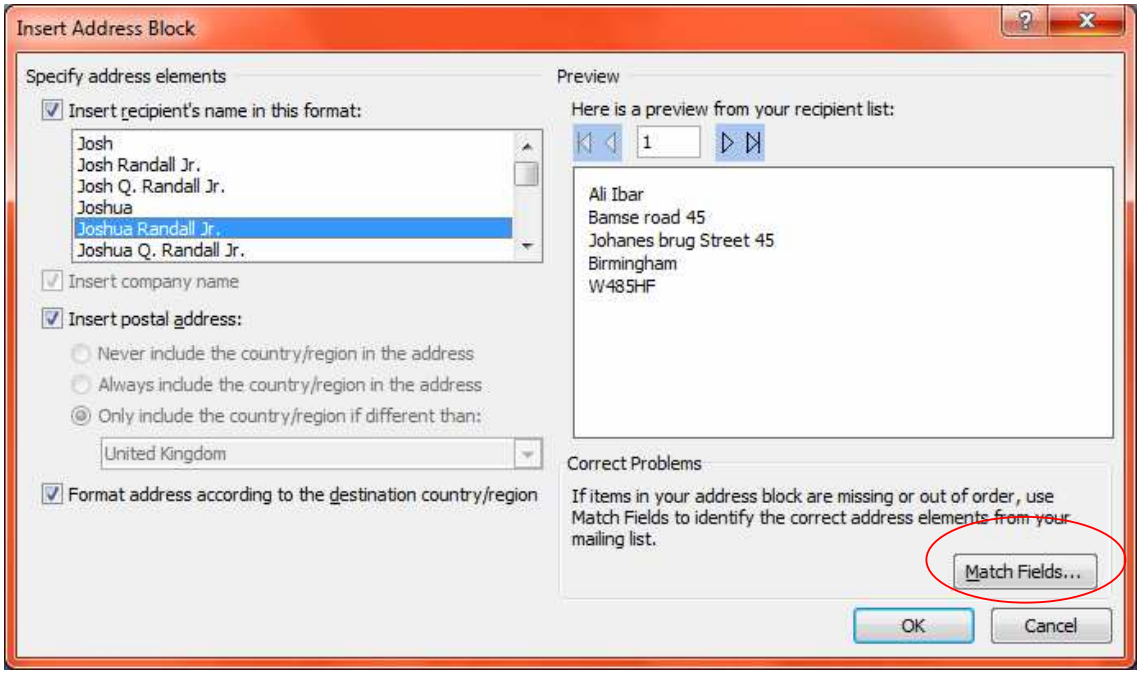
3. ***open the mailings menu (at the top of the world window) and choose letters in the start mail merge menu***

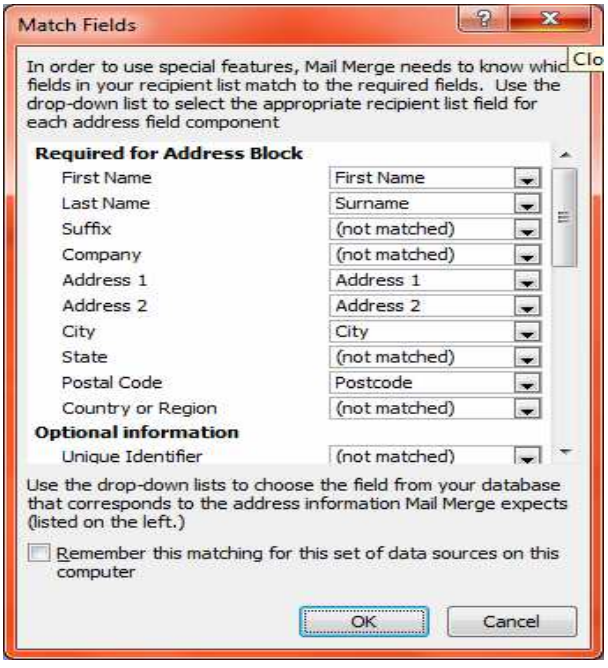
4.then go to the **Select Recipients** *menu and chose* **use existing list**

5. locate the query u saved in the database(find the query)

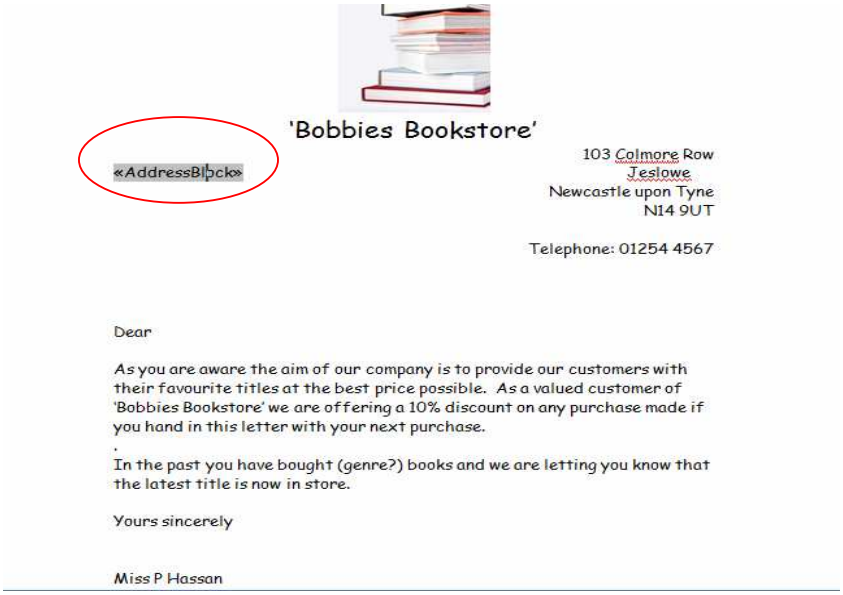


6 . ***go to the Address block menu and choose match fields and match the different fields***





7 . move the edited address block to the appropriate place on the letter



'Bobbies Bookstore'

«AddressBlock»

103 Colmore Row
Jeslowe
Newcastle upon Tyne
N14 9UT

Telephone: 01254 4567

Dear

As you are aware the aim of our company is to provide our customers with their favourite titles at the best price possible. As a valued customer of 'Bobbies Bookstore' we are offering a 10% discount on any purchase made if you hand in this letter with your next purchase.

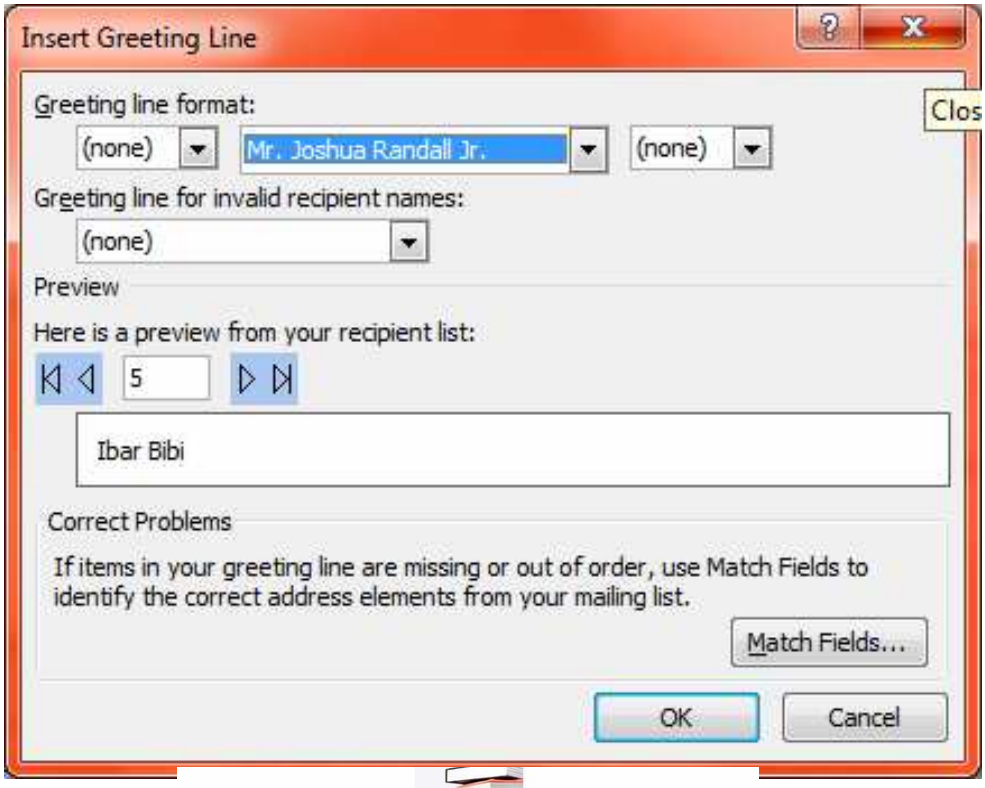
.

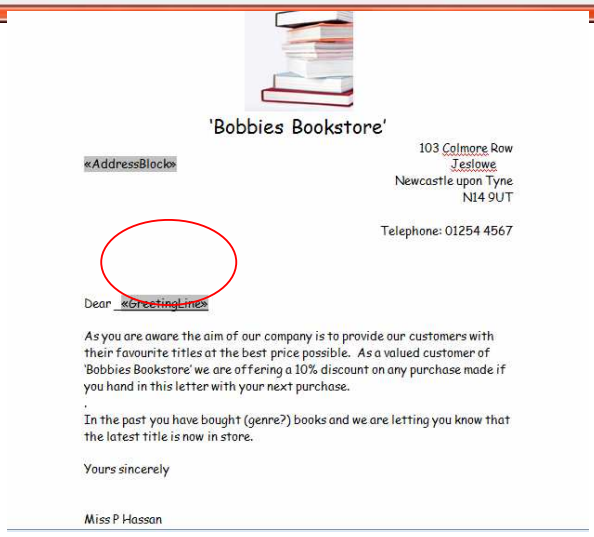
In the past you have bought (genre?) books and we are letting you know that the latest title is now in store.

Yours sincerely

Miss P Hassan

8 . create the greeting line block my going to the GREETING LINE menu and chose appropriate options





'Bobbies Bookstore'

«AddressBlock»

103 Colmore Row
Jeslowe
Newcastle upon Tyne
NI4 9UT

Telephone: 01254 4567

Dear «GreetingLine»

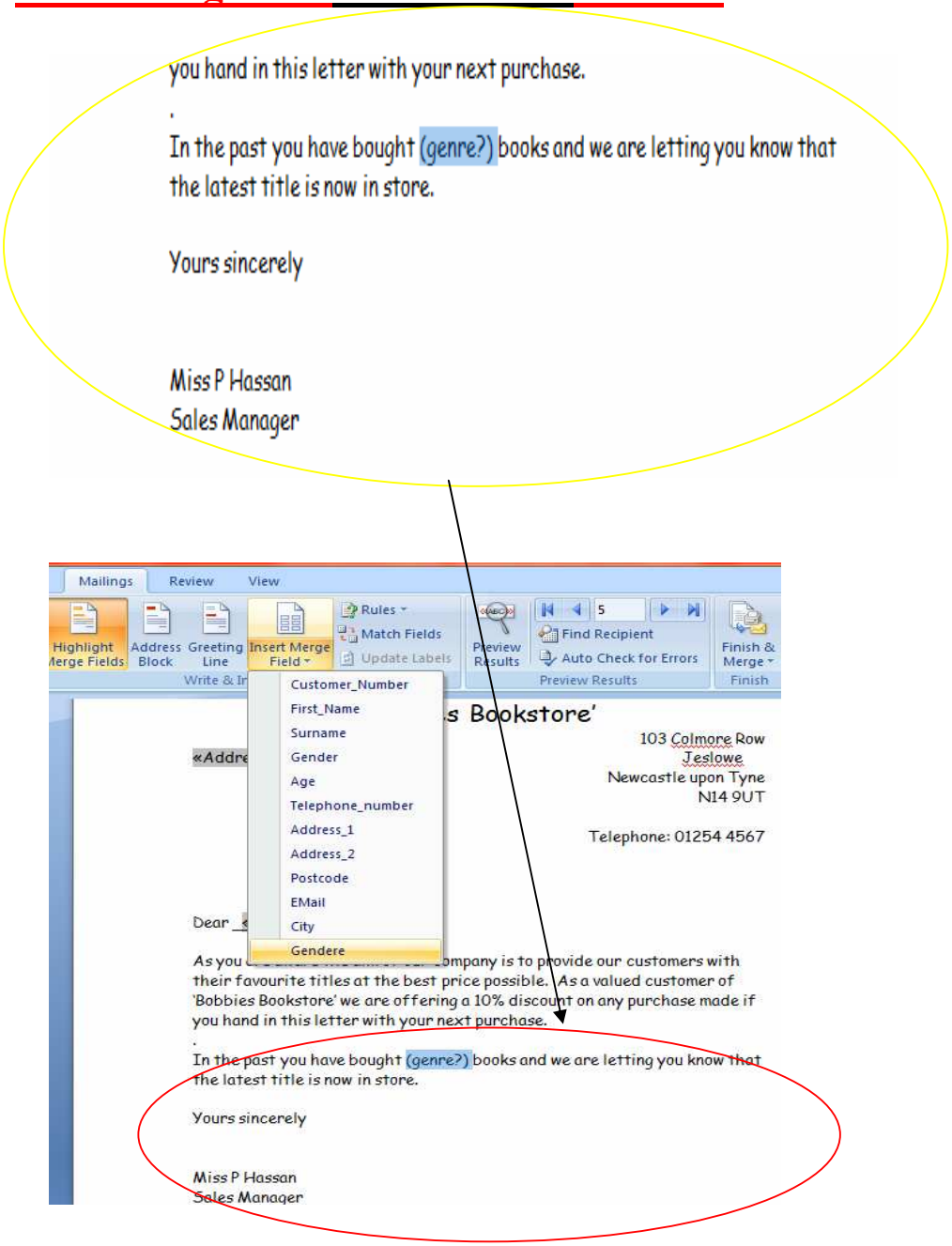
As you are aware the aim of our company is to provide our customers with their favourite titles at the best price possible. As a valued customer of 'Bobbies Bookstore' we are offering a 10% discount on any purchase made if you hand in this letter with your next purchase.

In the past you have bought (genre?) books and we are letting you know that the latest title is now in store.

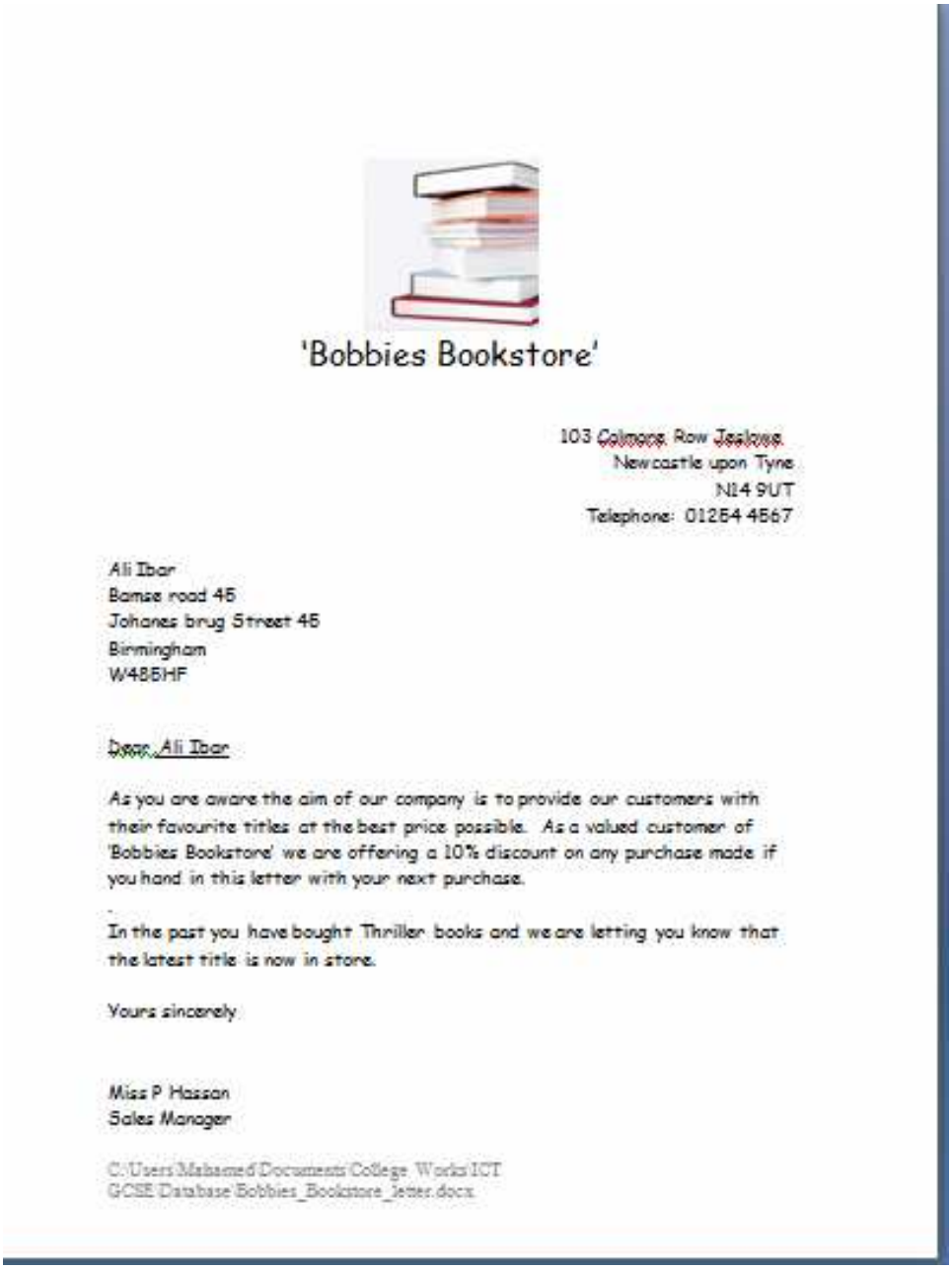
Yours sincerely

Miss P Hassan

9 . change the genre(in the letter) to Thriller by going to insert merge field and choose GENRE



10 . Check if everything is okay by clicking preview results and edit as appropriate



'Bobbies Bookstore'

103 Colmore Row Jesmond
Newcastle upon Tyne
NI4 9UT
Telephone: 01254 4567

Ali Ibar
Bamse road 45
Johanes brug Street 45
Birmingham
W48BHF

Dear Ali Ibar

As you are aware the aim of our company is to provide our customers with their favourite titles at the best price possible. As a valued customer of 'Bobbies Bookstore' we are offering a 10% discount on any purchase made if you hand in this letter with your next purchase.

In the past you have bought Thriller books and we are letting you know that the latest title is now in store.

Yours sincerely

Miss P Hassan
Sales Manager

C:\Users\Mahamed\Documents\College Works\ICT GCSE\Database\Bobbies_Bookstore_letter.docx

'Bobbies Bookstore'

103 Colmore Row Jewlows
Newcastle upon Tyne
N14 9UT
Telephone: 01254 4567

Eve Abdul
Broad gate 15
English Road 63
Birmingham
B386EQ

Dear Eve Abdul

As you are aware the aim of our company is to provide our customers with their favourite titles at the best price possible. As a valued customer of 'Bobbies Bookstore' we are offering a 10% discount on any purchase made if you hand in this letter with your next purchase.

In the past you have bought Thriller books and we are letting you know that the latest title is now in store.

Yours sincerely

Miss P Hassan
Sales Manager

C:\Users\Mahamed\Documents\College Work\ICT GCSE\Database\Bo

Here are 3 different letters (3 results)

'Bobbies Bookstore'

103 Colmore Row Jewlows
Newcastle upon Tyne
N14 9UT
Telephone: 01254 4567

Sabol Isman
Johanes brug Street 46
fernroad 16
Birmingham
D425RE

Dear Sabol Isman

As you are aware the aim of our company is to provide our customers with their favourite titles at the best price possible. As a valued customer of 'Bobbies Bookstore' we are offering a 10% discount on any purchase made if you hand in this letter with your next purchase.

In the past you have bought Thriller books and we are letting you know that the latest title is now in store.

Yours sincerely

Miss P Hassan
Sales Manager

'Bobbies Bookstore'

103 Colmore Row Jewlows
Newcastle upon Tyne
N14 9UT
Telephone: 01254 4567

Jerry Tina
Banna street 12
Maleroad 42
Birmingham
M458KL

Dear Jerry Tina

As you are aware the aim of our company is to provide our customers with their favourite titles at the best price possible. As a valued customer of 'Bobbies Bookstore' we are offering a 10% discount on any purchase made if you hand in this letter with your next purchase.

In the past you have bought Thriller books and we are letting you know that the latest title is now in store.

Yours sincerely

Miss P Hassan
Sales Manager

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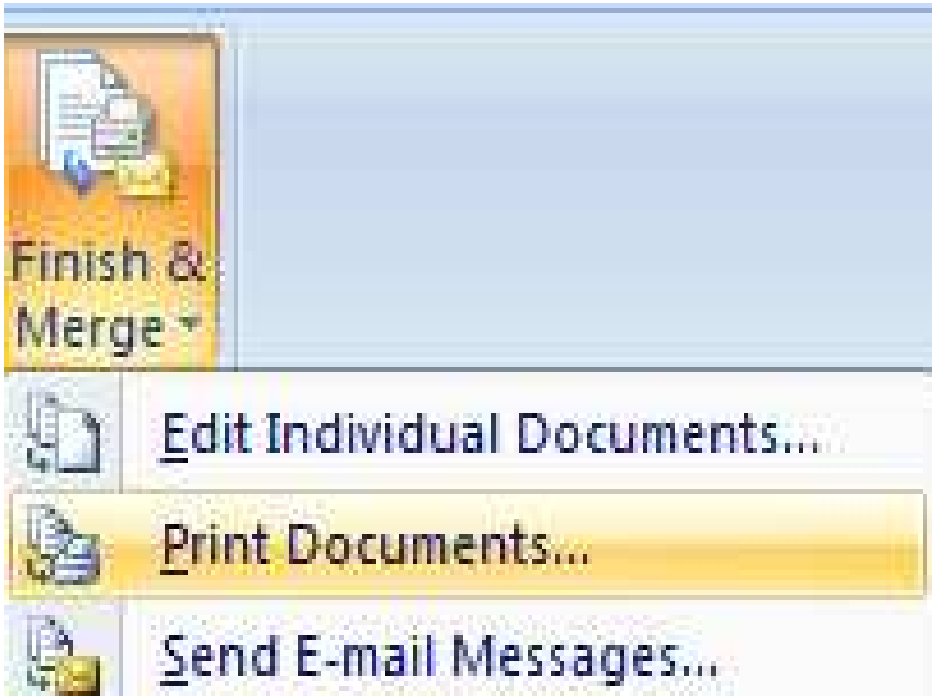
12. ***Then it's done, I have then 2 options, to send them (all) by E-mail or print them***



Evaluation

is Quantitative Objectives fully evaluated

Objectives	Achieved	Explanation
• Working database		This objective has successfully been achieved, this can has been proved by the test plan above. The database is fully working.
• Include all necessary informatio n		This objective has successfully been achieved; the database contains all necessary data to work.
• Produce rapports		This objective has successfully been achieved, the reports has been produces and the end user is satisfied. 3 reports has produced
• look up data(Quer ies)		This objective has successfully been achieved. The database contains enough data(information) to do multiple queries (different criterias). I have done 3 quires
• Produce Forms		This objective has successfully been achieved. The forms has been designed according to the designs and fully implemented. I have done 3 formsquires

• Be user friendly		**The database is easy to use and works without problems.**
• Be printable		**Al of the forms can be printed .i have myself printed out some ,it fits perfectly in A4 paper.**

User Feedback

Dear database Designer,

I am very impressed with the database you have designed for My Company in Fire roads Birmingham. *I am very ecstatic that you were able to get all our customer details in so easily and I'm so happy that it is so easy to use, it will be very easy to update so will bring in great revenue..*

However I found that some of the information you have put into the database is quite useless so I would like to see less information that is useless and more information that tells the user what the database will help the company and how they are to use it. Also I need the database to be more friendly and easy for me to change the information if I needed to change it.

Please could you fix these problems and give me the database and I hope I will be able to successfully use it. Everything else on the database is absolutely fabulous.

Thank You

Mr Carrot

Improvements from user feedback

Based on the user feedback I will have to cut out some of the useless information and add more information that is not useless .then It should be very easy to use the database, users won't need much training on how to use and update the database.