

Assignment Report

by Callum Thomas

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Introduction

In this document I will be talking about the Microsoft Access database I have created for The City Book Store. The task was to create a database that reflects the needs of this small but expanding business. The aim was to design and create them a system that allowed them to manage their stock by placing orders to their suppliers, receive orders from their customers, receive queries about particular books and the current stock level of the book and to store customer data in a more efficient way than their current storage system where they use a document to manually type all of the names and addresses etc in an un-organised and hard to manage format,

The Tables

The tables I have chosen to create are customer, stock, supplier and orders.

Customer Table

I have chosen this table to allow the company to store all of their customer data in an easy to manage space where they can add, edit and delete customer data at will. The fields I have chosen to add into this table are Customer ID (primary key), this is so that each customer has a unique identifier that they can be recognised by when using the forms and query searches within the database to lookup any data on the customer. The next fields are first name and surname, I have used these for obvious reasons, to keep a record of the customers details and so that the company will know what name to put on any packages they get delivered to the client. Following that I have fields that hold the data for the clients address, this is so that the company will know where to send any packages if they need to. Next I have the gender of the client, this is there so that if the company wants to look at any of their demographics or perform a query to find out what gender makes more purchases etc, they have the ability to do so.

Stock Table

I have chosen this table to allow the company to manage the books they are ordering in and keep a log of how many they have in stock without having to go and count them manually. The first field in this table is the Item ID field(primary key), again this is used as a unique identifier to make sure that all of the stock can be represented by its own value in any reports or queries made. Next, I have the names of the books, this is to know the title and author of each book without having to go and look manually in the stock room or front of the store. The books I have chosen to fill this field with are:

[1] [2] [3] [4] [5] [6] [7]

I have chosen these books as these are books; I know are considered to contain great literature and I know of 1st edition collectors' copies that sell for a reasonably high price, therefore I believed they suited the purpose.

I have then added prices for each book in the next field to give an example of what the field would be used for. Finally, I have included a quantity for each book to see how many of each were in stock without having to count them manually.

Supplier Table

I have included a supplier table to hold information to contact the suppliers to order or source books wanted for the shop. I have included a supplier ID field (primary key) to have something to identify the supplier by when making any queries or order requests. I have followed this by an email to contact the company by as well as a phone number should the company need to phone to make any enquiries or orders.

Orders Table

Finally, I have included an orders table to keep track of orders made to the supplier or orders made by customers into the business, this is so that the company can keep track of what books are selling, who is buying them and what stock needs to be ordered back in. The first field used here is order ID (primary key), this is to be able to identify each unique order by a number and search for these in the order form if necessary. Next, I have included the Item ID, this is to show what item has been ordered. Then I have included the customer ID to make it possible to see which customer has ordered the product. I have then included the price of the item that has been ordered and the ID of the supplier it was ordered from, this is to keep track of the cost of the stock and where it is coming from.

Queries

I have completed a query to demonstrate how the company would be able to use the database to search for information without having to scroll through all of their data to find it. The query I have used is "Query to find out how many copies of Catch-22 are available". In this query I have used an example client and show that they have searched to find out how many copies of a book they would like to purchase are available. I have included the name of the book, the price and the quantity in stock. To do this I have used SQL to search the "Stock" table for a book name that matched "Catch-22 – Joseph Heller" and I have then added the price and the quantity fields to display this information alongside the book, giving me the result that show the desired information.

Forms and Macros

I have used forms in this database to demonstrate how the tables can be navigated in a quick and easy to use format. The first form I have created is used to navigate the database and the other forms are used to search for, add and delete data from the tables.

HomeForm

This is the first form I have created to navigate the tables and forms within my database. I have included buttons with macros on them to open the desired table or form when clicked. I have buttons for "Customer Table", "Orders Table", "Stock Table" and "Supplier Table". Then for the forms I have included buttons to navigate to the "Customer" and "Order Form". When clicked these all open the desired table, this saves time from searching for the table down the side of the navigation bar. All of the buttons within the table have macros enabled on them that open the desired table when clicked. I have also included a separate macro that opens this form immediately when the program starts. I have named this macro "autoexec" this means that the program will automatically execute the macro as soon as it loads. In this case, opening the Homeform.

Customer Form

I have included this form so that there is an easy way to manage the data within the customer table. From this form you can add, delete, view next and view previous records. This allows the user to navigate through the data of the customers with ease. In this form I have included most of the fields from the customer table. I have included "First Name", "Surname", "Postal code", "Street Name", "House Number", "Male or Female" and "Customer ID". This allows you to see all of the necessary data of the customer you wish to view, and also to view all of the data in a more user-friendly format.

Order Form

I have included an order form to allow the workers at the books shop to place order to the supplier but also for them to be able to log orders they receive from any customers that wish to purchase a book. In this form I have given the employees the ability to add, delete, view next record and view previous record. I have included these buttons to give them the ability to view orders already in the table, add any orders that need to be put into the table, and also delete any orders from the table that may have been cancelled or added in error.

In this form I have included the "Order ID" field so that they see the number of the order in case of any queries that need to be made, "Item ID" to allow them to be able to see which item was ordered and the cost of the item, "customer ID" to allow them to be able to see which customer has placed the order and then get any contact details needed from the customer, "price" to see the total cost of the order that has been made and finally the "Supplier ID", I have included this so that the employees know which supplier they sourced the books from.

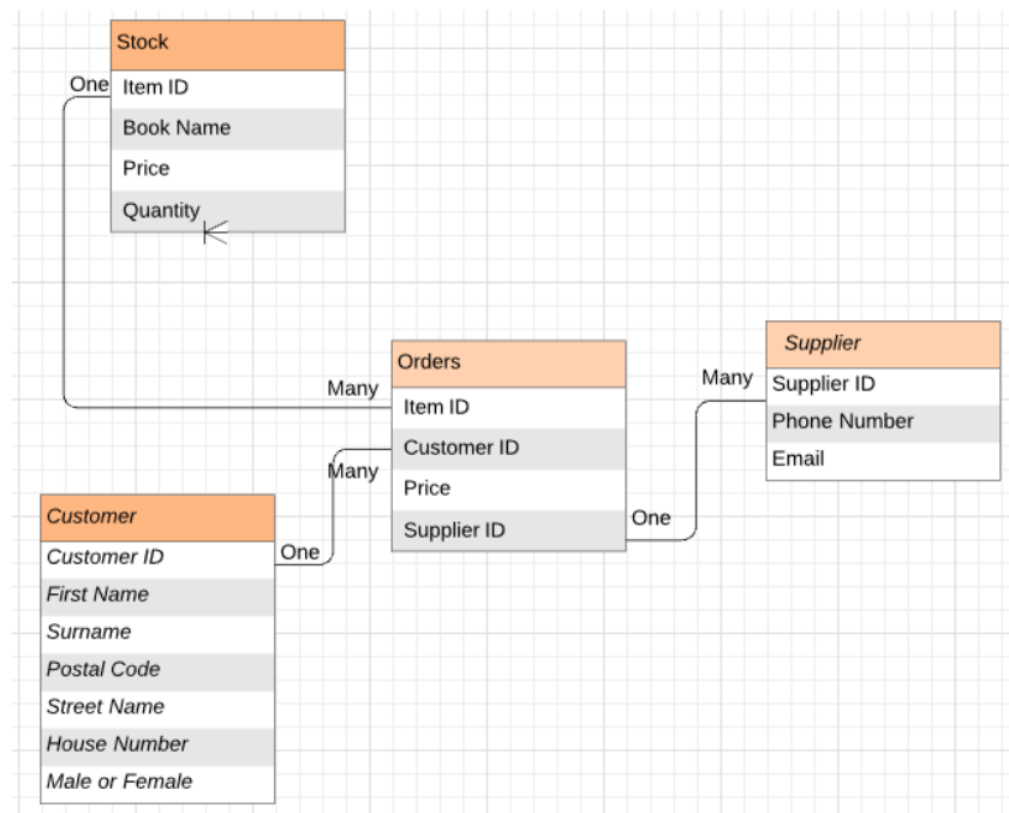
Relationships

It was important for me to make relationships between the tables that had fields that needed to be linked, I have done this so that data from one table can be used in another table without having to re-enter the data multiple times.

I have also done this so I can enforce referential integrity to make sure that all of the primary key data was the same in every table to avoid any error.

I have made a one to many relationship between the primary key "Customer ID" and the "Customer ID" field in the "Orders" table, I have done this to make sure that the ID is the same in both tables and there is no error made by the "auto number" feature making the ID a different number to the number put inside the "Orders" table. I have also made a one to many relationships between the "Item ID" field in the "Stock" table and the "Supplier ID" field within the "Supplier" table. This is all to make sure that all of the primary key data has referential integrity enabled to ensure that no human error is made in the "order form" when adding new data to the table. I have chosen one to many because I am using one field from another table and using it many or multiple times in the chosen table which is "orders". Each field from these tables is going to be used in every order so ensuring that the data was going to be added correctly was important.

ERD



With no access to Microsoft Visio I have had to improvise and create my own ERD, I have annotated the relationships between each table to show which side is one and which side is many.

Conclusion

In conclusion I believe that I have accurately met most of the requirements of the The City Book Store correctly and have incorporated the required features into my design as asked. This system would suit a small business that needed to manage stock, client data, orders and their suppliers.

Assignment Report

GRADEMARK REPORT

FINAL GRADE

30/100

GENERAL COMMENTS

Instructor

Generic Assessment Criteria Callum Thomas 30%	Marks available	Marks awarded
1. Engagement with Literature Skills		
2. Knowledge and Understanding Skills		
<i>Suitable development methods employed and justified. Using the above scenario,Functionality</i> A very simplistic and far too generic design. You have not considered the uniqueness of the bookstore.	25	7
3. Cognitive and Intellectual Skills		

<i>Provide evidence that the tables will link together in a relational database environment. For this section you should also provide evidence of the design techniques that you have used to develop the database system</i> <i>Understanding of design and SQL</i> No use of SQL. You have translated your design into Access tables but again it is very simplistic.	20	7
4. Practical Application Skills		
<i>Successful demonstration of software implementation. You are required to implement a database to meet the requirements, attribute field to enhance the design)</i> <i>Forms, Queries, Reports, Relationships, Macros</i> Only one query has been presented you have not considered the requirements of the bookstore customers and staff users of the system.	45	10

5. Transferable Skills for Life and Professional Practice		
<i>All work suitable presented and referenced.</i> A suitably well written report.	10	6

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