

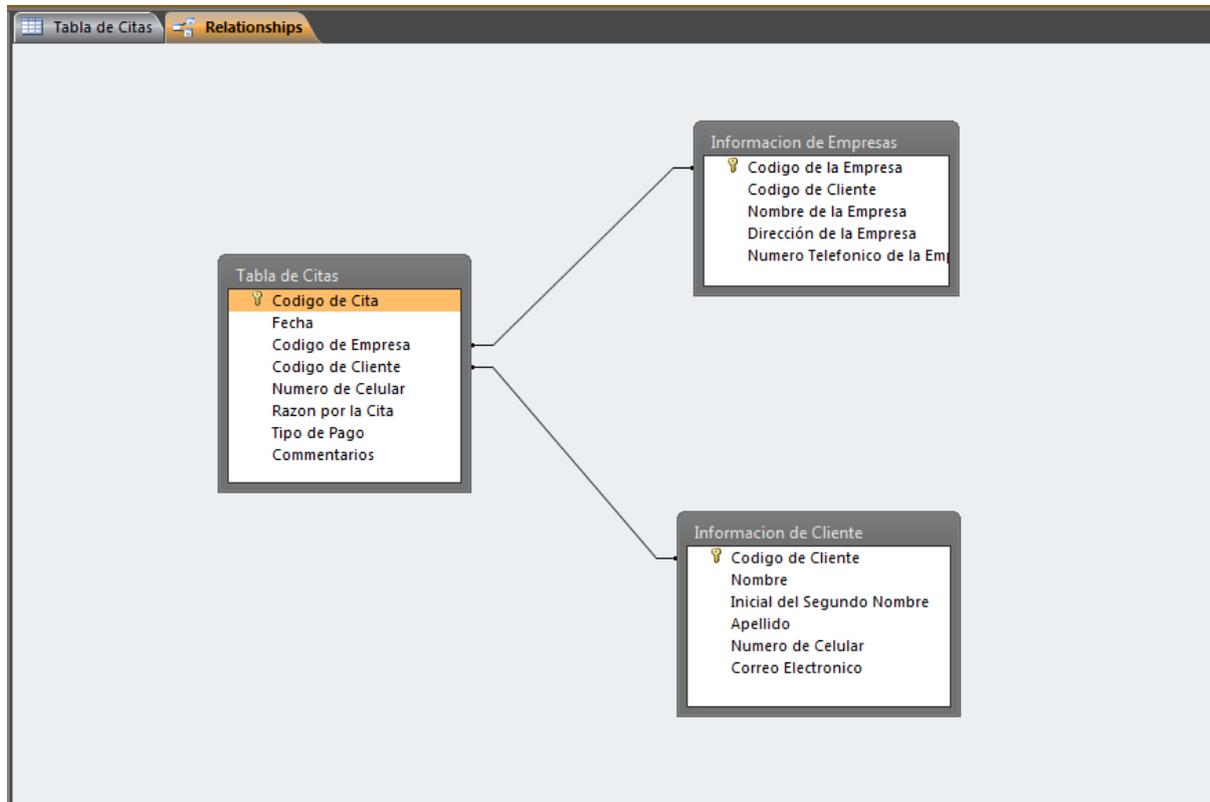
Criterion E: Product development

Advanced Techniques

- Three or more related tables.
- Proficient use of techniques to enable easy navigation such as menus or buttons
- Proficient design of reports and/or forms
- Complex queries/calculated fields

Overall Structure of the Database

The structure of the database is shown in the screen shot below.



These are the tables that are used in the database; they contain the data that will be inputted to the database by the user.

Description:

The screenshot displays the Microsoft Access interface for a table named 'Información de Empresas'. The table design grid shows the following fields and data types:

Field Name	Data Type
Codigo de la Empresa	AutoNumber
Codigo de Cliente	Number
Nombre de la Empresa	Text
Dirección de la Empresa	Text
Numero Telefonico de la Empresa	Number

Below the design grid, the 'General' tab of the field properties is visible, showing the following settings for the selected field:

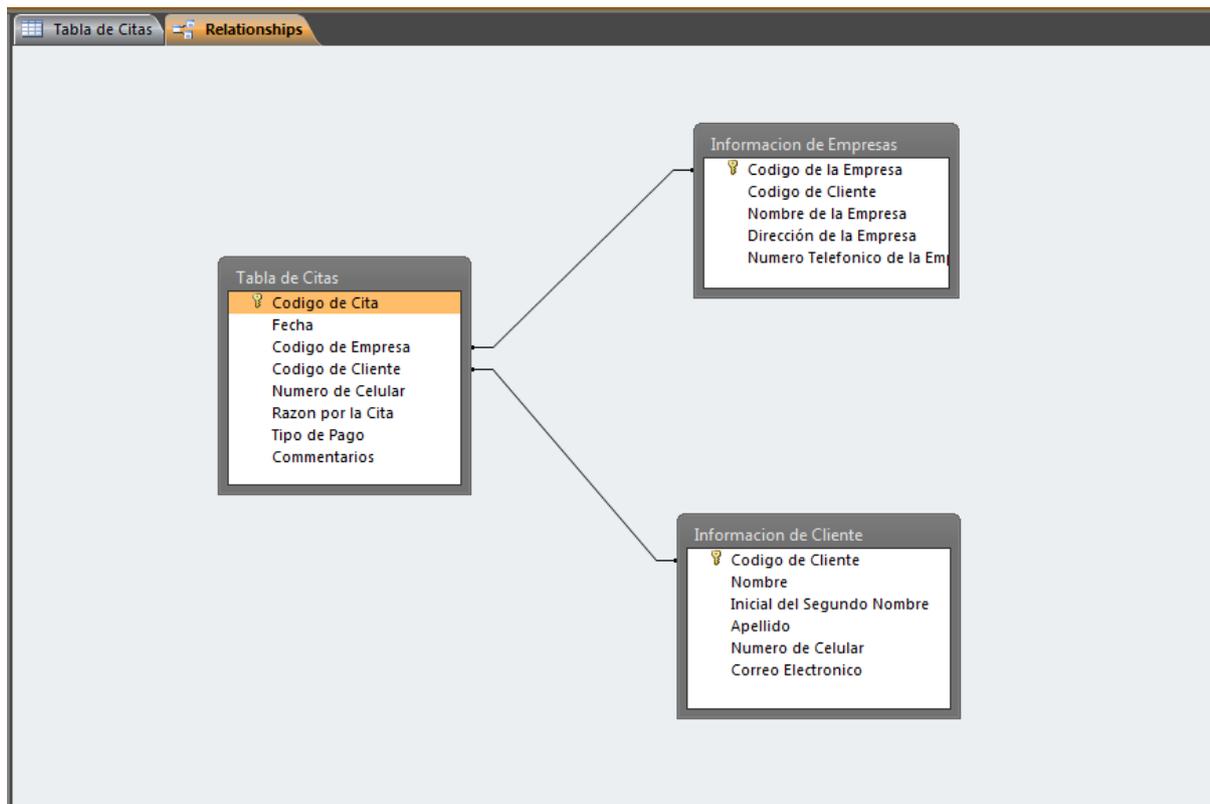
Property	Value
Field Size	Long Integer
New Values	Increment
Format	
Caption	
Indexed	Yes (No Duplicates)
Smart Tags	
Text Align	General

Annotations with arrows point from text boxes to specific fields in the table design grid:

- Workplace ID points to 'Codigo de la Empresa'.
- Client ID points to 'Codigo de Cliente'.
- Workplace Name points to 'Nombre de la Empresa'.
- Workplace Address points to 'Dirección de la Empresa'.
- Workplace Telephone Number points to 'Numero Telefonico de la Empresa'.

The 'Workplace ID' is an AutoNumber that will increase as the records are added onto the table. This is done so that in other tables the 'Workplace' can be easily identified, as now they will now have a unique number to identify themselves. The Client's ID will be a lookup which gets the respective ID's from the Client's Information table, I've also added an input mask of 3 digits in case it ever goes over 100. The 'Workplace Name' is a text data field as some workplaces have alphanumeric characters. The same applies to the 'Workplace Address'. Finally the 'Workplace Telephone Number' contains a number data type in which it will store the telephone number of the business; however, I didn't include an input mask for the reason that some of the businesses are outside of the country; therefore there can't be a single format.

Three or more related tables



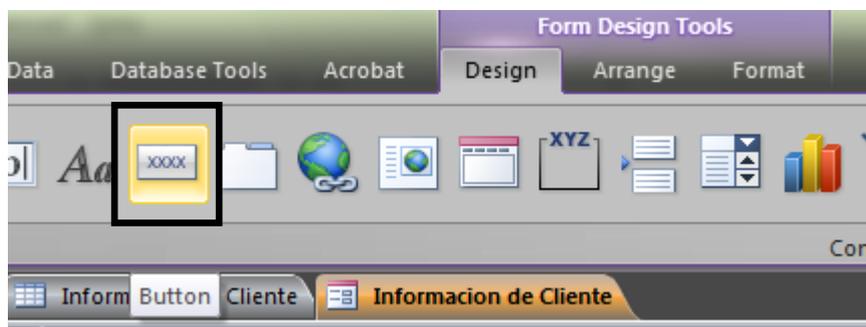
Here we can see the relationship that I created by using my 3 tables. These relationships were made in order to keep my data organized and not redundant throughout the database. These are the relationships that are going to be used to create the 'complex queries'.

Proficient use of techniques to enable easy navigation such as menus or buttons

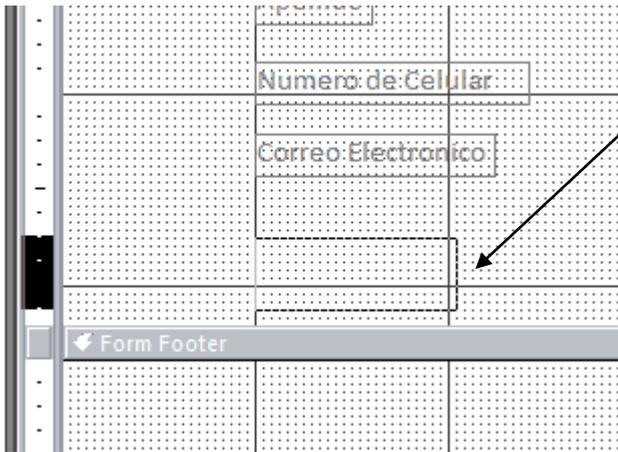


The purposes of the buttons shown above are to enable easy navigation between records; to provide a user-friendly interface.

My design was based on my initial design on Criteria D.



In order to create buttons I used the feature that MS Access 2010 has in its 'Design' tab.

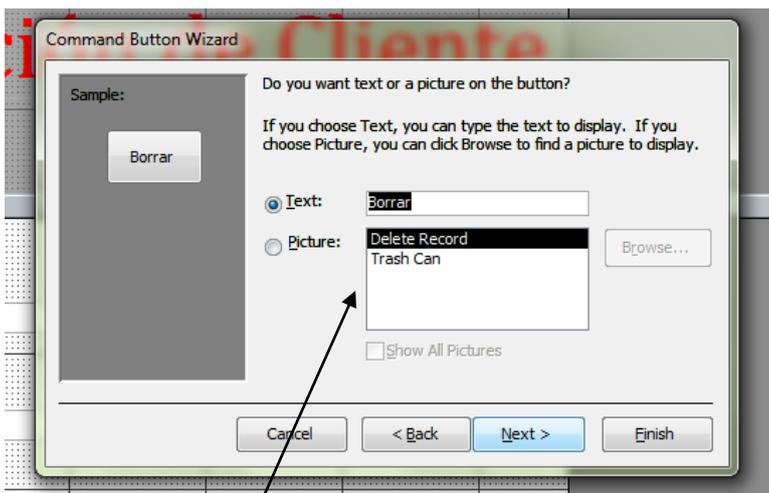
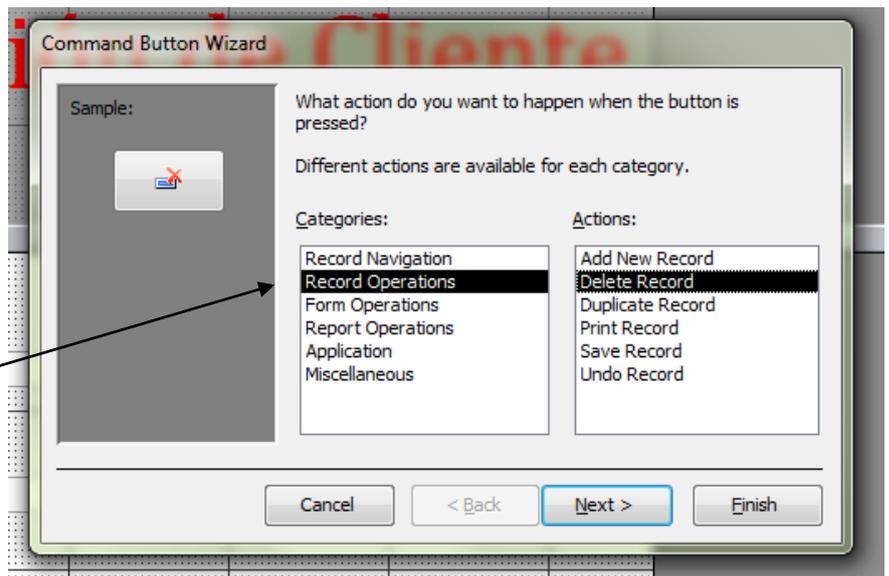


I clicked and dragged the mouse to create the position in which I'll be placing the first button according following my design.

A window popped up showing me the following options. >>

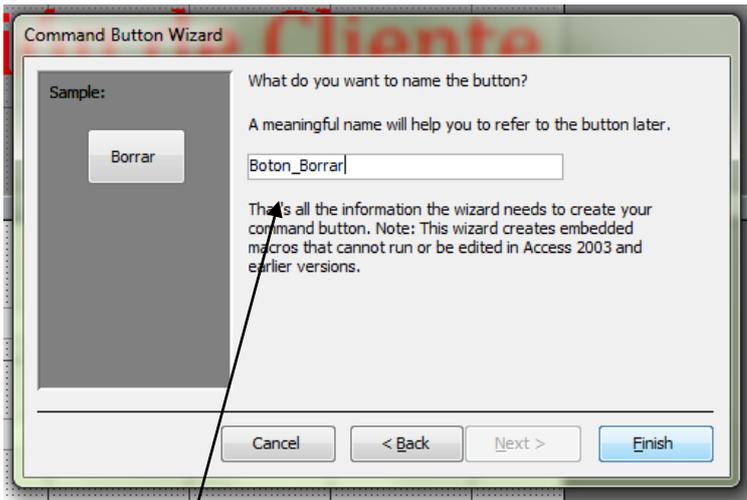
As my client stated that this button specifically had to be the 'Erase' button I chose:

Record Operations >> Delete Record



"Delete"

Given that I wasn't provided with any picture, I simply chose text and wrote 'Borrar'. This button will be in charge of deleting the record the user is currently in with one single click.



If my client wants me to edit the database in any given time, I made easier the location of the buttons by adding a label shown in the left side.

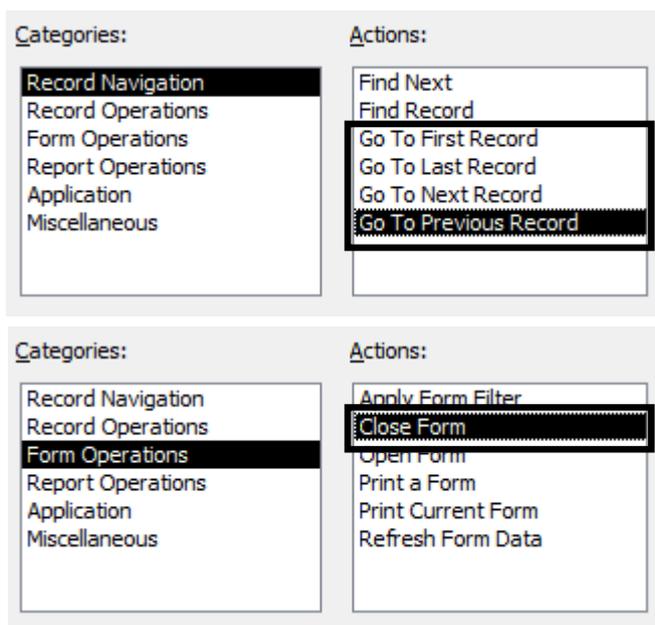
<<<<

“Erase_Button”

The button appeared a little bit off the actual design of my client, so I moved the button to the position showed in the diagram at the right. >>>

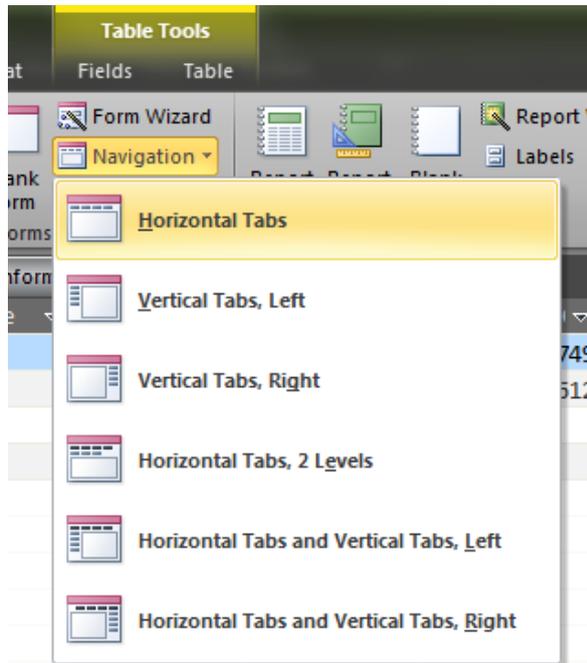


The remaining buttons where done using the same procedure; however, I used different categories for some, such as 'Close Form'. The following screenshot shows the location from which I obtained the rest of the actions performed by the buttons:



I used the actions inside the square at the left. I followed my design by using the ones that were essential for the forms.

Instead of using a switchboard I decided to use a 'Navigation Menu', which does similar operations when handling forms/reports.



I used the layout that placed the buttons at the top of the screen: 'Horizontal Tabs' this will make the navigation easier, because all the forms will be in the same place.

This buttons work when the client clicks on them, afterwards, a form/report/query is displayed inside the Navigation Menu so the user can use it.

The design finished up like the screenshot shown below. I created the menu keeping in mind that my client's resolution is: 1366 x 768, therefore this menu is designed to fit into that display.

A screenshot of a web application interface for 'ALA Información de Cliente'. At the top, a navigation menu contains several buttons: 'Formulario de Información de Cliente', 'Formulario de Información de Empresas', 'Formulario de Citas', 'Buscar Empresa', 'Buscar Cliente', 'Buscar por Fecha', and 'Reporte de Empresas'. Callout boxes with arrows point from these buttons to labels: 'Workplace Information Form' (pointing to 'Formulario de Información de Empresas'), 'Appointment's Form' (pointing to 'Formulario de Citas'), 'Search for workplace' (pointing to 'Buscar Empresa'), 'Search for client' (pointing to 'Buscar Cliente'), 'Search by date' (pointing to 'Buscar por Fecha'), and 'Workplace's Report' (pointing to 'Reporte de Empresas'). Below the menu is a red header with the 'ALA' logo and the text 'Información de Cliente'. The main content area is a form with fields for 'Codigo de Cliente' (3), 'Nombre' (Samuel), 'Inicial del Segundo Nombre' (E), 'Apellido' (Linares), 'Numero de Celular' (78854749), and 'Correo Electronico' (samlinares@hotmail.com). Navigation buttons include 'Primera Entrada', 'Ultima Entrada', 'Borrar', 'Entrada Anterior', 'Siguiete Entrada', and 'Cerrar'. A status bar at the bottom shows 'Record: 1 of 4' and a search field.

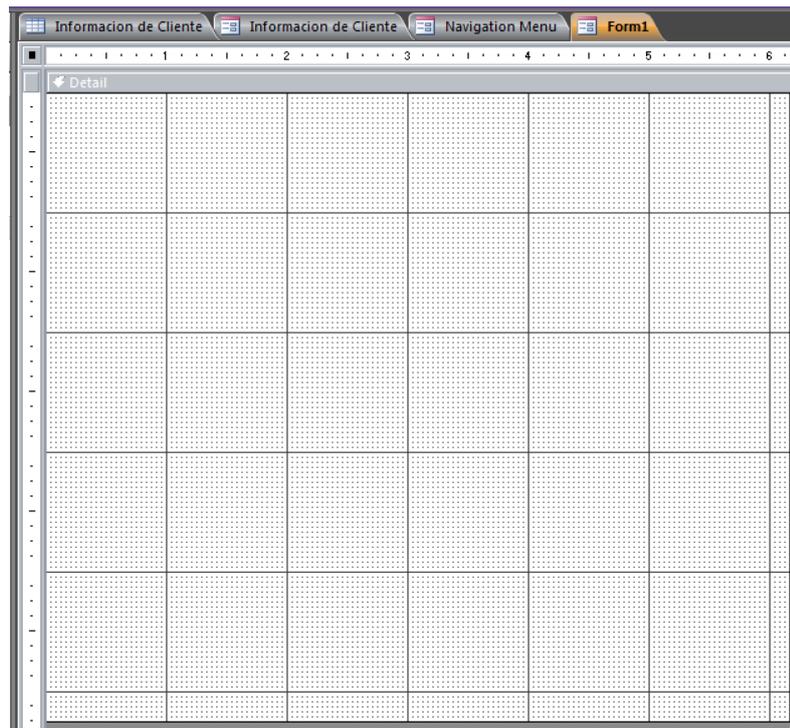
Client's Information Form

Proficient design of reports and/or forms

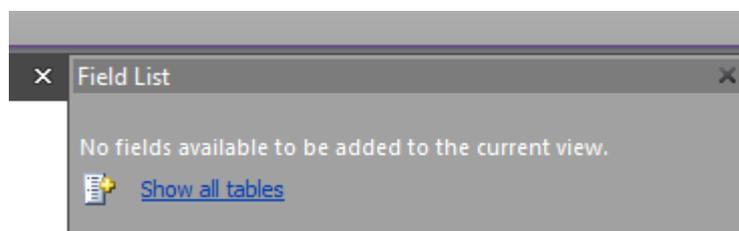
As my client wanted a 'simple' database which would let her add, delete and output the current records I decided on creating forms with buttons and menus. To do this I clicked on the "Blank Form" button inside the 'Create' tab as shown below.



This created a form with nothing inside it.



In order to add fields I clicked on the option labeled: "Show all tables"



Afterwards I placed all of the fields onto the form by 'click and drag' and organized them to look similar to the design that I made.

The screenshot shows a form design tool interface with a grid background. The form is titled "Detail" and contains the following fields:

Código de Cliente	Codigo
Nombre	Nombre
Inicial del Segundo Nombre	Inici
Apellido	Apellido
Numero de Celular	Numero de Cel
Correo Electronico	Correo Electronico

Finally, to enable easy navigation I placed the buttons in the same location as the design.

I used a white font for the title because of my client's request. The logo is placed at the top left corner, just as the design stated. Finally the header's 'dark red' background was also defined by my client.

The screenshot shows a completed form design in a software tool. The form has a dark red header with a logo and title, and a main content area with input fields and navigation buttons.

Form Header:

- Logo: ALA
- Title: Información de Cliente

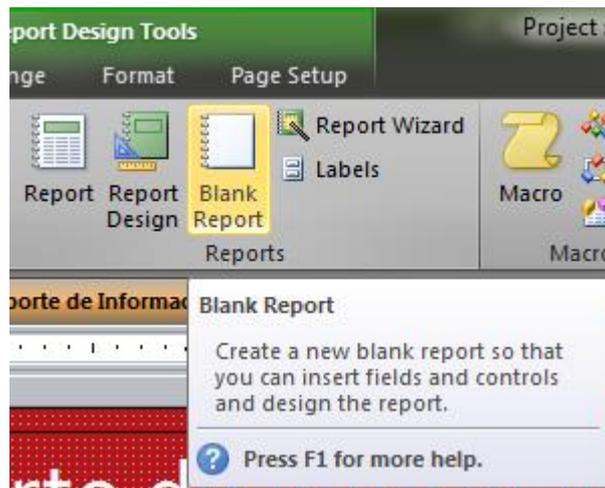
Form Detail:

Código de Cliente	Codigo	Primera Entrada
Nombre	Nombre	
Inicial del Segundo Nombre	Inici	
Apellido	Apellido	
Numero de Celular	Numero de Cel	
Correo Electronico	Correo Electronico	Ultima Entrada
Borrar	Entrada Anterior	Siguiente Entrada

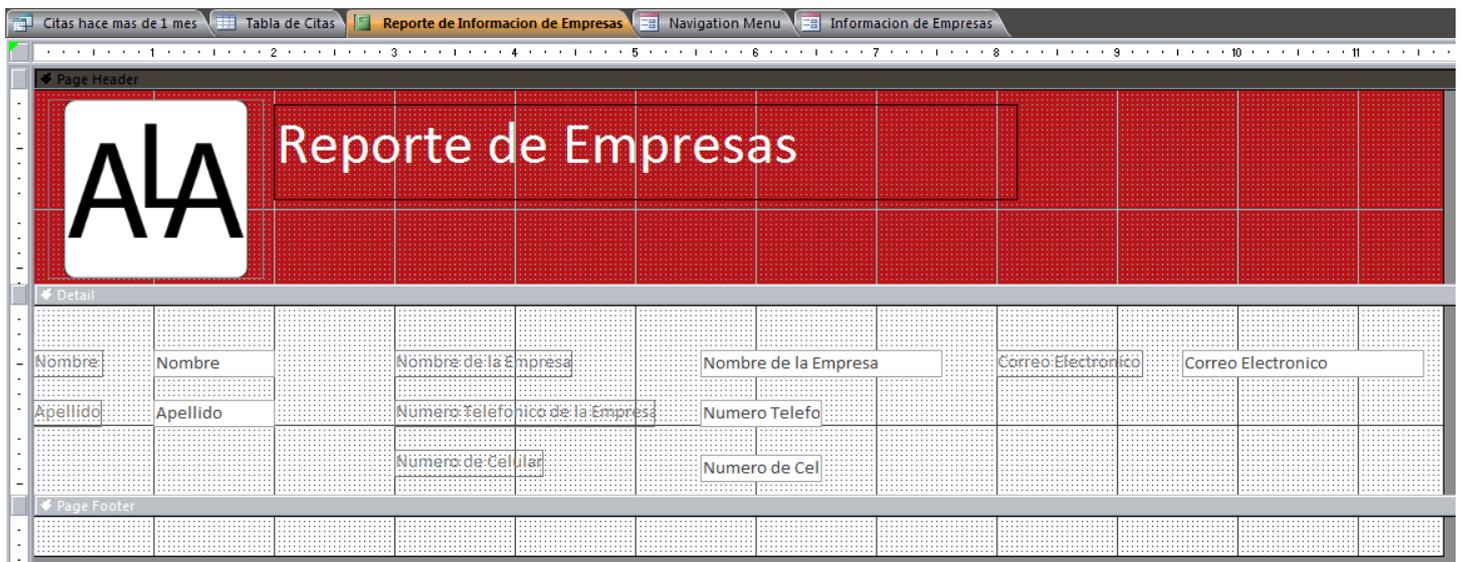
Form Footer:

- Cerrar

The reports are made were based on my first design shown in Crit. D. I used a blank report to start with.

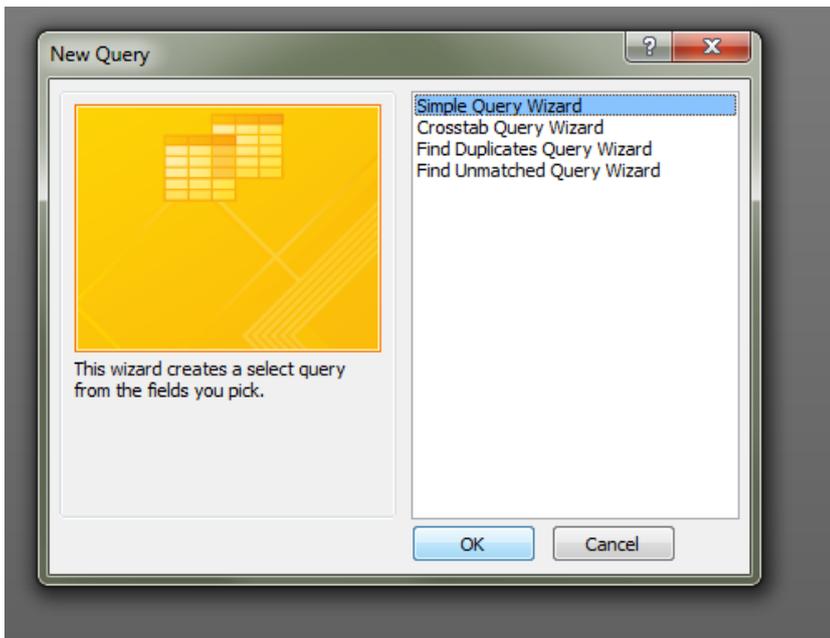
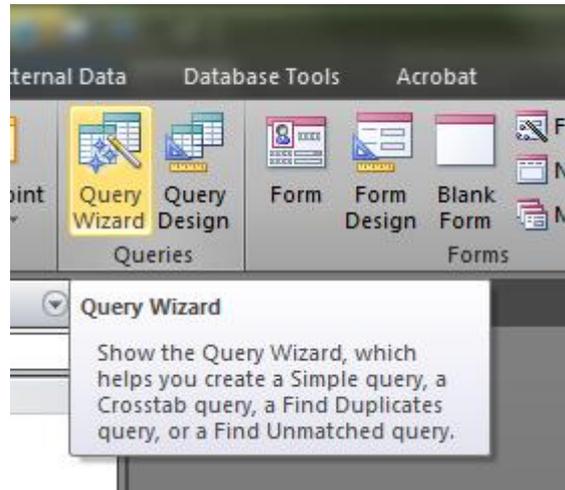


I used the same design in the header as my previous forms because of my client's original request. After dragging and organizing the data (the same way I did with the forms) to match with my original design I ended up with the report shown below.



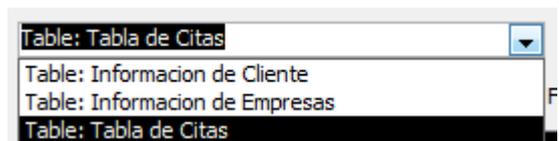
Complex queries/calculated fields

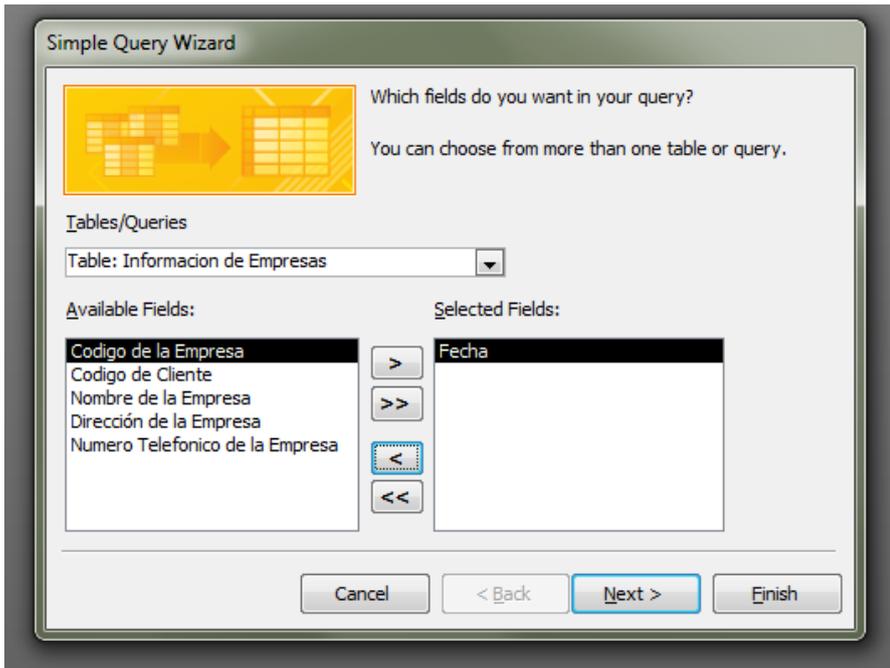
In order to create a query that outputs the appointment's for this month a complex query is required. To start off, I used the 'Query Wizard'.



I chose 'Simple Query Wizard'

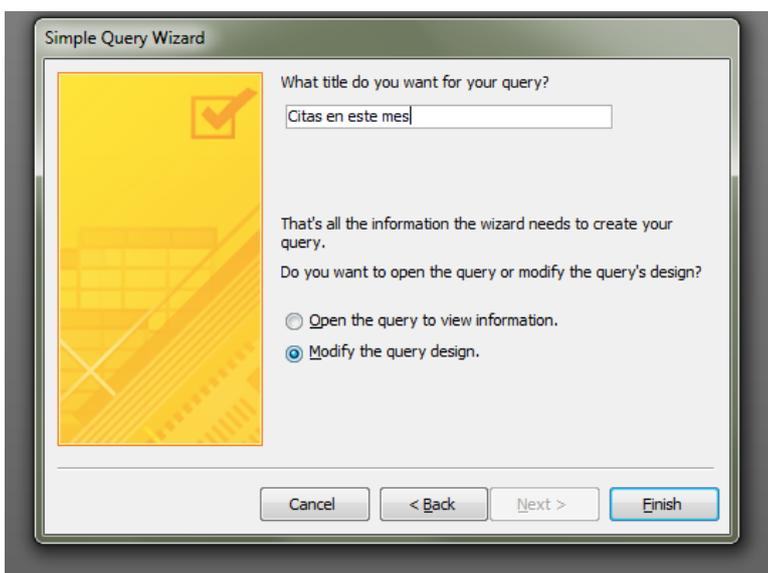
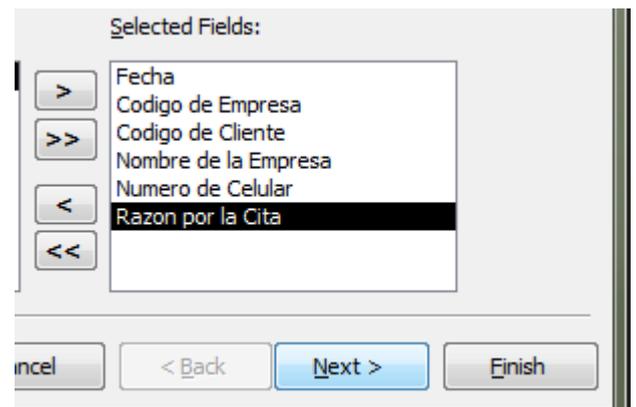
I specifically used the three tables shown at the right.





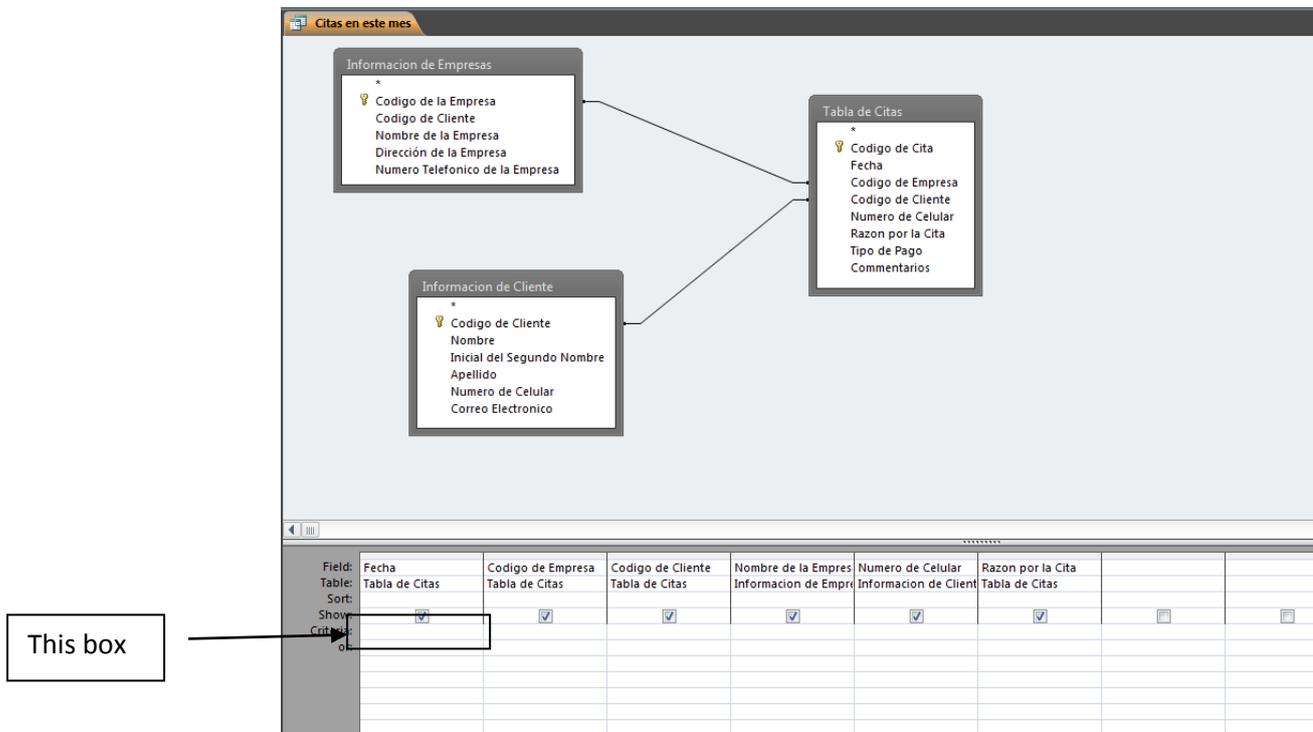
I added the field 'Fecha' (Date) by selecting it from the available fields and then clicking the '>' button.

The fields which appear at the right are the ones that will be used for the: "Search by date" query.

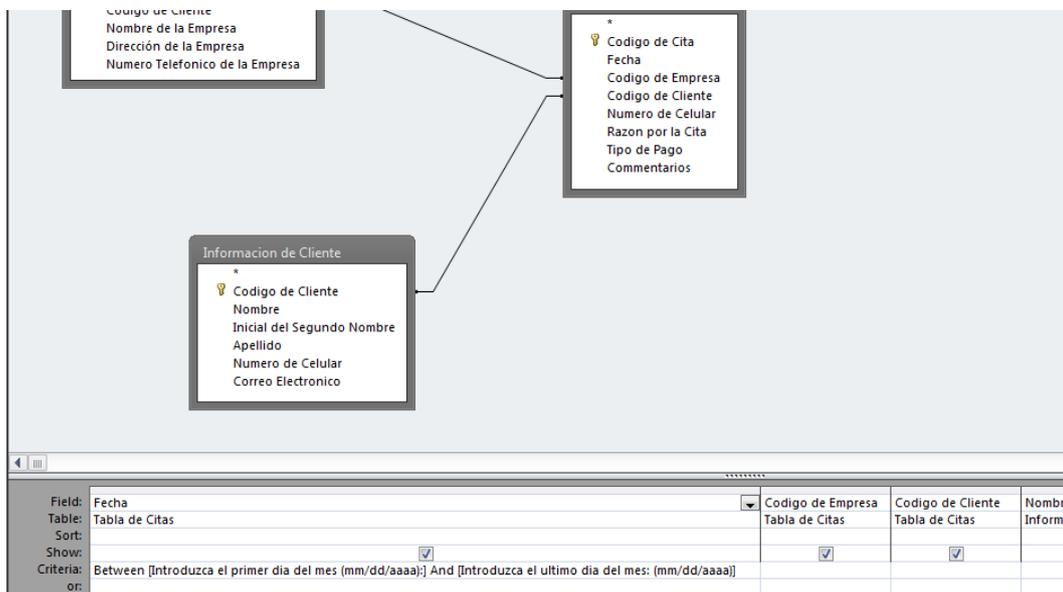


Lastly I named the query and, I chose 'Modify the query design' this will take me to the next screen which will be where I input the complex criteria to search for.

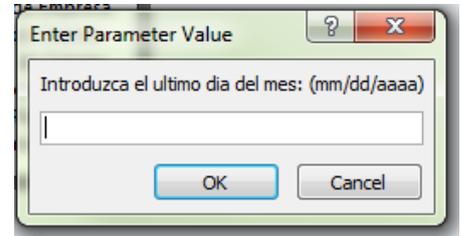
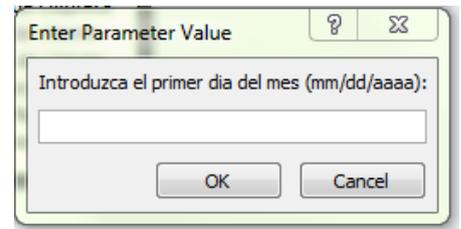
As this query will be used in the future by my client when she wants to search appointments by dates we have to modify the Date Criteria:



To provide a query that searches records based on the dates that my client wants, I was required to use a complex statement as a criteria: "Between [Introduzca el primer dia del mes (mm/dd/aaaa):] And [Introduzca el ultimo dia del mes: (mm/dd/aaaa)]". The word 'Between' works as a filter that will display the results from the first date that the user inputs and the last. I did this because my client wanted an easy way to search appointments that were between ranges that she asks.



In the end, this criterion creates an output similar to the image at the right side: It asks for the first date, the last and outputs the appointments between those two dates.



Word count: 1089