Department of Computer Technology and Information Systems

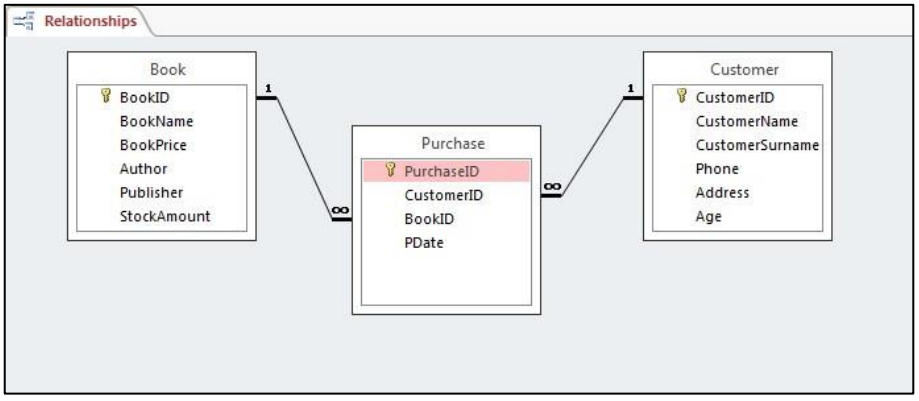
CTIS165 – Fundamentals of Information Systems

Fall 2017 - 2018

Lab Guide #5 - 1

OBJECTIVE: Introduction to MS Office Access	
Instructors : Dr. Erkan Uçar **Assistants:** : Efecan Yilmaz	Week: *8*

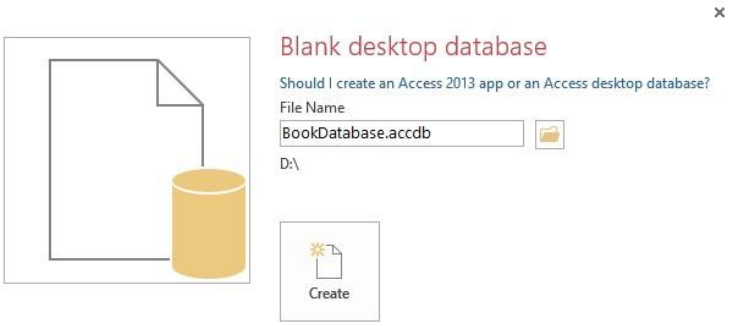
The aim of this lab hour is to create a database in the MicrosoftOffice Access software. This database is going to be about a Book Store, and it will store information abot the books in store, the customers and information about these customers, as in who bought books from the Book Store. The relation between Customer and Book tables can be seen in the following relation:



Because there is a many to many relation, i.e. many customers purchasing books but each customer purchasing a book only once, between the Book and the Customer tables there should also be a relation table as “Purchase” that will store both the customerID and the bookID; Customer and Book tables’ primary keys, as fields; as well as the date of the purchase and the purchaseID as the table primary key, in order to hold all purchase records for all customers. Primary key is necessary for all of the tables, it should be a unique value. The reason why Purchase and Customer IDs aren’t used as a composite primary key together is because a customer can always buy the same book twice.

Create Database

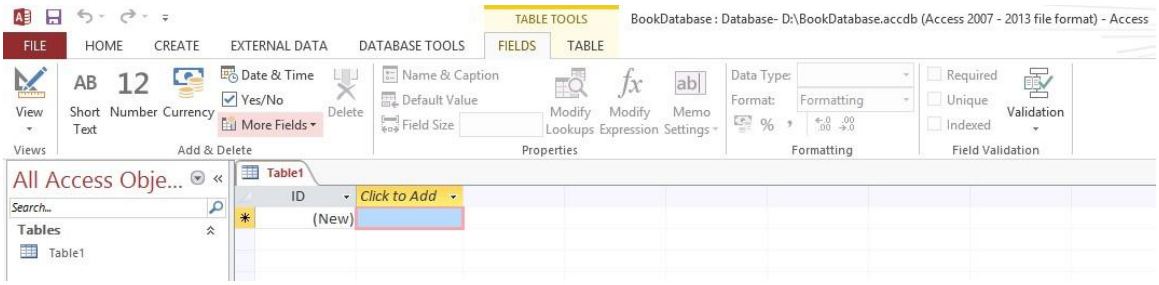
In order to begin to create the database open MicrosoftOffice Access and follow the rest of this guide. After you have clicked the Access 2013 shortcut you will see the startup window of the application, and in that window click on the “blank desktop database” option. You will see the following window:



Because we will create a new database give the name of the database into FileName part, BookDatabase, and then select D:\ drive to save the database. Then click on “Create” button.

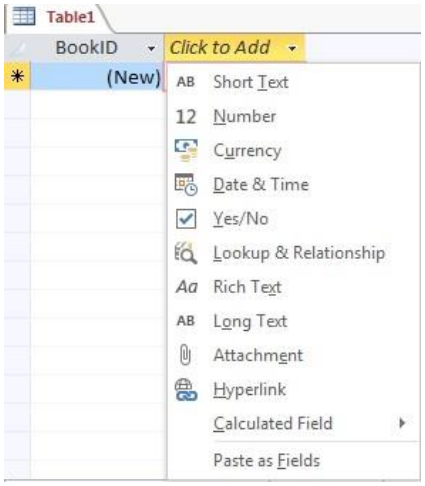
Then the Access interface will appear on the screen.

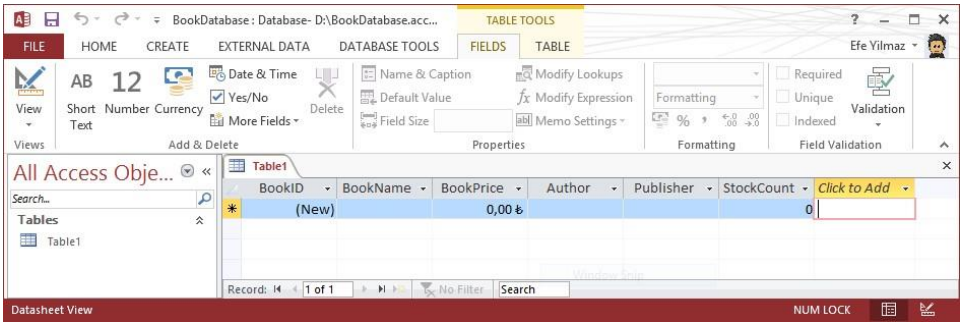
Create Table



Firstly, you should create your tables and to do this: use the user interface you will see the above, the Tables section; The program automatically generates the Table1 view whilst creating the database, and you can add the necessary fiels to this table right away at this point. To begin with, the program has generated an ID and set it as primary key of the table; go and rename this ID field as "BookID" by double clicking the name and typing the new name.

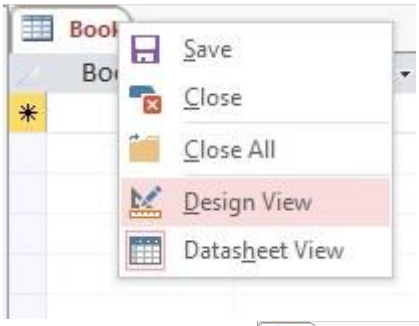
Then write the fields' names and the type of the fields of the "Book" table as shown above in the relationships picture. To do so, click on the "Click to add" button to see the data type of the fields you can choose from. Use Long Text option for the name of the book. Then give the name of the field as BookName:

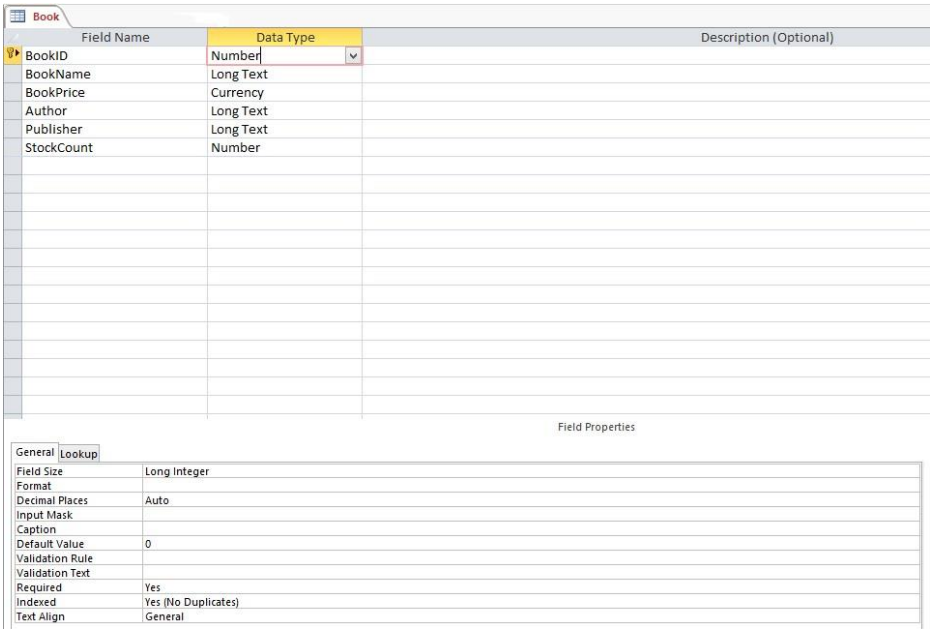




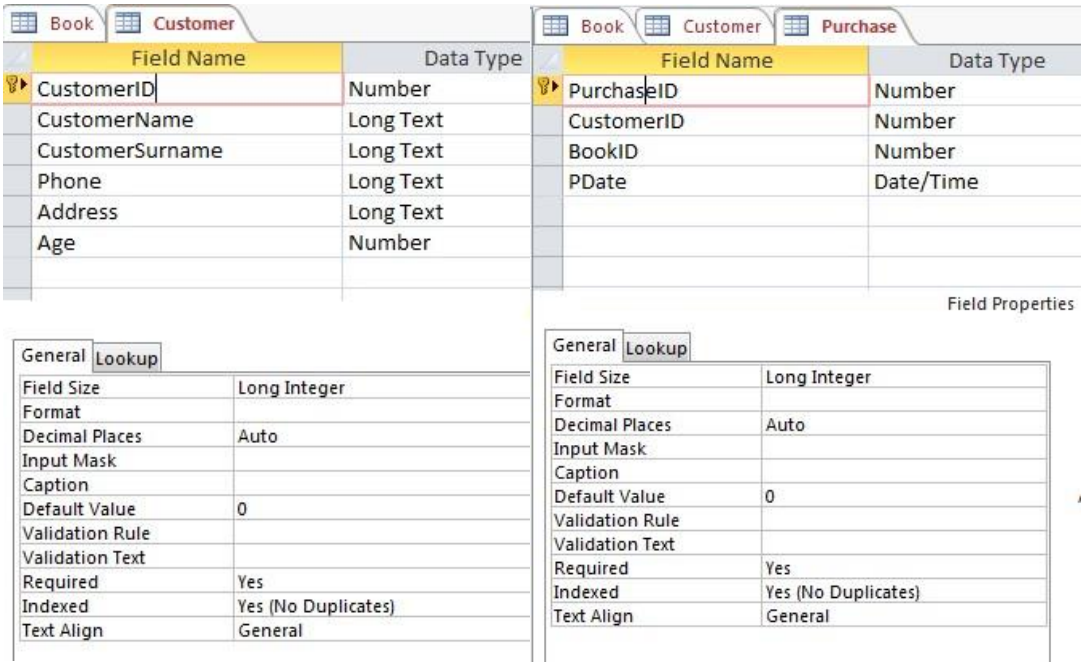
We have so far set the "BookID" field is the primary key. All the tables must contain a primary key as an identifier. Set CTRL + S to save your changes on this first table so far, and then to see the table's field's properties right click on the table name and select "Design View":

When you do that, it will ask you to give a name for the table. Name it as "Book".





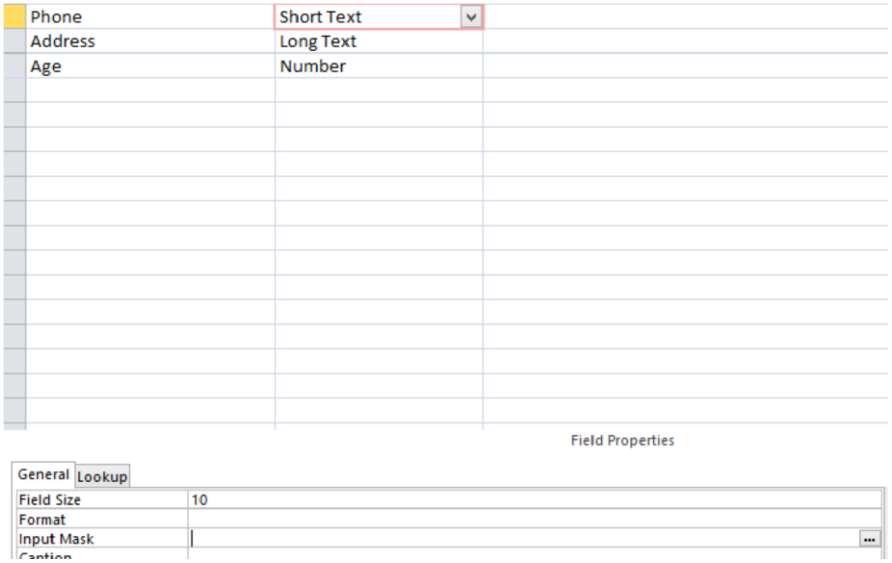
Continue with the “Customer” and “Purchase” tables. Go to the “Create” tab in Access and click on “Table” to create each. Do exactly the same things for those tables as the Book table. The Design view should look like:



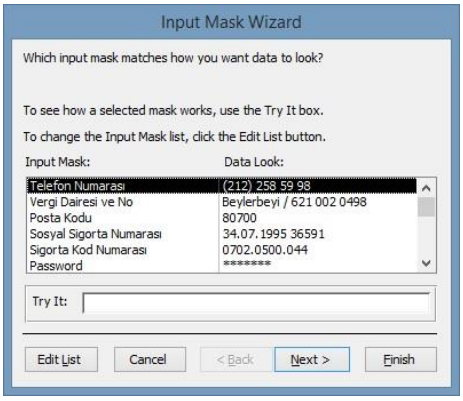
Setting up Input mask

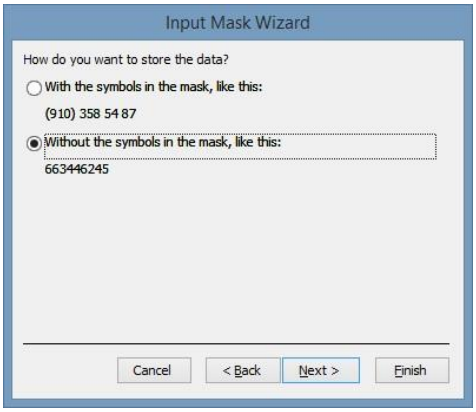
You can help people enter data correctly into your database by providing input masks for fields that contain data that is always formatted a certain way. For example, you can use an input mask to make sure that people enter correctly formatted phone numbers into a phone number field.

Create an input mask for the **phone** field in the **Customer** table, to do this change the data type of phone to short text, save your change, then set size of the phone field to 10. Click the input Mask Wizard button ... under the field properties part and save the table.



- In the Input Mask list, select the type of mask that you want to add.
- Click **Try it** and enter data to test how the mask displays.
- To keep the input mask without any changes, click **Next**.
- Select an option for how you want the data to be stored.
- Click **Next** and then **Finish** and save your changes.

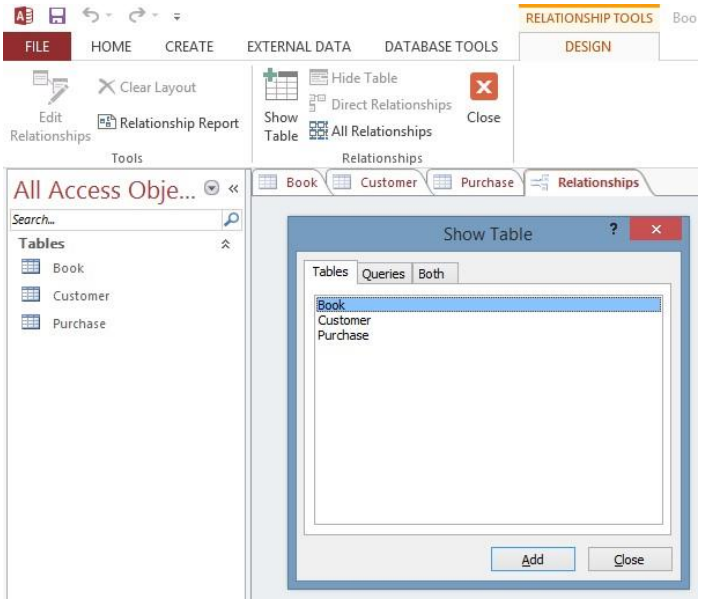




Creating Relationships

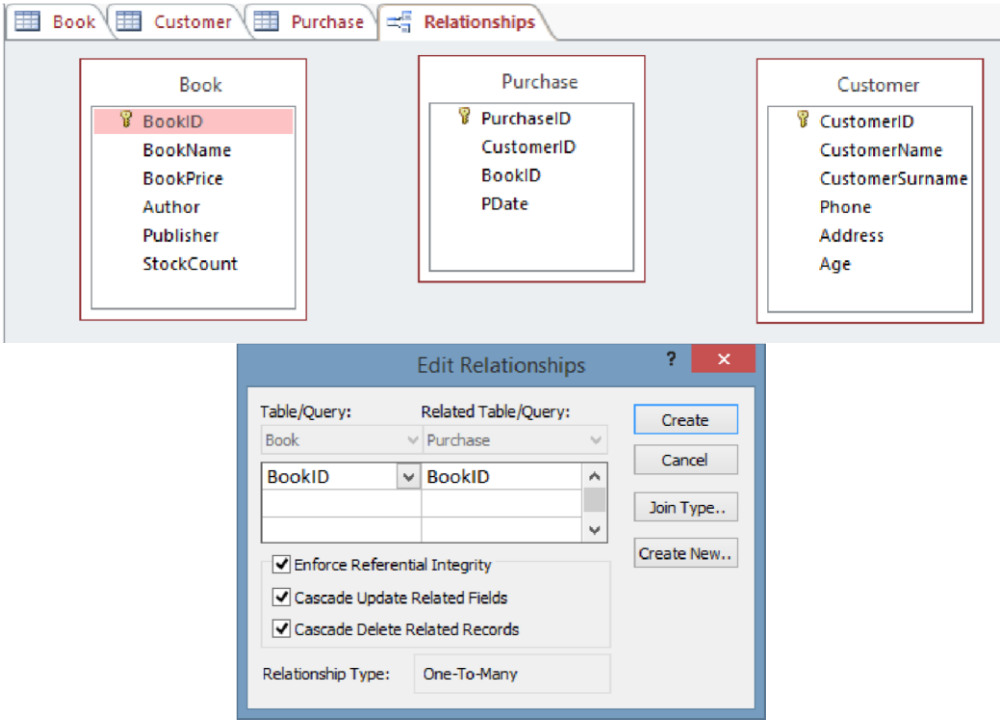
Relationships connect fields of different tables to one another, in a way. To create relationships between Book, Customer and Purchase tables go to **Database Tools-> Relationships** menu. Once there, you will see the folowing window on the screen:

Because we need all the tables for the relation, firstly close all the open tables and then select all the table names and click "Add" button. Then all these tables will be shown in the Relation Design Table.

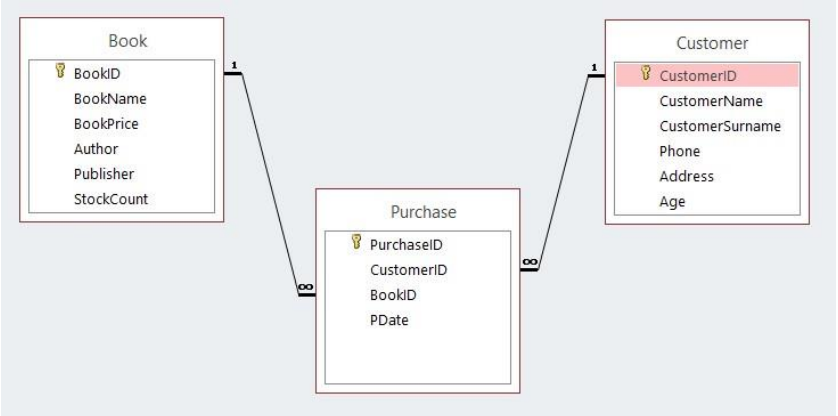


To create the relation click on the BookID field from the Book table then drag and drop it on the BookID of the purchase table. Do the same operation for the CustomerID field of the Customer table and the CustomerID of the Purchase table. Then save the relatio n.

Before relation:

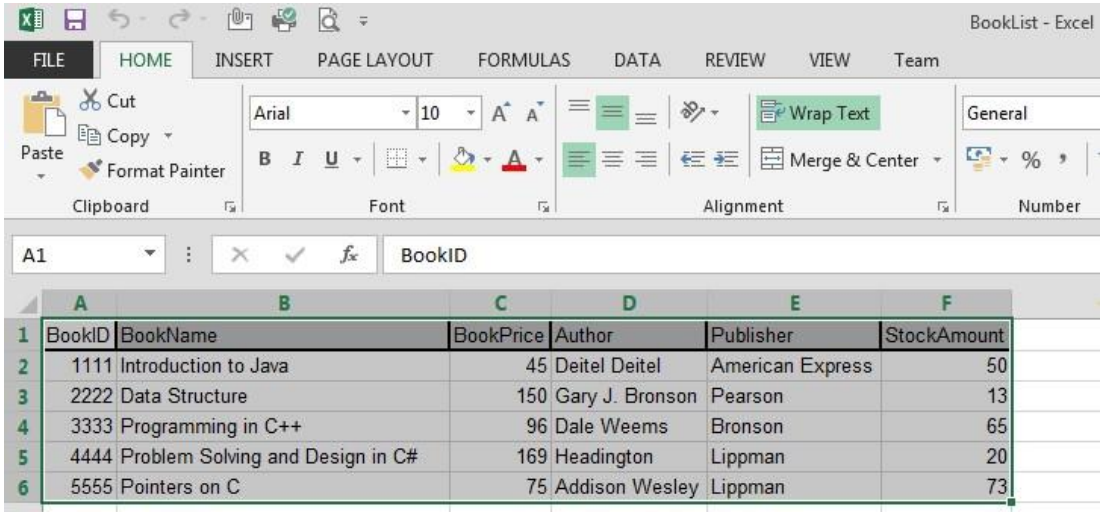


After Relation:



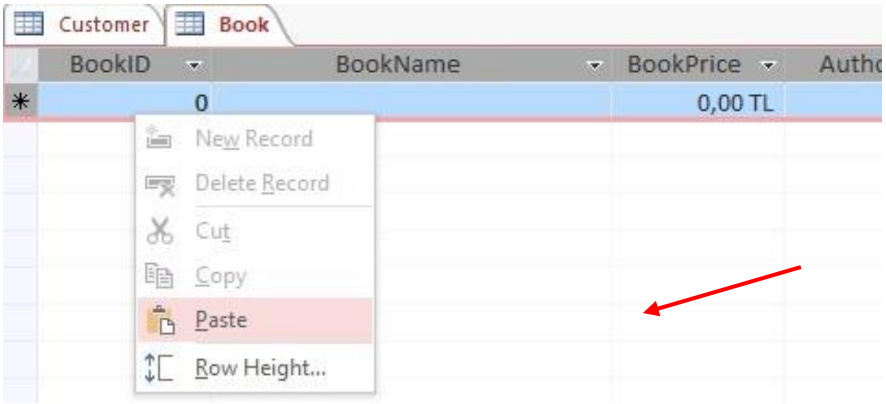
Filling Data into Tables

Now, it is time to fill the data in the tables. There are many ways of inserting data into a table. For this lab hour, we are going to use MS Excel to get and insert the data. To do so, open the BookList spreadsheet in the **LG5.zip**, select all the given data and copy it as follows:

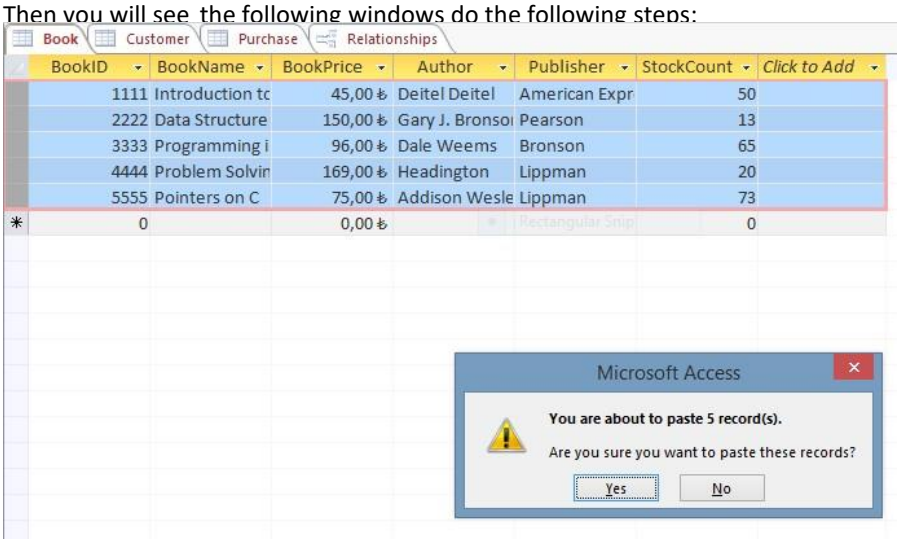


	A	B	C	D	E	F
1	BookID	BookName	BookPrice	Author	Publisher	StockAmount
2	1111	Introduction to Java	45	Deitel Deitel	American Express	50
3	2222	Data Structure	150	Gary J. Bronson	Pearson	13
4	3333	Programming in C++	96	Dale Weems	Bronson	65
5	4444	Problem Solving and Design in C#	169	Headington	Lippman	20
6	5555	Pointers on C	75	Addison Wesley	Lippman	73

Come back to the "BookStore" database find the Book table, press CTRL + A to select it all, and press CTRL + V to paste the data, as follows:

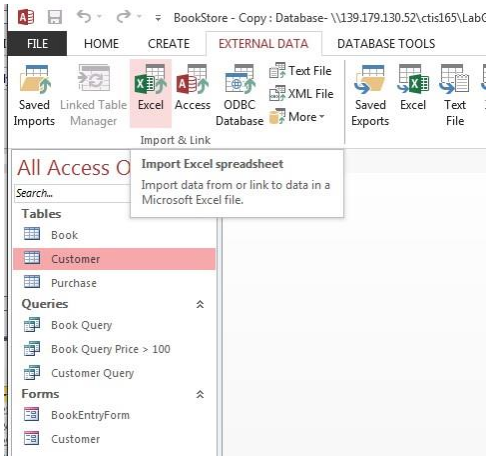


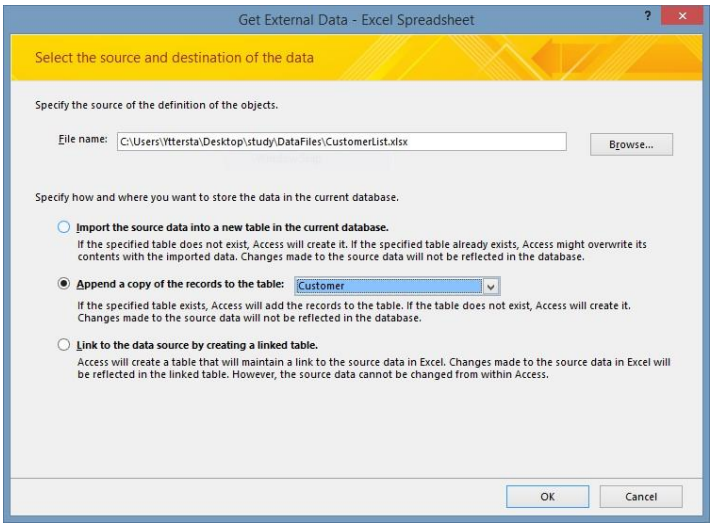
Then you will see the following windows do the following steps:

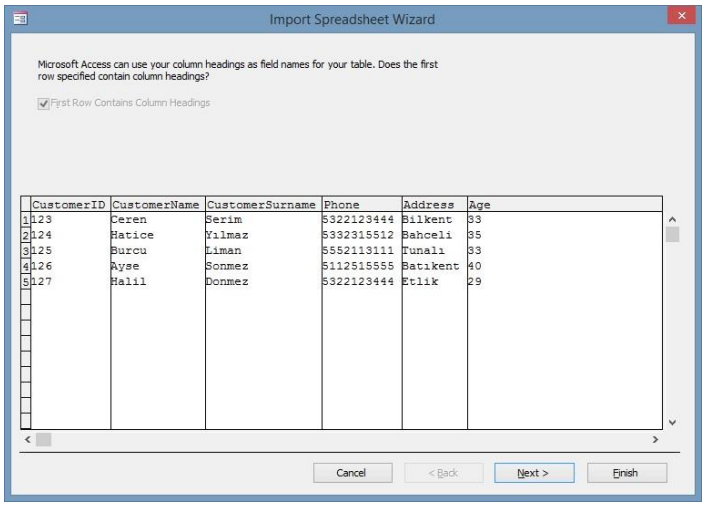


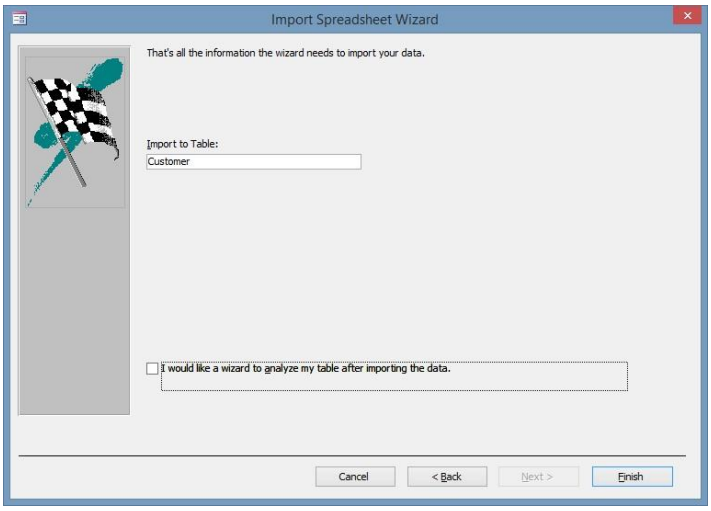
Importing Data from a Spreadsheet File into an Existing Table

On the **External Data** tab, in the **Import & Link** group, click the type of the file you want to import. Follow the instructions in the **Get External Data** wizard.



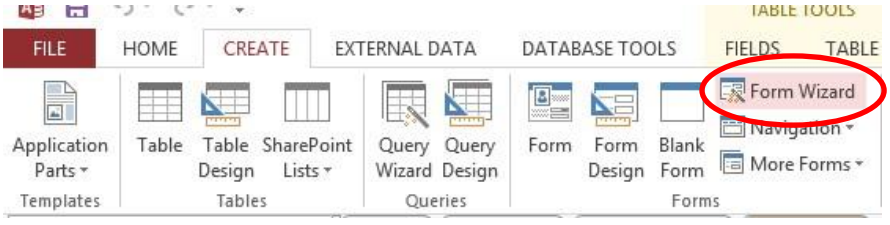


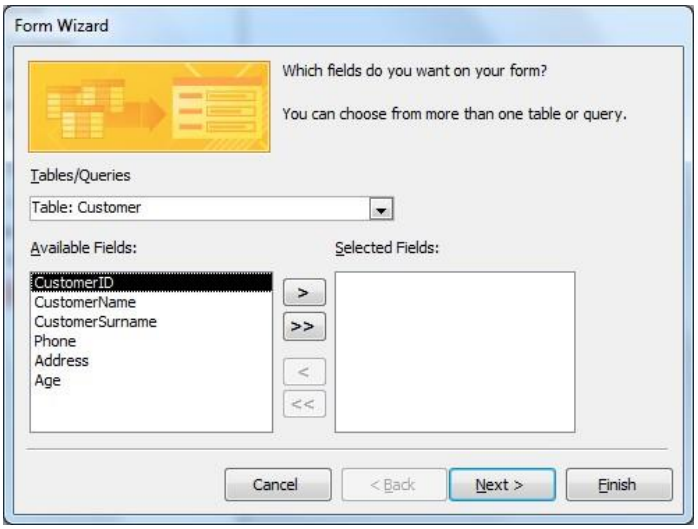


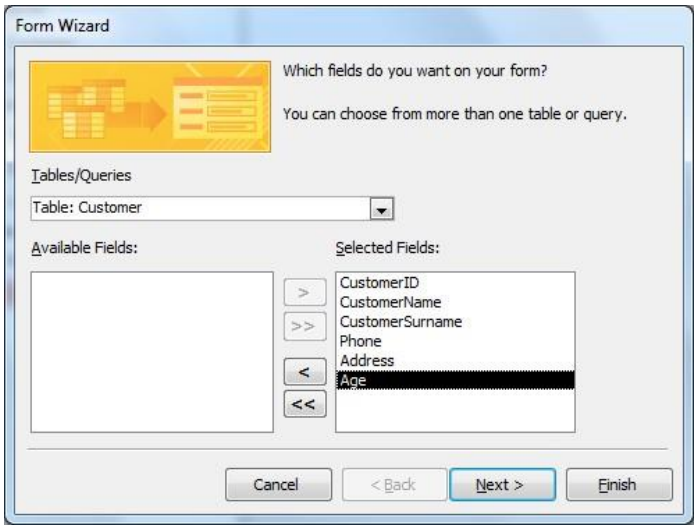


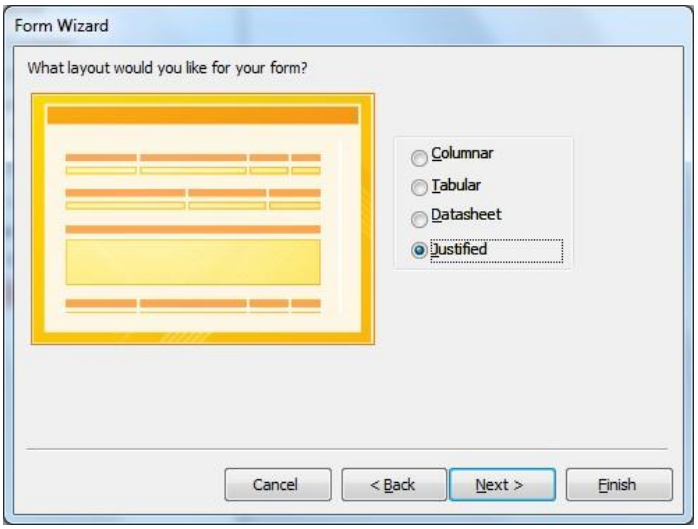
Entering Data Using Forms

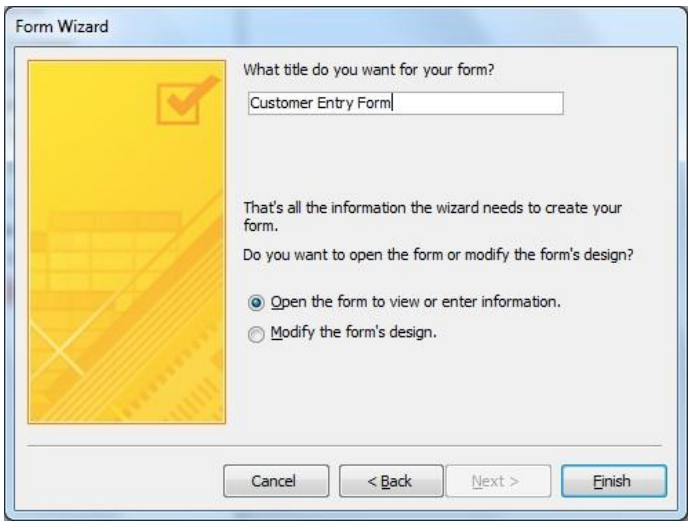
To be able to enter new data to the database in the related tables, we can also create forms. To create an Entry Form of a specific table, first select the table (for example select the customer table), right click on it and select “form wizard…” menu. Do the following steps to create an entry form:









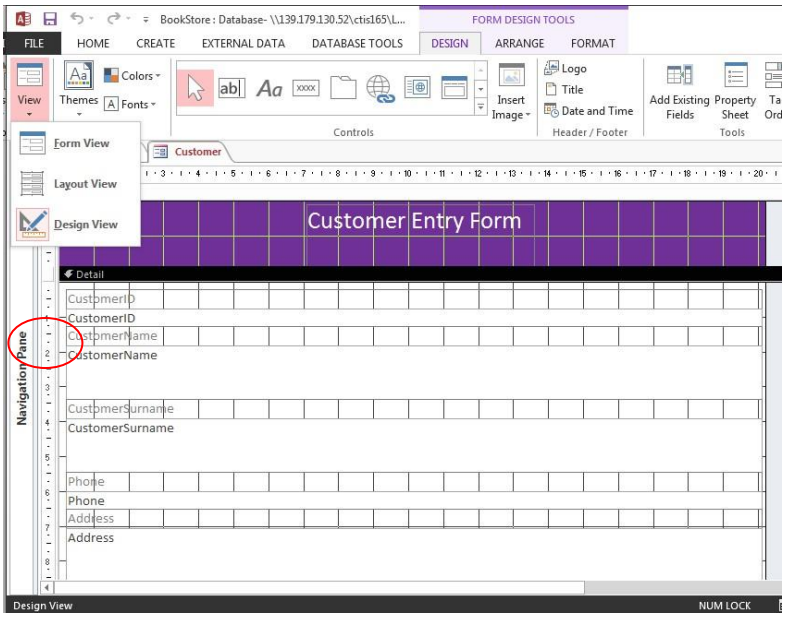


Close the edit view of the form and from the “Forms” tab double click on the form and try to enter a new entry for the Customer table.

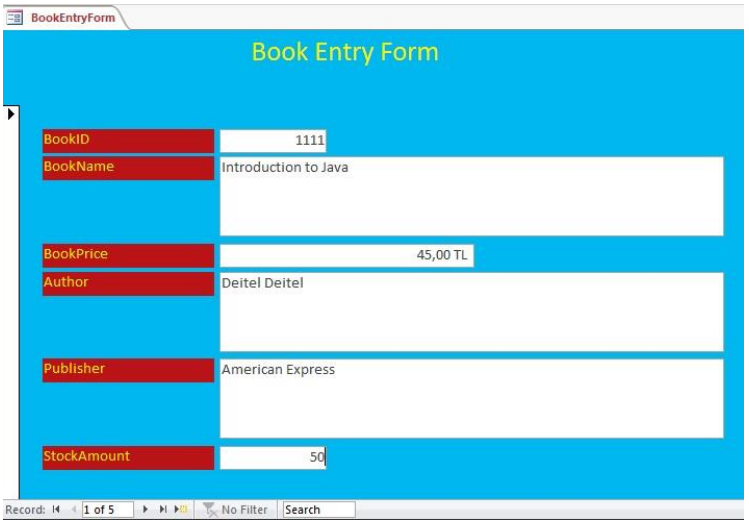
- You may also switch between Design View / Form View

Form View

Design View



Then create also a form for the Book table.


BookEntryForm
Book Entry Form
BookID
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BookName
Introduction to Java
BookPrice
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Author
Deitel Deitel
Publisher
American Express
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50
Record:
1 of 5
No Filter
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