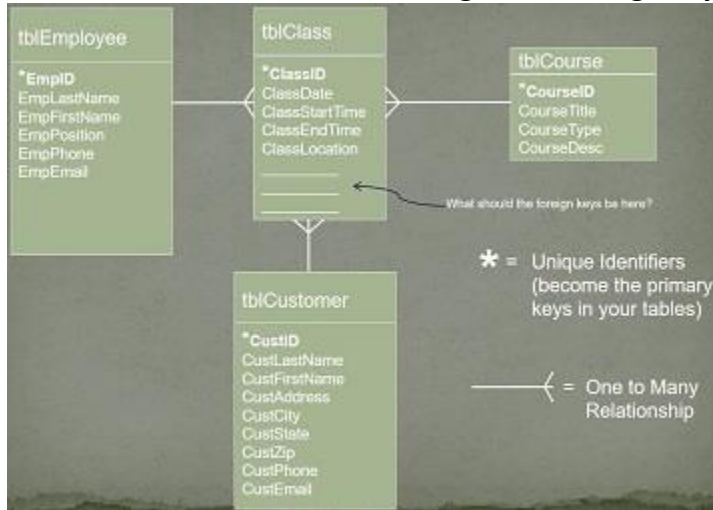


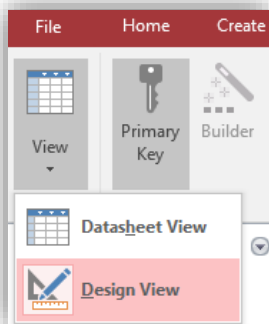
CIS200 MS Access Project Supplement

(NOTE: NOT the main assignment file!! See the MS Access Project file.)

1. Make sure you thoroughly read the main assignment file, Access_Project.pdf. Keep this document open/available nearby for reference.
2. Finish the data model, determining which foreign keys are needed:



3. Based on the completed data model, create your tables in MS Access. Create the Class table last. Make sure you save your tables as labeled in the data model (tblEmployee, tblCustomer, tblCourse, and tblClass). Use Design View to create and set up your fields, selecting the proper data types.



Field Name	Data Type
CourseID	AutoNumber
CourseName	Short Text
CourseType	Short Text
CourseDescription	Long Text

Field Name	Data Type
CustID	AutoNumber
CustLName	Short Text
CustFName	Short Text
CustAddress	Short Text
CustCity	Short Text
CustState	Short Text
CustZipCode	Short Text
CustPhone	Short Text
CustEmail	Short Text

Field Name	Data Type
EmpID	AutoNumber
EmpLName	Short Text
EmpFName	Short Text
EmpPosition	Short Text
EmpPhone	Short Text
EmpEmail	Short Text

Field Name	Data Type
ClassID	AutoNumber
ClassDate	Date/Time
ClassStartTime	Date/Time
ClassEndTime	Date/Time
ClassLocation	Short Text
FK_???	Number
FK_???	Number
FK_???	Number

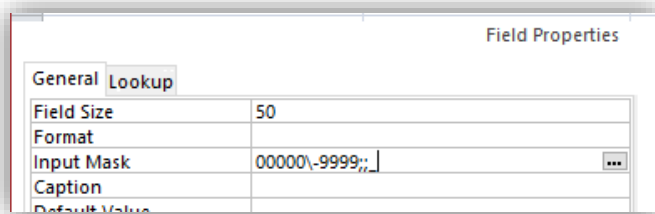
NOTE: The foreign keys (FK_???) are wrong as shown. You must set up the foreign keys based on the data model.

Make sure to select the proper data type for each field.

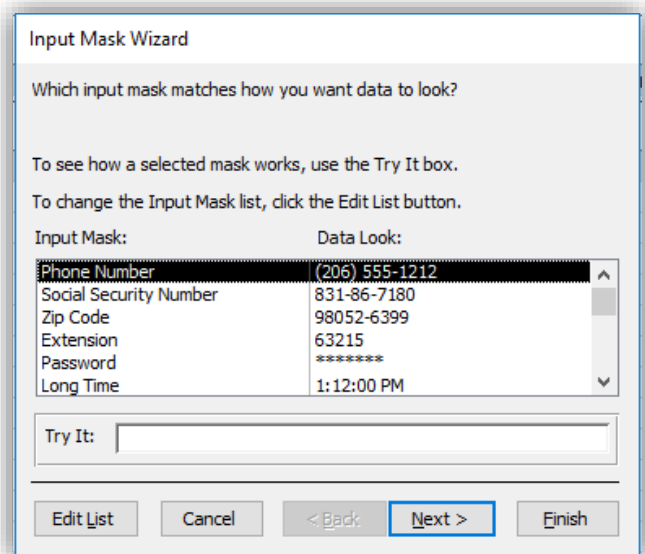
Primary keys: AutoNumber

Foreign keys: Number

4. Where appropriate, use input masks for your fields.



The Field Properties dialog box is shown with the 'General' tab selected. The 'Field Size' is set to 50. The 'Input Mask' is set to '00000\.-9999;'. The 'Caption' and 'Default Value' fields are empty.

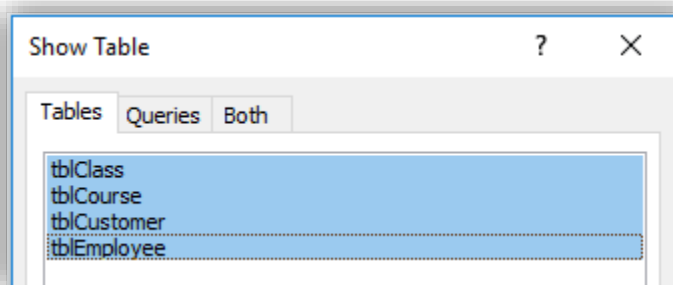


The Input Mask Wizard dialog box is shown. It asks 'Which input mask matches how you want data to look?'. It provides instructions on how to use the 'Try It' box and how to change the input mask list. The 'Input Mask' list is expanded, showing options like 'Phone Number', 'Social Security Number', 'Zip Code', 'Extension', 'Password', and 'Long Time'. The 'Data Look' list is also expanded, showing corresponding data formats like '(206) 555-1212', '831-86-7180', '98052-6399', '63215', '*****', and '1:12:00 PM'. The 'Try It' box is empty. The 'Next >' button is highlighted.

5. Save your tables as labeled in the data model (tblEmployee, tblCustomer, tblCourse, and tblClass).

6. Create relationships between the tables by going to Database Tools (tab) → Relationships.

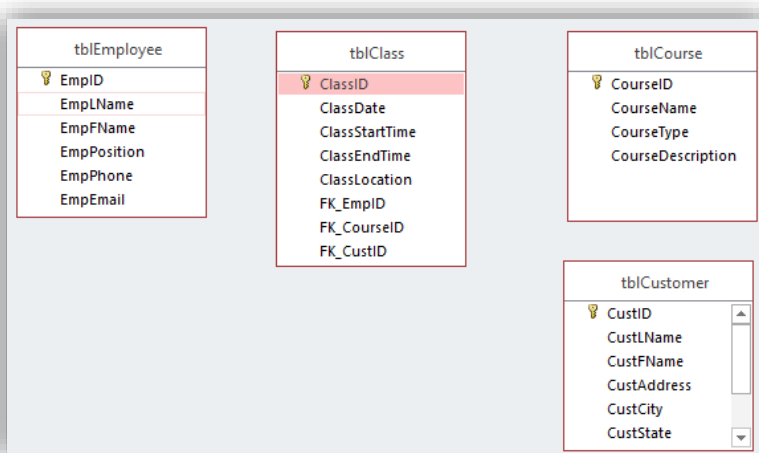
7. In the Relationships window, select all tables using the Shift key and selecting all tables.



The Show Table dialog box is shown. The 'Tables' tab is selected. The list of tables includes tblClass, tblCourse, tblCustomer, and tblEmployee. All four tables are selected.

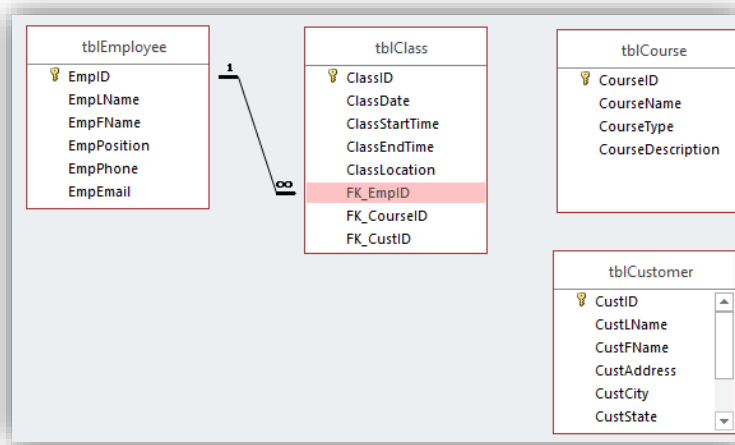
8. Click “Add”

9. Drag and drop to rearrange the tables.



The Relationships window is shown. It displays four tables: tblEmployee, tblClass, tblCourse, and tblCustomer. Each table has a list of fields. The primary key for each table is highlighted with a yellow lightning bolt icon: EmpID for tblEmployee, ClassID for tblClass, CourseID for tblCourse, and CustID for tblCustomer. The fields for each table are: tblEmployee (EmpID, EmpLName, EmpFName, EmpPosition, EmpPhone, EmpEmail), tblClass (ClassID, ClassDate, ClassStartTime, ClassEndTime, ClassLocation, FK_EmpID, FK_CourseID, FK_CustID), tblCourse (CourseID, CourseName, CourseType, CourseDescription), and tblCustomer (CustID, CustLName, CustFName, CustAddress, CustCity, CustState).

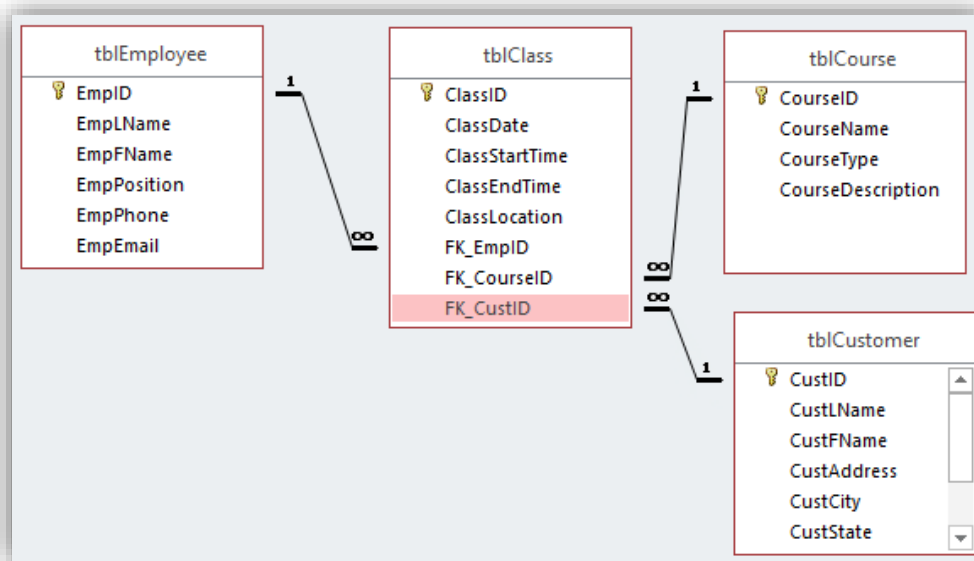
10. Drag and drop from the PK to the corresponding FK to create a relationship.



11. Make sure to select “Enforce Referential Integrity” when you create relationships.

The screenshot shows the **Edit Relationships** dialog box. The **Table/Query:** dropdown is set to **tblEmployee** and the **Related Table/Query:** dropdown is set to **tblClass**. The **EmpID** field in **tblEmployee** is selected as the primary key, and the **FK_EmpID** field in **tblClass** is selected as the foreign key. The **Enforce Referential Integrity** checkbox is checked and highlighted with a red box. Other options include **Cascade Update Related Fields** and **Cascade Delete Related Records**, both of which are unchecked. The **Relationship Type** is set to **One-To-Many**. Buttons for **Create**, **Cancel**, **Join Type..**, and **Create New..** are visible.

12. When you are finished creating relationships, they should look as follows:



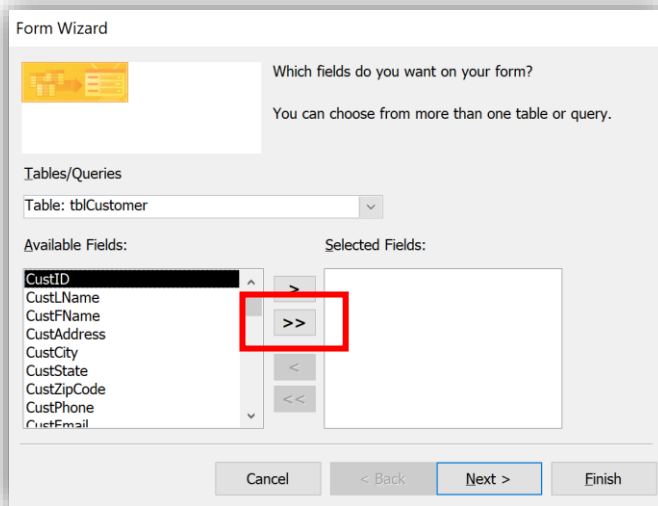
13. Close the Relationships window and **SAVE** the layout of the relationships.

Now you are ready to enter data, and you will do this using forms.

14. Click on the table for which you are creating a form. For every table, there will be a corresponding form, and you will create one form at a time.

15. Go to the Create tab and select Form Wizard.

16. Click the double arrows to select all fields.



17. Click “Next” and select the layout you want.

18. Click “Next” and relabel the form with the prefix “frm” (e.g., frmCustomer).

19. Click “Finish” and repeat these steps until a form is created for each table.

20. Use the forms to enter data into the tables. (If you happened to have already entered data directly into the tables, the data should populate in the forms.)

- a. Enter data in the Class form LAST.
- b. You should enter at least five records for Employee, Course, and Customer.
- c. You should enter at least ten records for Class.

21. In the Class form, for the FK fields, you will need to enter the numbers that correspond with the IDs of the employees, customers, and courses. This is why you enter data into the Class form/table last.

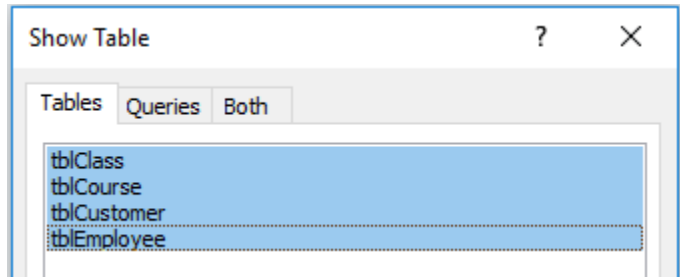
- a. For example, if the PK_EmployeeID for Luca Felton is 1, if Luca Felton is to teach a class, you will enter 1 in the FK_EmployeeID field for the class she is teaching. You do the same to enter FK data for Customer and Course per class record.
- b. Look ahead to the queries (Access_Project.pdf) to make sure your data entry can be used for the queries.

22. Save all of your data entry. Once you are finished with the data entry, you can move on to the queries.

NOTE: Remember that we perform queries to retrieve meaningful information, so you want to include fields in your queries that represent meaningful information. It's fine if you include IDs but you will also want names and course titles/names, so you can make better sense of the information retrieved.

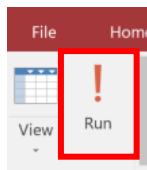
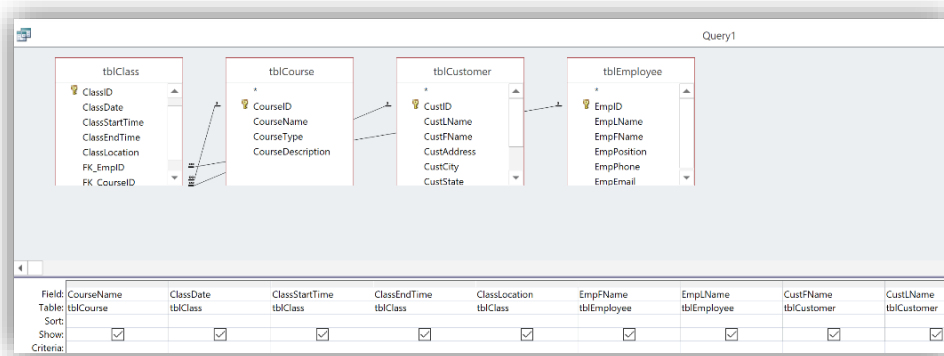
23. To create a query, go to the Create tab and select "Query Design."

24. Select all tables using the Shift key and selecting all tables.



25. Click "Add." The tables should appear with the relationships linking the tables.

26. For Query 1, drag and drop the field names from the tables to the field row at the bottom of the screen.



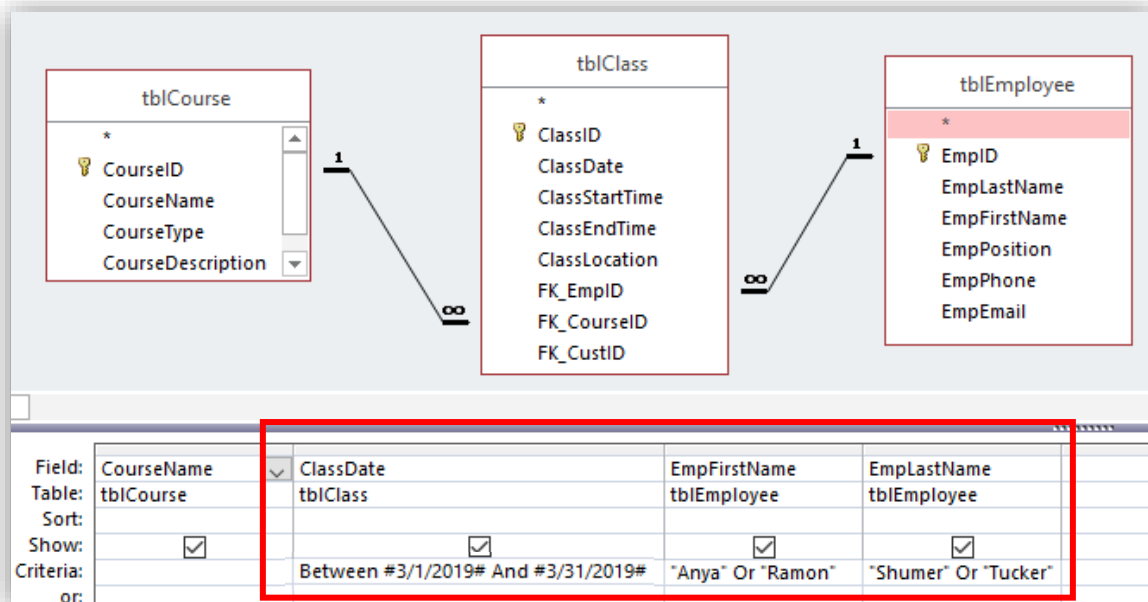
27. Click "Run" to run the query.

28. Check the results to ensure the query returned the information needed.

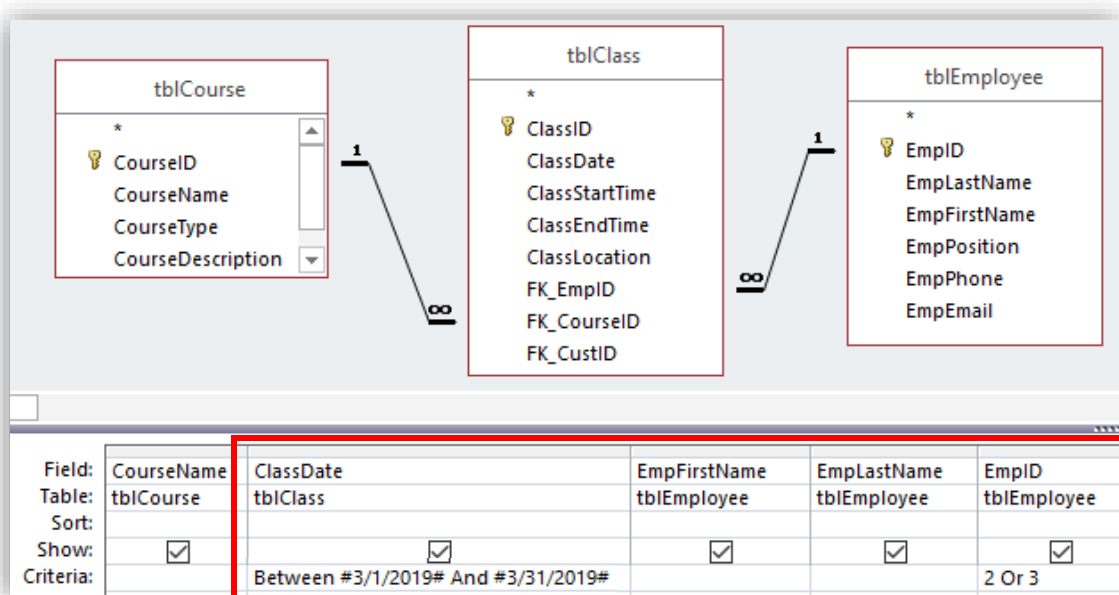
29. Save the query according to the assignment instructions (qry1). When you close the query window, you will be prompted to save the query.

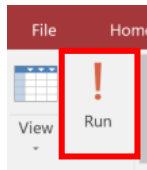
Starting with Query 2, specific criteria are required for the queries. The next step will demonstrate how to create Query 4, which is the most complex query. With this knowledge, you should be able to create Queries 2 and 3.

30. Query 4 asks, “What classes are being led by either Anya Shumer or Ramon Tucker in March 2019?” In this query, you need to enter criteria on the lower portion of the Query Design screen to return information that only includes these two instructors teaching in March 2019 (but, before you try this, read further to learn why the below criteria can be improved).



HOWEVER, while the above query will work, technically, the query asks to return information for any employee with the last names “Shumer” or “Tucker” and first name “Anya” or “Ramon”...so if there is ever a Ramon Shumer or Anya Tucker, they will be included in the results. **To be more precise with the query**, you should use the EmpID field, which will always uniquely identify the employees. See below:





31. Click “Run” to run the query.

32. The results appear as follows (NOTE: yours likely will differ because of different data entry):

CourseName	ClassDate	EmpFirstNar	EmpLastNan	EmpID
Bouldering Fundamentals	3 /15/2019	Anya	Shumer	2
Introduction to Kayaking	3 /16/2019	Ramon	Tucker	3

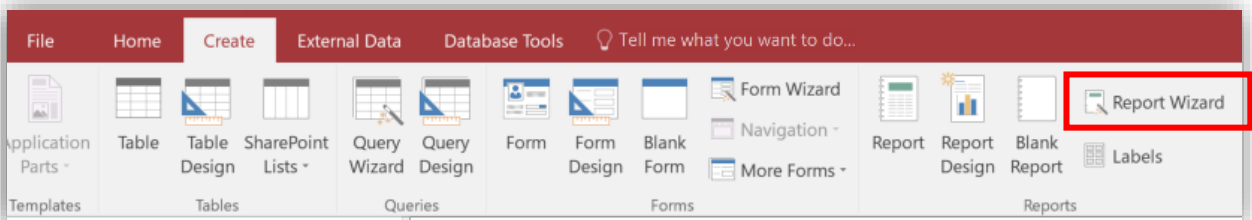
33. Save the query according to the assignment instructions (qry4). When you close the query window, you will be prompted to save the query.

34. Create any remaining queries (e.g., Queries 2 and 3) and save them.

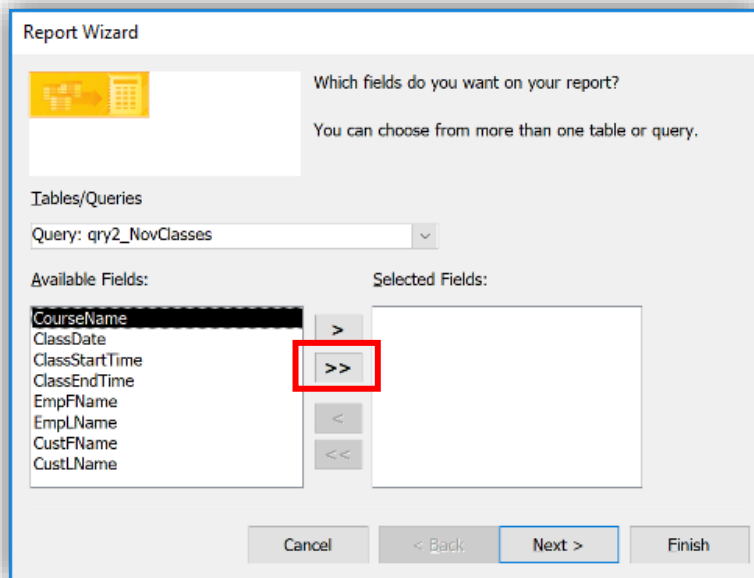
35. Next you will create a report based on Query 2. Select qry2 in the left Access Objects pane.



36. Select the Create tab → Report Wizard.



37. On the Report Wizard window, select all fields by clicking the double arrows.



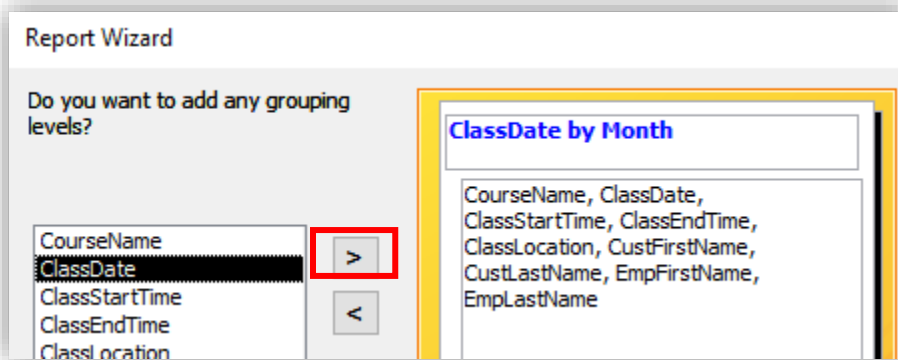
38. Click "Next."

39. When presented with "How do you want to view your data?" select "by tblClass"

40. Click "Next."

41. When presented with "Do you want to add any grouping levels?" select "ClassDate" (your "class date" may look differently depending on how you named this field).

42. Click the single arrow pointing right  to apply "ClassDate" as the grouping level.



43. Click "Next."

44. When presented with "What sort order do you want for detail records?" select "CustLastName" (your "customer last name" may look differently depending on how you named this field).

45. Click "Next."

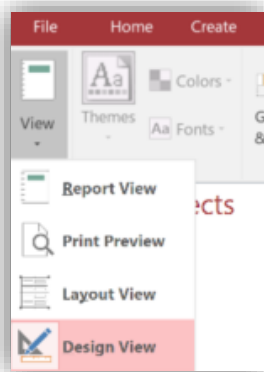
46. Select “Landscape” for Orientation and choose any layout you prefer.

47. Click “Next.”

48. When presented with “What title do you want for your report?” type rptJulyQuery

49. Click “Finish.”

50. On the Home tab, go to View → Design View to format the report.

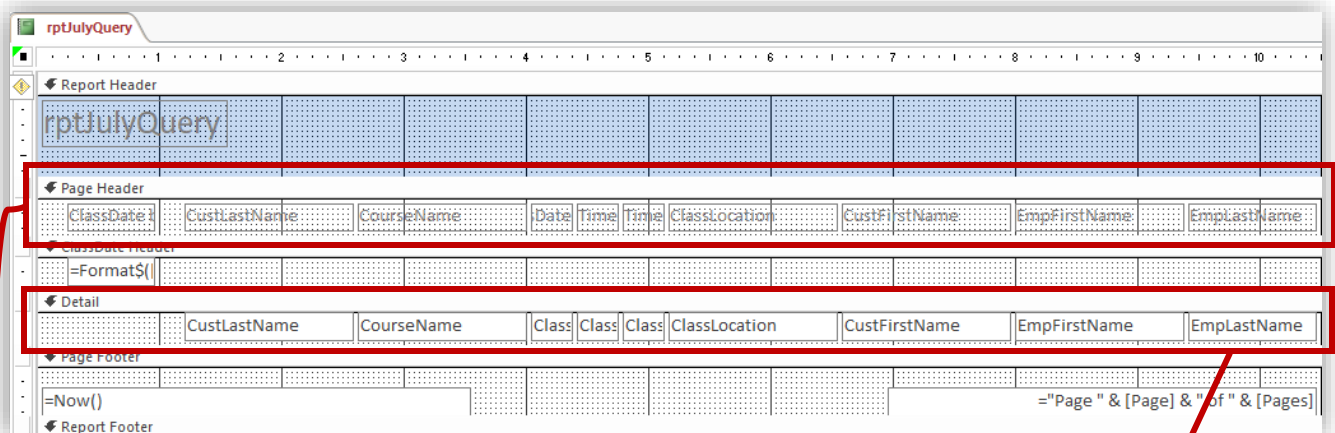


51. Once in Design View, you can edit any of the objects by clicking on them. You can resize them, change the text, move objects around (click and drag), etc.

52. You may wish to use the Format tab to left-justify some text objects or otherwise format the report content.

53. Here are example before and after views of the report in Design View:

Before/Default:



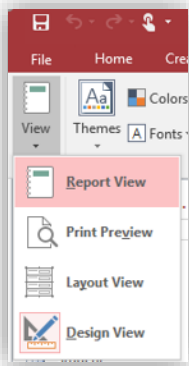
You can edit and/or delete field names under “Page Header” only!

You can **NOT** edit any field names under “Detail”! You can move and re-size these ONLY!

After Formatting:

The screenshot shows the design grid for a report named 'rptJulyQuery'. The grid is divided into sections: Report Header, Page Header, ClassDate Header, Detail, and Page Footer. The Report Header section contains the title 'WildOutfitters July 2019 Classes'. The Page Header section contains fields for Month, Course, Date, Start Time, End Time, Location, Customer Name, and Instructor Name. The ClassDate Header section contains a formula '=Format\$'. The Detail section contains fields for CourseName, ClassDate, ClassStartTime, ClassEndTime, ClassLocation, CustFirst, CustLastNam, EmpFirst, and EmpLastN. The Page Footer section contains a formula '=Now()' and a page number formula '="Page " & [Page] & " of " & [Pages]'.

54. To check the presentation of your report based on your formatting, on the Home tab, go to View → Report View. You may have to toggle between Report View and Design View several times before you are satisfied with the formatting.



55. Based on the previous before/after views in Design View, the report in Report View appears as follows:

WildOutfitters July 2019 Classes									
Month	Course	Date	Start Time	End Time	Location	Customer Name		Instructor Name	
July 2019									
	Basic Caving	7/27/2019	8:00:00 AM	10:50:00 AM	In-Store	Eliza	Arcachon	Ramon	Tucker
	Intro to Backpacking	7/11/2019	8:30:00 AM	4:00:00 PM	Granite State Park	James	Eddie	Eugene	Farley
	White Water Rafting	7/11/2019	12:00:00 PM	2:00:00 PM	In-Store	Sam	Walton	Emilie	Fields
	Mountain Climbing	7/7/2019	9:00:00 AM	12:00:00 PM	Granite State Park	Daniel	Waterhouse	Anya	Shumer
Friday, February 15, 2019									
Page 1 of 1									

56. Save your report. Once at this step, you have completed the project!

57. Save your Access project according to the file naming instructions specified in Access_Project.pdf and submit your file Canvas.