Access (CIS117DM) Skills Assessment
Exam 2 - 200 Points

Project 1: Tables and Queries (40 Points)

Download the exam, find and correct unmatched records, establish referential integrity, create a crosstab query, use a lookup field for MembershipStatus, create an Update Query, create a Top Values query with a Calculated Field.

1. First, log in to Canvas, find and open the "**Unit 2 Midterm**" assignment, and save the two data files. One file is this exam, and the other is the Access database you will use. **Close** (log out of) Canvas.
2. Rename the **Fitness.accdb** database to Fitness**XXX**.accdb where **XXX** is your initials, three if you have three initials, otherwise two initials.
3. Open your **FitnessXXX.accdb** database and **use only that file for this exam**.
4. Notice that there are two tables: **tblPrograms** and **tblMembers**. This is a database used to track the membership of a fitness center / health club, the "**All Access Fitness Center".**
5. Referential Integrity was never established between these two tables. As a result, several new members were accidentally added to **tblMembers** using a **ProgramID** that does not exist in **tblPrograms**. You job is to **write a query to find any unmatched records** between the two tables using the **ProgramID** as the linking field. When you find any unmatched records, **display all available fields**. (continued)
6. Save and name your query **qryFindUnmatchedProgramIDs**. When you run your query, you should find several mismatched records. Make the necessary data changes to assign all mismatched members to the **Junior Limited Program, program 202**.
7. Now that you have corrected the unmatched or "orphan" records, open the Relationships Window, add both tables to the window, join the tables on the common field **ProgramID,** and specify to **enforce referential integrity.** Do not cascade updates or deletes. Save your changes.
8. Next, create a CrossTab query that displays a count of the number of **tblMembers** by **City** (row header) and by **MembershipStatus** (column header)**.** When asked, include the "total" column. Save and name your query **qryMembershipCrosstabByCity**.
9. In **tblMembers**, replace the data type of the **MembershipStatus** field with a lookup field. The three valid values are: "**Active**", "**InActive**", and "**OnHold**". Turn **on** the check box to "**Limit To List**" but leave the checkbox to "**Allow Multiple Values**" turned **off.** (continued)
10. Then, create a simple select query to find members with a **MembershipStatus** that is **not** one of the valid values in step 9 above. Run your query to observe what you find. Next, turn this query into an Update Query that changes the invalid **MembershipStatus** to "**InActive**". Save your query as "**qryUpdateInvalidStatus**",
11. Create a new query from the **tblMembers** table that includes the **FirstName**, **LastName**, **DateJoined** and **ExpirationDate** for all "**Active**" members. Save this query as **qryLongestMemberships**. Add a calculated field to your query to determine the total number of days between the **DateJoined** field and **ExpirationDate** field by subtracting those two fields from each other. Then sort your query in **descending** sequence so the largest number of elapsed days displays **first.** Finally, make your query a "**Top Values**" query by limiting your query output to the **top 2 values** based on the largest number of elapsed days. Save the changes to your query.

Project 2: Parameter Query, Mailing Labels, Datasheet Form (60 Points)

Create a parameter query and use it as the record source for mailing labels. Create a query to find programs with no members. Create an outer join query to find and display unmatched programs. Create and secure a datasheet form. Apply and save a filter as a query.

1. You need to mail a membership renewal flyer to selected members in designated cities. Write a query to select members whose membership expires **prior** to **4/15/2013.** Include these fields from **tblMembers: FirstName**, **LastName**, **Street**, **City**, **State**, and **Zip**. Also use **ExpirationDate** in your selection criteria as indicated above, but **do not display** that column in your query result. (continue with next step)
2. Since you will run this query several times, once for each **City**, use a parameter so you will be prompted to enter the **City** each time the query runs. Also **use a wildcard** pattern match so that **all** members will be selected if you choose to **not** enter a specific **City** when you run the query. Save and name your query **qryMemberCityParameter**.
3. Create mailing labels using the **qryMemberCityParameter** query. Choose Avery 5160 labels with any 12-point **bold** font, and sort by **Zip**. Format the labels with spaces and/or commas between fields **similar** to this:

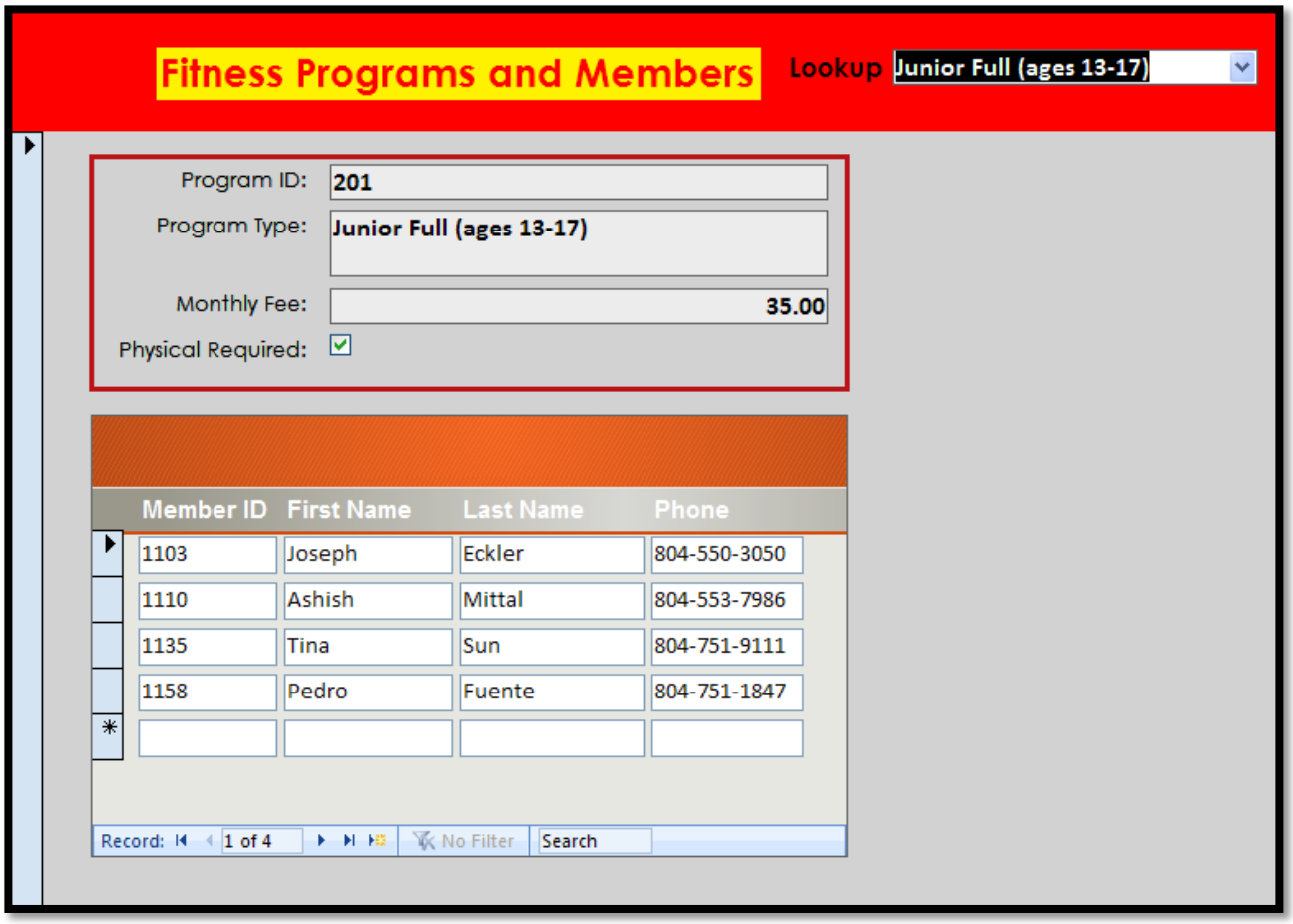
   [First Name] [Last Name]
   [Street]
   [City], [State] [Zip]

4. Save your label report as **rptMembershipRenewalLabels**.
5. Several of the available programs currently have no members.
   Note: This is not an error in the data. Some programs are just not very popular.
   Use the Query Wizard to create a **"Find Unmatched"** query to list all of the **tblPrograms** that have no matching **tblMembers**. Show all fields. Save or rename your query as **qryProgramsWithNoMembers**.
6. Create a simple select query using **tblPrograms** and **tblMembers**. From **tblPrograms**, include the **ProgramID** and **ProgramType**. From **tblMembers**, include **MemberID**, **FirstName** and **LastName**. Sort your query in ascending sequence by the **MemberID**. Save your query as **qryProgramsAndMembers**. Then, edit the relationship between the two tables and change the "inner join" to an **"outer join"** so you can **include all records from tblPrograms**. Run your new "outer join" query to see if you found the **tblPrograms** that currently have no members. Save your changes in the same query (**qryProgramsAndMembers**).
7. Use the Datasheet form tool to create a **datasheet form** from **tblMembers**. Include all fields. Save your form as **frmMembersDatasheet**. Then open your form in design view and make the following changes: change the font in the textboxes (the data, not the labels) to bold; and also change the textbox background fill color to any shade of light blue. Finally, change the form's properties to not allow **Additions**, **Deletions** or **Edits**. Test your form and **save your changes**.
8. Open your Datasheet form and use the tools in the "**Sort & Filter**" group to **filter** your form to select a **MembershipStatus** of "**On Hold**". Also filter the remaining records by the **City** of "Richmond". Then click on "Advanced Filter/Sort" twice to save your filter as a query, **qryMembersFilter**. You do not need to save your datasheet form again.

Project 3: Modify a Form (35 Points)

Modify an existing form with a title, add new fields, change formatting, add a combo box to lookup rcds and change the tab order.

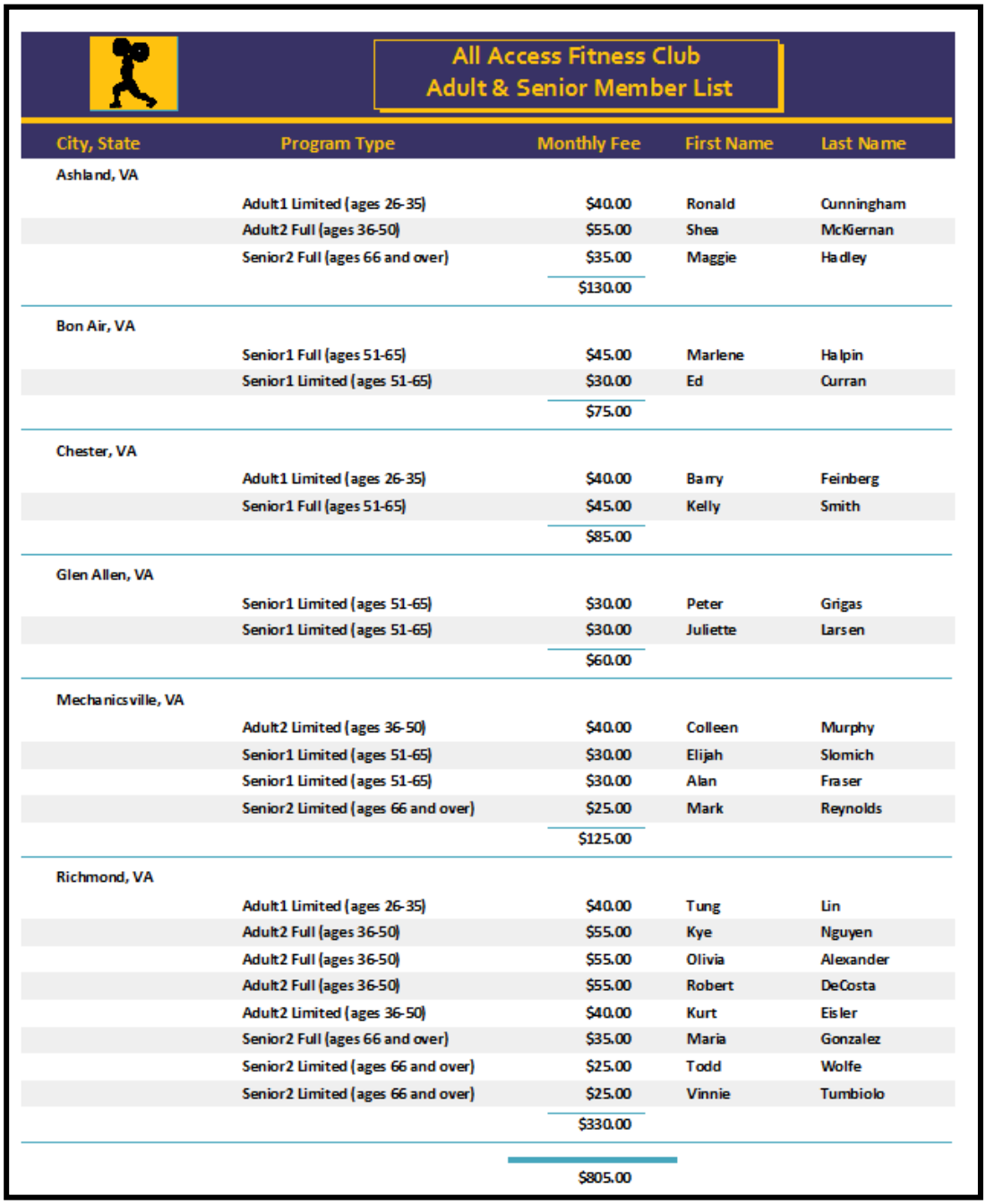
1. Modify the existing **frmProgramMainform** and **frmMemberSubform** (provided) by making the following changes:
2. Place a **title** in the form header, "**Fitness Programs and Members**", with a red, bold 18 point font over a yellow background.
3. On the main form, add a new field for **MonthlyFee** below the **ProgramType** field.
4. Size the textbox width on the main form so none of them extend over the 5" mark on the ruler.
5. Change the font of the textboxes to black, **bold**, 12 points with any light gray background color.
6. Change the **caption** of all four of the labels to be right-aligned within the label box with a back style property of transparent.
7. Place a dark red **rectangle**, with a line thickness of 2 points, around all four fields on the main form to visually separate them from the subform.
8. Size the main form so the width is 8", and align the subform with the left side of the rectangle.
9. Place a **combo box** in the form header to look up records on the main form by the **ProgramType**.
10. Change the Tab Order so the **ProgramType** is the first tab stop.
11. Change the properties of both the new lookup field and the subform so **neither** is a **Tab Stop.**
12. Your new form should look similar to the following:



Project 4: Modify a Report (15 Points)

Modify an existing report with subtotals for the group and report footer, add lines and proper spacing.

1. Take a look at the **rptSelectedMembers** report. This report needs some totals and formatting.
2. Use any of the methods we studied to add a subtotal and grand total for the **MonthlyFee** column. See the example below. Make sure your totals align vertically with the **MonthlyFee** column and the corresponding column header. Use consistent currency formatting.
3. Include a **short line** above the subtotal, a **medium length line** above the grand total, and a **really long line** at the bottom of the group footer (below the group total).
4. Your finished report should look **similar** to this example:



All Access Fitness Club
Adult & Senior Member List

City, State	Program Type	Monthly Fee	First Name	Last Name
Ashland, VA				
	Adult1 Limited (ages 26-35)	$40.00	Ronald	Cunningham
	Adult2 Full (ages 36-50)	$55.00	Shea	McKiernan
	Senior2 Full (ages 66 and over)	$35.00	Maggie	Hadley
		$130.00		
Bon Air, VA				
	Senior1 Full (ages 51-65)	$45.00	Marlene	Halpin
	Senior1 Limited (ages 51-65)	$30.00	Ed	Curran
		$75.00		
Chester, VA				
	Adult1 Limited (ages 26-35)	$40.00	Barry	Feinberg
	Senior1 Full (ages 51-65)	$45.00	Kelly	Smith
		$85.00		
Glen Allen, VA				
	Senior1 Limited (ages 51-65)	$30.00	Peter	Grigas
	Senior1 Limited (ages 51-65)	$30.00	Juliette	Larsen
		$60.00		
Mechanicsville, VA				
	Adult2 Limited (ages 36-50)	$40.00	Colleen	Murphy
	Senior1 Limited (ages 51-65)	$30.00	Elijah	Slomich
	Senior1 Limited (ages 51-65)	$30.00	Alan	Fraser
	Senior2 Limited (ages 66 and over)	$25.00	Mark	Reynolds
		$125.00		
Richmond, VA				
	Adult1 Limited (ages 26-35)	$40.00	Tung	Lin
	Adult2 Full (ages 36-50)	$55.00	Kye	Nguyen
	Adult2 Full (ages 36-50)	$55.00	Olivia	Alexander
	Adult2 Full (ages 36-50)	$55.00	Robert	DeCosta
	Adult2 Limited (ages 36-50)	$40.00	Kurt	Eisler
	Senior2 Full (ages 66 and over)	$35.00	Maria	Gonzalez
	Senior2 Limited (ages 66 and over)	$25.00	Todd	Wolfe
	Senior2 Limited (ages 66 and over)	$25.00	Vinnie	Tumbiolo
		$330.00		
		$805.00		

Project 5: Create a Query and a Custom Report (50 Points)

Create a new query that uses the IIF function, and use the query to create a new report (either from scratch or by using the Report Wizard) that is grouped and sorted, includes subtotals and grand totals, uses conditional formatting and includes the report title on each page.

Members of the **All Access Fitness Club** pay an annual re-enrollment fee. You have been asked to help analyze incentives to encourage members to re-enroll. You suggest that members with higher monthly fees get a bigger discount. You need to **produce a report** showing the annual re-enrollment fee that each member would pay, **similar to the sample report on page 7.** Use these steps:

1. Create a new query from **tblPrograms** and **tblMembers**. Include **FirstName**, **LastName**, **City**, **MembershipStatus, ExpirationDate** and **MonthlyFee.**
2. Then add a new calculated field, named **ReEnrollmentFee**, which uses the **IIF** function. If the normal **MonthlyFee** is greater than $35, then the **ReEnrollmentFee** should be zero, otherwise it should be reduced by $15 (the normal **MonthlyFee** minus $15). Test your query to make sure it works, and then save it as **qryReEnrollmentFees**.
3. **Next, use your creativity and Access knowledge to create new report (rptReEnrollmentFees). You may use any report tool or wizard, or you may create your report from scratch by adding fields to a "blank" report. Use the attached sample report (see the last page, below) as a guide – your report can be different, as long as you follow these general guidelines:**
4. Use your new query (above) as the record source for the report. Make the report easy to read with good **alignment**, **spacing** and use of **lines**.
5. You may use built-in styles or use your own creativity as desired. Use narrow margins (.25" left and right) and a landscape layout. Although your report may occupy several pages in length, **do not** allow your report to exceed the right/left margins of each page.
6. In the **page** header (**not** the **report** header), use a title of "**Proposed ReEnrollment Fees by City**" (minimum of 16 points and **bold**) and include the **date** and **page number** in the **Page Footer**.
7. The report should display all of the fields from your query for each member **in this order**: **City**, **ExpirationDate, FirstName**, **LastName**, **MembershipStatus**, **MonthlyFee** and **ReEnrollmentFee.**
8. Group your report by **City**, and sort your report by **ExpirationDate** within each **City**.
9. Specify to "**keep whole group together on one page**".
10. Include **subtotals** to sum the **ReEnrollmentFee** in the **City** group footer. Include the same **grand totals** in the report footer. You may use either manual or automatically generated subtotal titles.
11. Format all dollars / subtotals / grand totals consistently (Currency with 2 decimal places) and align them vertically.
12. Format your group total and grand total dollar amounts in **bold** font.
13. Use conditional formatting so that any **ReEnrollmentFee** equal to **zero** appears in a **red font.**
14. Save or rename your new report as **rptReEnrollmentFees.**

Final Step:

1. **Save, compact** and then close your **FitnessXXX** database.
2. Return to Canvas and open the **Unit 2 Midterm** assignment. "**Attach**" your completed **FitnessXXX** database and then "**Submit**" the assignment for grading. That's it!

This is a sample of one possible report design / layout. This is page 2 of 2 with **grand totals** and **group totals** displayed**.** You do not have to use complicated color schemes, and your report can look slightly different, as long as you display the data and meet the requirements listed in Project 5. You may get as creative as you want, or as basic and simple as you want. **Note: Your exact data and totals may be different from this sample below – that's OK.**

Proposed ReEnrollment Fees By City

City	First Name	Last Name	Expiration Date	Membership Status	Monthly Fee	Re-EnrollmentFee
Mechanicsville	Alan	Fraser	10/7/2010	InActive	$30.00	$15.00
	Colleen	Murphy	12/27/2011	Active	$40.00	$0.00
	Mark	Reynolds	1/7/2012	Active	$25.00	$10.00
	Jessica	Picard	1/9/2012	Active	$45.00	$0.00
	Elijah	Slomich	2/19/2012	On Hold	$30.00	$15.00
					Proposed Monthly Fee	**$40.00**
Richmond	Kurt	Eisler	5/4/2009	InActive	$40.00	$0.00
	Barney	Hassan	4/19/2010	InActive	$30.00	$15.00
	Kye	Nguyen	3/9/2011	InActive	$55.00	$0.00
	Olivia	Alexander	4/28/2011	InActive	$55.00	$0.00
	Debbie	Ward	5/9/2011	InActive	$25.00	$10.00
	George	Krukonis	6/22/2011	InActive	$30.00	$15.00
	Vinnie	Tumbiolo	7/6/2011	Inactive	$25.00	$10.00
	Maria	Gonzalez	8/6/2011	Inactive	$35.00	$20.00
	Jamal	Asmal	9/25/2011	Inactive	$30.00	$15.00
	Robert	DeCosta	10/10/2011	Inactive	$55.00	$0.00
	Abigail	Turner	3/20/2012	On Hold	$45.00	$0.00
	Todd	Wolfe	4/8/2012	Active	$25.00	$10.00
	Carmen	Sanchez	5/6/2012	On Hold	$25.00	$10.00
	Tung	Lin	6/4/2012	Active	$40.00	$0.00
					Proposed Monthly Fee	**$105.00**
					Grand Total Monthly Fee	**$300.00**

Sunday, October 23, 2011

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