Access Midterm Exam 1
CIS117DM

Project 1: Tables and Relationships (25 Points)

Download files, rename the database, change field properties, set primary keys, establish table relationships & referential integrity

- First, log in to Canvas, find and open the "**Unit 1 Midterm**" assignment, and save the attached **Midterm1.ZIP** file to the Windows desktop. Then **Close** (log out of) Canvas.
- Second, create a new folder on the Windows desktop named **Midterm**.
- Next, open your downloaded **Midterm1.ZIP** file from the 1st step by double-clicking it. There are four files including a database named **Donations.accdb.**
  Note: You will need file compression software, such as WinZip, 7-Zip (free download), or unzip your exam file in our classroom or computer lab.
- Drag the four files from the **Midterm1.ZIP** file into your new **Midterm** folder on the desktop. Make sure all four files are now located in your Midterm folder, and then **close and delete the ZIP file.** Repeat: Delete the **Midterm1.ZIP** file.
- Rename the **Donations.accdb** database to **DonationsXXX.accdb** where **XXX** is your initials, three if you have three initials, otherwise two initials, like **DonationsJD.accdb** for someone named **J**ohn **D**oe.
- Open your **DonationsXXX.accdb** database and notice that there are three Access tables: **tblAgencies, tblDonors** and **tblDonations**. This is a database used to track charitable donations given to Non-Profit organizations.
- Open the **tblAgencies** table in design view and:
  - Rename the **[Region]** field to **[State]**.
  - Set the **default value** for the **[State]** field to "**KS**".
  - Change the maximum size of the **[City]** field from 16 characters to 25.
  - Move the **[Phone]** field to the bottom of the table structure.
  - Make both **[ContactLastName]** and **[Zip]** required fields.

  Then save your changes to the table design.
- Open the **tblDonations** table in design view and:
  - Change the field type of the **DonationValue** field to **currency**.
  - Set the Validation Rule so the **DonationValue** must be between 1 and 999.
  - Set the Validation Text to "**Sorry, must be between $1 and $999**" **(**without the quotes).
  - Some of the fields in **tblDonations** do not have a "caption". Create a caption for each field by using a space between each word (e.g., the caption for **DonorID** becomes **Donor ID**).
  - Make **[PickupRequired]** a **required** field.
  - Set the default value for the **[PickupRequired]** field to "no" (false).
- Set the following primary keys for the three tables:

tblAgencies:	**[AgencyID]**
tblDonors:	**[DonorID]**
tblDonations:	**[DonationID]**

- Referential Integrity was never established between these tables. As a result, several donations were accidentally entered into the **tblDonations** table using an **AgencyID** that does not exist in the **tblAgencies** table. Your job is to **write a query to find any unmatched records** between the two tables using the **AgencyID** as the linking field. Be sure to find any **tblDonations** that have no matching master record in **tblAgencies**. When you find any unmatched donation records, **display all available fields**. (continued)
- Save and name your query **qryFindUnmatchedAgencyIDs**. When you run your query, you should find several mismatched records. Make the necessary manual data changes to credit all unmatched donations to "Mental Health Specialists" (an agency located in Salina, KS). (continued)
- Now that you have corrected the unmatched or "orphan" records, open the Relationships Window and join those two tables on the common field **AgencyID,** and specify to **enforce referential integrity.** Do not cascade updates or deletes. Save your changes.

Project 2: Creating Forms (20 Points)

Create a form/subform, insert a graphic and title in the form header, size all fields for best fit, create a split form

- Using the Form Wizard, create a Form / Subform from the **tblDonors** and **tblDonations** tables. Show all of the fields from **tblDonors** on the main form, and **[DonationDate]**, **[DonationDescription]**, **[DonationValue]**, and **[PickupRequired]** from **tblDonations**. Specify to view your form by **tblDonors** with a Datasheet subform and use any style you want. Save the main form as **frmDonorsMainForm** and the subform as **frmDonationsSubform**. (continued)
- Open the form in Design view and insert the Handshake graphic file provided into the right side of the form header. Size the graphic to about 1.5" by 1.5". (continued)
- Make the form title "**Donors and Donations**" in bold, 28 point type with a **yellow** font color and a dark blue background fill color. Center the title within its label box and keep the title label box aligned on the far left. Drag the title label box wider than necessary to display the full title. Then double-click the sizing handle on the right side of the title label box so Access will size it to "best fit". (continued)
- View your form in Form View and then **best fit** all of the fields in the subform.
- Next, use the **tblAgencies** table to create a **split form**. (continued)
- Go into design view and make all of the textboxes (data, not labels) in the top (the layout view) display in a **bold** font with a font size of **12 points**. (continued)
- Size your form so all of the **tblAgencies** fields in "layout" view at the top are visible. (continued)
- Name your split form **frmAgenciesSplitForm.**

Project 3: Creating a Query, a Report and Mailing Labels (25 Points)

Create a query and use it in a new report with grouping and conditional formatting, create mailing labels

- Create a new query from **tblAgencies** and **tblDonations**. Include **[AgencyName]**, **[City]** and **[State]** from **tblAgencies**, and **[DonationDate]**, **[DonationDescription]**, **[DonationValue]**, and **[PickupRequired]** from **tblDonations**. Save the new query as **qryDonationsByAgency**.

- Use the Report Wizard and your new query to create a report of agencies and donations. Include all fields from your query, and specify a grouping level of **[AgencyName]**. Accept any default settings for the Report Wizard **except** sort the donations by **[DonationValue]** in descending sequence, and use an outlined, landscape lay out. Save your report as **rptAgenciesAndDonations**. (continued)

- Open your report in design view and use **conditional formatting** to show any donation greater than $300 in **bold green** font. (continued)

- Save your changes and test your report to make sure it works.

- Next, use the **tblAgencies** table to create mailing labels. Specify **Avery 5160** style labels using any desired font name but specify **bold** and a **12 point** font size. In the label wizard, specify line one as the **[AgencyName]**, line two as the **[Address]**, and line three with the **[City]**, **[State]** and **[Zip]** fields on the same line. Separate the **[City]** and **[State]** with a comma, as in "**Topeka, KS 66604**". (continued)

- Save your mailing labels as **rptMailingLables**.

Project 4: Creating Queries (30 Points)

Create and save queries

- Create a query based on **tblAgencies**. Display **[AgencyName]**, **[ContactFirstName]**, **[ContactLastName]**, and **[City]** in that order. Sort in ascending sequence by **[City]** and then by **[AgencyName]**, left to right. Save the query as **qryAgenciesByCity**.

- Create a query from **tblDonors** and **tblDonations** that displays the **[DonorID]**, **[FirstName]**, **[LastName]**, **[DonationDescription]**, and **[DonationValue]** for all donations **over $50**. Sort the query in descending sequence by **[DonationValue]**. Save the query as **qryLargeDonations**.

- You have been tasked with analyzing the data in the **Donations** database to find out if any of the **tblAgencies** have the exact same mailing address. Use the **Find Duplicates** wizard to see if any records in **tblAgencies** have the same **Address**, **City**, **State** and **Zip**. If you find any, have your query display the **AgencyName** plus the four matching (mailing address) fields above. Save your query as **qryFindExactSameAddresses.**

  (continued)

- Create a query that uses a **calculated field** as follows. Display from **tblDonations** only these 4 fields: the **[DonorID]**, **[AgencyID]**, **[DonationDescription]**, and **[DonationValue].** Select only donations that require a pickup ("Yes" or true in the **[PickupRequired]** field). Create a calculated field named **[NetDonation]** that displays the results of subtracting $8.75 from the **[DonationValue]**. Save the query as **qryDonationsAfterPickupCharge**, and run the query. Go back into design view and format your calculated field as "currency" with 2 decimal places. Save your changes.
- Use **tblDonations** to display the sum, average, and count of the **[DonationValue]** field**.** Format the sum and average columns as "standard" with 2 decimal places and use the following captions: **Total Donations**, **Average Donation**, and **Number of Donations**. **Be sure to save** your query as **qryDonationStats**, and test it to make sure it works. Your answer should be exactly **one row** with three fields and no grouping. Re-size all columns to "best fit" in the query datasheet.
- Start with the previous query but include **tblAgencies** in the query design and group the donation stats by **[AgencyName]**. Accept the default of "**Group By**". Test your query.
  Caution: Do **not** click "Save". If you do click "Save", you may **accidentally overwrite** the **qryDonationStats** query from the previous step. You need to save **both** queries, so use **Save As** to save this last query as **qryDonationStatsByAgency**.

Optional Bonus (5 points): Create a query that displays **[DonationID]**, **[AgencyID]**, **[DonationDate]**, and **[DonationDescription]** from **tblDonations** and **[AgencyName]** from **tblAgencies**. Specify a wildcard selection criterion to include any agency that contains the word "**Senior**" or the word "**Youth**" anywhere in the **[AgencyName]**, but exclude records that have a **[DonationDate]** between 9/1/2012 and 1/1/2013 inclusive. Sort the results in ascending sequence by **[DonationDate].** Save your query as **qrySeniorOrYouthAgencies.**

Final Step:

- **Compact your Donations database.** You might be interested in looking at the size of your database (properties) before and after you compact it.
- Return to Canvas and open the **Unit 1 Midterm Assignment**. **Attach** only your completed **DonationsXXX.accdb** database and **submit** the assignment for grading.

  Note: **Mozilla Firefox** is the recommended browser for attaching assignment files in **Canvas**.

That's it! Good luck.