King Fahd University of Petroleum and Minerals
MIS-105--- Introduction to Computer Applications
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Chapter 2: Table Relationships/ Forms in Access

MIS105-Lab09

Objectives:
After finishing the lab, students should be able to do the following:
- Discuss the importance of data validation (referential integrity) and how it is implemented in Access.
- Understand the importance of creating relationships among Access tables.
- Understand the use Forms in Access.
- Use the Form Wizard to create a form; explain how AutoForm layouts can bypass the Wizard altogether.

Table Relationships

Lab Practice#1 (a)– Problem Statement
For the given database, named Employees, implement referential integrity checks among the database tables. Handle the integrity for data insertion, deletion and modification activities.

Hands On 11.1
Steps in creating relationships
1. Identify the type of relationship exist.
   According to the company rules, the following relationship types were identified.

Employee:Computers is 1:1
Location:Employee is 1:M
Title:Employee is 1:M

2. Identify the parent and child table.

Employee:Computers	Parent: Computers ,	Child: Employee
Location:Employee	Parent:Location	Child:Employee
Title:Employee	Parent:Title	Child:Employee

3. Repeat the primary key of parent table as a foreign key in the child table.

4. In case of a one-to-one relationship, assign the property "Indexed: Yes (No duplicates) to the foreign key in the child table.

5. Create the relationship in the Relationship Window.

6. Select the option "Enforce Referential Integrity"

7. Select Cascade options to maintain the integrity for Update and Delete cases accordingly.

8. Test the relationship effectiveness by using different scenarios.

Use of Lookup feature for accurate data entry
Table design view allows the use of lookup lists while entering the data in a field which refers the data in another table (foreign key field).

Lab Practice#1 (b)– Problem Statement
Using the Lookup feature of table design simplifies the data entry for different relationship tables.

Hands On 11.2
1. Open Computers.
2. For EmployeeID field, select the data type as LookupWizard.
3. By follow the steps in the wizard, connect the field with the field EmployeeID in the Employees table.
4. Repeat the same procedures with other relationship tables.

Creating Forms in Microsoft Access

Lab Practice#2 – Problem Statement
For the given database, named OurStudents.mdb, create a form for an easier data entry in Students table. Use the following details to complete the form. • The form header should have the title and current date in it. • The form should show one student record at a time. • The fields on the form should be placed in a columnar layout. • A calculated field, named GPA=Quality Points/Credits, should also be shown on the form. • The form should make use of special controls like combo box, check box, option group, command buttons etc. when appropriate.

Steps in Form Creation

Step I: Select form creation approach
Approaches to create a Form in Microsoft Access
Three approaches can be used:
1. Using Auto Form feature
2. Using Form Wizard
3. Using Form Design View

1. *Using Auto Form feature*
   It is the easiest way to create forms.

Hands On 11.3: Using Auto Form feature
1. Select the table Student. 2. Press AutoForm button, and the form will be ready.

2. Using Form Wizard

- More flexible than AutoForm.
- The Wizard asks you a series of questions, then builds the form according to your answers.
- For a detailed view of Wizard screens, see Figure 2.6 (page 69)

Hands On 11.4: Using Form Wizard
1. In the Form section, select the option 'Create form by using wizard.'
2. On the first screen, select the table or query name on which the form will be created.
3. Next screen, enter the fields to be shown on the form.
4. Select the form layout in screen#3.
5. Select the form background in screen#4.
6. Press Finish to complete the form.

3. Using Form Design View

- Most flexible way of Form creation.
- Needs the deeper understanding of different concepts.
- Allows the use of property sheets for form and controls over the form.
- Allows to select different types of controls from the available tool box.

Hands On 11.4: Using Form Design View
1. In the Form section, select the option 'Create form in the Design View'.
2. Open the form property sheet.
3. Attach the form to the table Student.
4. Show the form's header and footer by using 'View | Form Header & Footer' option.
5. By making use of different controls and their property settings, make the form as required by the problem statement.

Step II: Adding controls to the Form

Types of controls
1. Unbound – not attached with the table.
2. Bound – attached with a table's field.
3. Calculated – using some table fields to calculate a result.

Lab Practice #1.1
In addition to all the table fields, the form should show the calculated GPA, which is [QualityPoints]/[Credits].

Hands On 11.1
Follow Step 4 on page 73 of Access portion to add a calculated control over the form.

Manual controls alignment Vs Automated controls alignment

Lab Practice #1.2

Use automated alignment feature to align the control on the form.

Hands On 11.2

Follow Step 6 on page 75 to do automated alignment.

Setting the Form Header

Lab Practice #1.3

Add a header with the current date in it.

Hands On 11.3

Follow Step 7 on page 76

More Options to test:
- Changing the name of a control   (Step 5 - page 74)
- Aligning the controls (Step 6 - page 75)
- Error Messages (#NAME or #ERROR) (Step 8 - page 77)

More sophisticated Form
- Lookup Wizard Field on the table (Major - Step 2 - page 80))
- Adding new fields from the field list (Step 3 - page 81)
- Create an option group (Field: Campus - Step 4 - page 82)
- Add command buttons (automated code)
- Reset Tab Order (Step 7 - page 85)
- Insert Clip Art (Step 8 - page 86)