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Creating a relational database, creating grid fields, merging records

Related forms are relationships between the main or parent form with sub or child forms. They are used for one-to-many relationships (e.g., patient record/visit records). Related forms are linked to a parent form automatically by unique keys generated by the application.

Related Forms are made accessible through buttons in the form. When a Related Form Button is selected it will open the first page of the related form. Buttons can be accessible on a conditional basis to become available only under specified conditions through Check Code (i.e., to show a special form for a particular disease).

Create the Main or Parent Form

1. From the Epi Info main menu, select **Create Forms** or select **Tools > Create Forms**. The Form Designer window opens.
2. Select **File > New Project**. The New Project window opens. In the Project **Name** field, type **HouseSurvey**.
3. Save the project to the **C:\RMS Course** folder.
4. In the **Form Name** field, type **House**. Click **OK**.
5. Create the main (parent) view
6. Add the following variables to your database

| Prompt | Variable Type | Other |
|---------------|---------------|-------|
| House ID | Number | ##### |
| Address | Text | |
| Pipe | Yes/No | |
| Any Children? | Yes/No | |
| Comments | Multiline | |

7. In the lower part of the page where you want the Related Form Button to be placed, right-click on the page. Move the cursor over the New Field option. A sub-menu will appear. Select **Relate** as the field type to display the Related Form Button dialog box.
8. Type *Children* in the Question or Prompt for the Related Form Button.
9. From the Related Form drop down box, select **create new form** to create a new form or select from the list of existing forms.
 - The dialog box will show the Accessible always button selected. The *Only When Certain Conditions are True* selection is not available in this version of Epi Info 7.
 - Accessible always will create a related button in the form that is active at all times during data entry.
 - **Only When Certain Conditions are True** will be available in a future Epi Info release. However, a conditional statement can be created using Check Code. Check Code can be associated with the button to create a condition statement like this:

Record
Before
DISABLE Children



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```

End-Before
End-Record
Field AnyChildren
After
    IF AnyChildren = (+) THEN
        ENABLE Children
    END-IF
End-After
End-Field
Page [Page 1]
Before
    IF AnyChildren = (+) THEN
        ENABLE Children
    END-IF
End-Before
End-Page

```

10. Selecting **Return to the Parent Form after One Record has been Entered** allows only one record to be entered in the related table and returns the cursor to the parent form after it is entered. Leave it **unselected**.
11. Click **OK**. The Create a New Form dialog appears. Click **OK** to accept the default value. A new form named **Children** will appear in the **Form Designer** page panel. The Related Form button appears on the House Form.
 - Left Click to resize or move the related button.
 - To edit the relate options for that button, place the cursor on the relate button **Right Click > Properties**. The Related Form Button dialog box will open.

Create the related view

1. Right click on the related button. Select **Go To Related Form**
2. In the blank page that appears, the title at the top tab should be Children\New Page instead of House\Page 1. On this new form, enter the following variables:

| Question or Prompt | Type |
|--------------------|---|
| Child's Name | Text |
| Age in Years | Number (##) |
| Sex | Text: Legal (Male, Female) |
| School | Text Legal (None, Primary, Secondary, Koranic, Other) |
| Comments | Multiline |

Testing the new relational database system

1. From the Enter Data navigation menu toolbar, select **File > Open Form** or **Recent Forms**. Choose the HouseSurvey project, select the **House** form and click **OK**.
2. Type the data for the first family:

| | |
|-----------------|---------------|
| House Id | 0001 |
| Address | 100 Bauchi Rd |
| Pipe | Yes |
| Children | Yes |
| Comments | None |

3. Now click on **Children** button and enter the following data:

| Name | Age | Sex | School | Comments |
|-----------|-----|--------|-----------|----------|
| John | 6 | Male | Primary | |
| David | 13 | Male | Secondary | |
| Priscilla | 2 | Female | None | Sick |
| Hauwa | 8 | Female | None | |

Two new buttons are displayed on the left side of the form--**Back** and **Home** above the **Open Form** button. By clicking on Back you will be taken to the parent form (House). When done with the first house, click on “Back” to return to the parent form.

4. To enter the second family, click on the “New Record” button in the main form

| House Id | 0002 | 0003 |
|----------|----------------|--------------------------|
| Address | 121 Shendam St | 136 Shendam St |
| Pipe | No | No |
| Children | No | Yes |
| Comments | None | House next to the school |

5. Since AnyChildren = “No” the Check Code keeps the button disabled so that you cannot enter children for record two.
6. Click on “New Record” to create the third record. Add the children records.

| Name | Age | Sex | School | Comments |
|-------|-----|--------|---------|----------|
| Dauda | 11 | Male | Koranic | |
| Aisha | 12 | Female | Koranic | |

Click on “Back” to return to the parent form.

Create a Grid

Grids are used for small groups of repeating information. For example, we could have used a grid for the children’s data above.

- Click on the **Edit Form** button on the House form to switch to the Form Designer. Right click in the page. Select **New Field > Grid**.
- Type **Grid Practice** in the Question or Prompt field. This will be the name of the grid. **Click Add**.
- In the **Enter Column Header Name for Grid** field, type **Disease**. Click **Save Column**. The First column in the set-up grid populates.
- Type **Symptom** and click **Save Column**. Type **Days Ill**, and select **Number** from the Column Type field. Select **##** from the Pattern field. Click **Save Column**. Enter all the necessary columns, clicking Save Column for each.
 - To edit a column, click the Column Name. Click Save Column to save edits. To delete a column, right click on the Column Name.
 - Use the Column Type field drop-down list to select different field types as necessary.



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- Property options, such as Required or Read Only, can also be applied to columns. Code Tables, such as Legal Values and Comment Legal Values, can also be set for columns.
5. Click **OK** then click **OK** again. The grid appears in on the form.
- Grids can be resized by selecting the grid and dragging the blue bounding boxes.
 - Columns can be resized by hovering the mouse over a column border until the mouse turns into horizontal arrows and then use the click, hold, and drag method to resize the column.
 - Grid columns cannot have check code.

Package File for transport

1. From the Enter Data navigation menu toolbar, select **File > Open Form** or **Recent Forms**.
2. Select the *AsthmaSurvey2005* project (AsthmaSurvey2005.prj).
3. Select the **PreInterventionSurvey** form. You should have 800 records.
4. Select **File > Package for transport...**
5. Browse **Package path**. Choose where you want to save the file to. It cannot be the same folder as the project.
6. Type *AsthmaSurvey2005* as the Package Name (optional add password to encrypt the file). You can choose to append a timestamp to the file name (optional).
7. Click **Package**. The package file will be placed in the folder you selected with the extension .edp7.
8. The package file can be sent to others by email or on a disk for merging with other similar Epi Info 7 files using the Data Packager. You can copy and save the file to any location.

Merging Records

We want to merge the records from the AsthmaSurvey2005.MDB with the 4 records we entered in the AsthmaSurvey project we created earlier.

1. From the Enter Data navigation menu toolbar, select **File > Open Form** or **Recent Forms**.
2. Select the *AsthmaSurvey2005* project (AsthmaSurvey.prj).
3. Select the **PreInterventionSurvey** form. You should have 800 records.
4. Select **File > Import data > From form**
5. Click on the **ellipsis (...)** button to the right of the **Project containing the data to import** field to locate the *AsthmaSurvey.prj* file.
6. Select **PreInterventionSurvey** in the **Form data to import** field. Select **Update and Append** from the **Type of import** dropdown list.
7. Click **Import**. Enter Data will update and append your Epi Info 7 project with the imported records.
8. You should now have 804 records. Browse to the last 4 records to see the newly imported records.
 - The Data Packager tool from Enter Data module can also be used merge all the student



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records in one project.

- As seen earlier we can also use the MERGE command from **Classic Analysis** to join records.
- A merge using the Data Packager requires a key, called the GLOBAL RECORD ID, which represents an internal matching variable inside both sets of data.