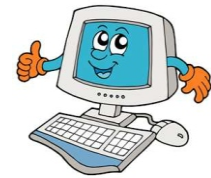


12

Forms and Reports



In the earlier chapters, we have discussed how to design the database, perform operations on the table using Table Datasheet View and view information by using Query Datasheet View. The Datasheet View is in the form of row and columns. When we entered data in the Product table, we entered it using spreadsheet style. This black and white format of entering and viewing data is sometimes unpleasant and boring to the user. While designing the Customer table we have used small names for defining field like Ccode which stands for customer code. Sometimes, these types of fields are not self explanatory. In this chapter, we will discuss an alternative way to enter and display the data in the database known as Forms and Reports. We will discuss how to display output in the formatted manner using reports. As explained in previous chapters, Forms and Reports similar to Tables and Queries are objects displayed in left pane of the Database Window. Let us discuss each of them one by one.

Forms

Recall when you took admission in school, you might have entered your data in the admission form designed with fill in the blanks style to enter the data. Base also offers similar alternative to view and work with the data in the tables and it is known as Form. A Form resembles the pen and paper style forms. In the language of databases, a form is a front end for data entry and editing. Forms can be designed using various styles, colors, along with heading, name and logo. Designing forms is really interesting. There are two ways to create a Form.

1. Using Wizard
2. Using Design View

The simplest way is to use the Wizard. Let us continue our journey of learning forms in Base by creating a form using Wizard.

Creating form using Wizard

There are two ways to initiate Form Wizard. The first way is to right click the table for which form is to be created. The second way is to click on Forms icon and choose *Use Wizard to create a form* option from the *Tasks* pane. Figure 12.1 shows how to use the first option. Follow the mentioned steps to create a simple form using wizard.

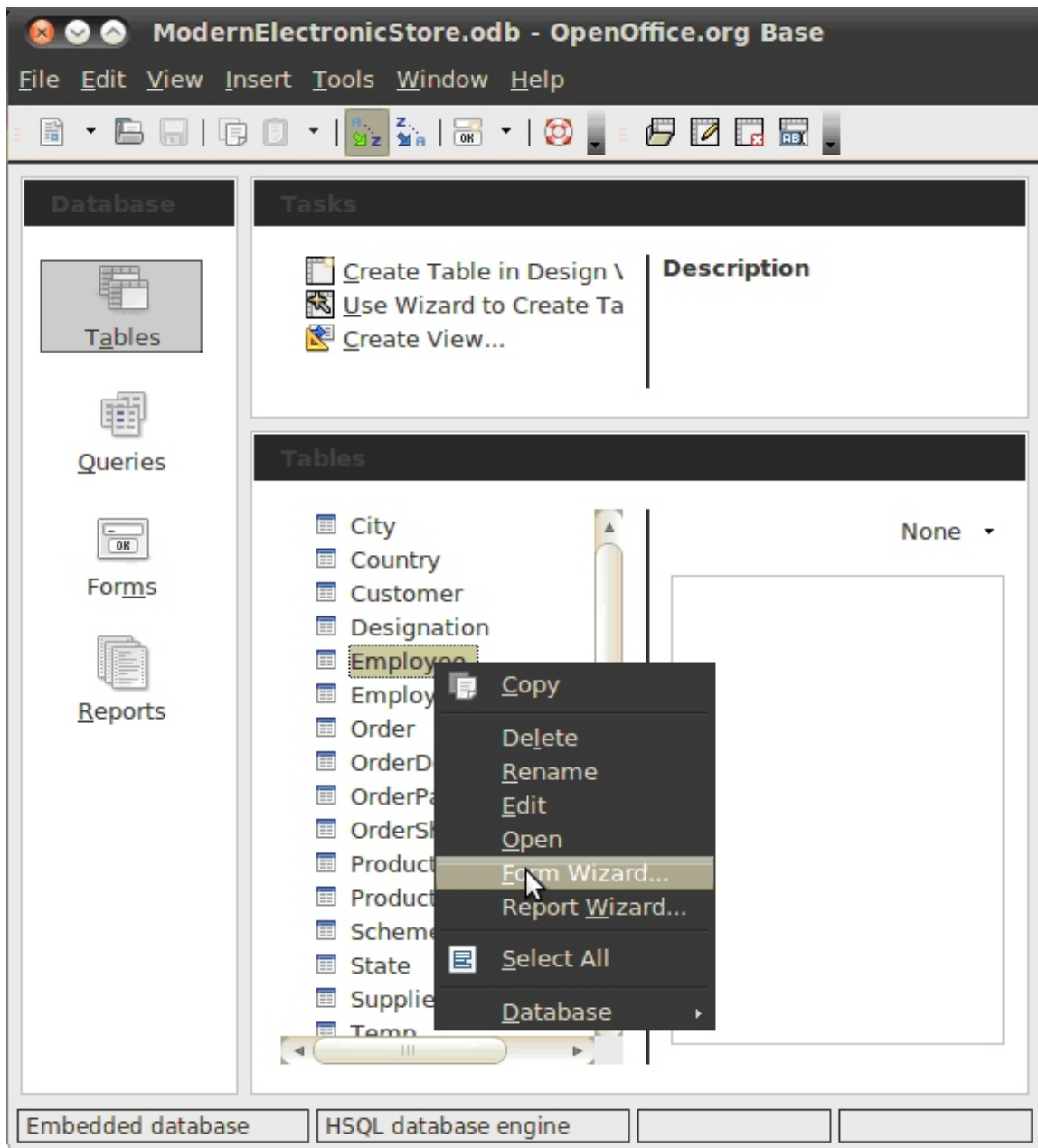


Figure 12.1 : Creating a Form Using Wizard

- Right click on the Employee table.
- From the pop up menu select *Form Wizard...* option. (See figure 12.1)
- The wizard will open two dialog boxes namely; Form Design and Form Wizard together as shown in figure 12.2. For time being we will only look at the Form Wizard dialog box. Also observe that all the fields of the Employee table are listed under *Available Fields* list box of Form Wizard dialog box.
- Click on the right double arrow (>>) to move all of these fields to the *Fields in the form list*.
- Click on the Next button.

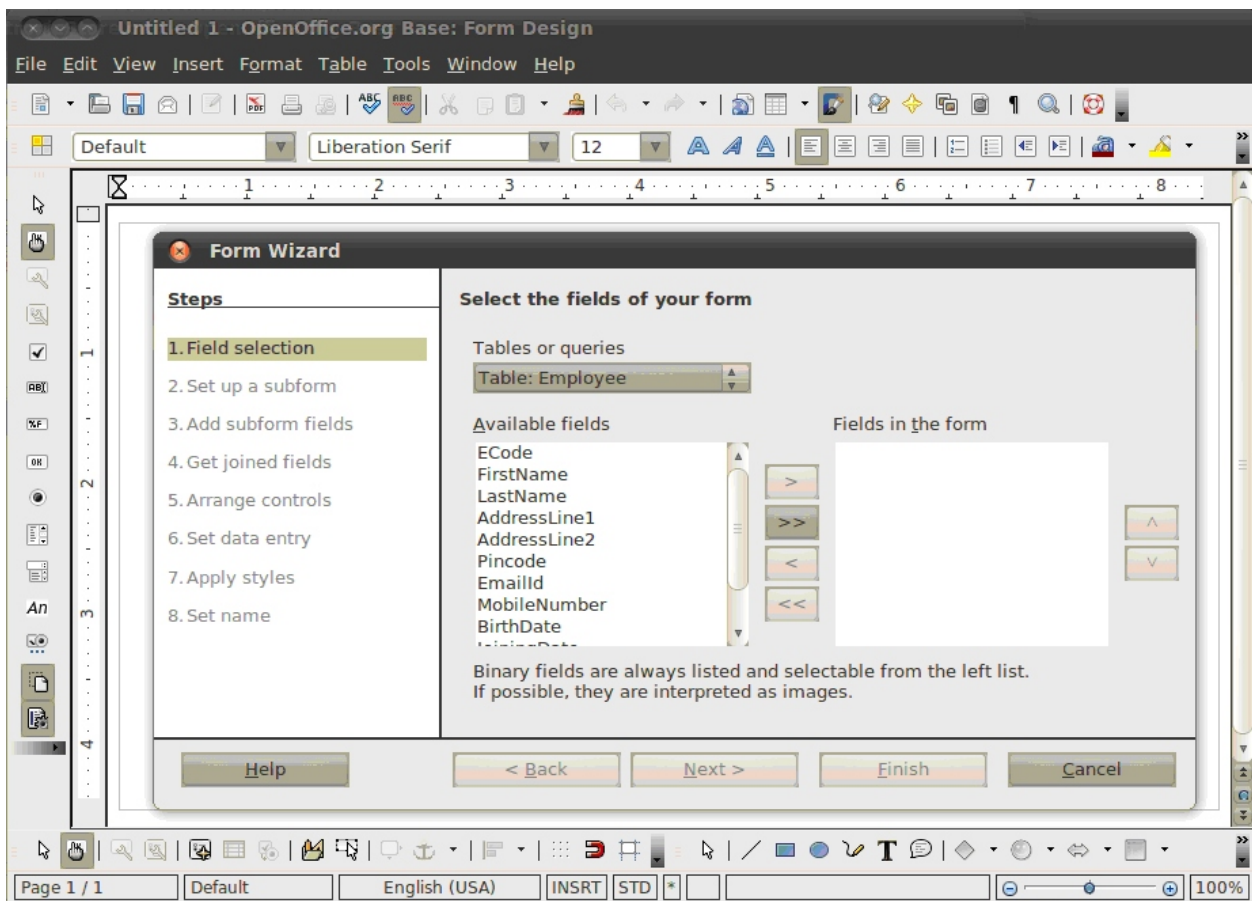


Figure 12.2 : Field Selection for Form creation

- This step consists of setting up a subform. Subforms are discussed later in this chapter. For creating a simple form, click on Next button and step 5 of form wizard as shown in figure 12.3 would be displayed.

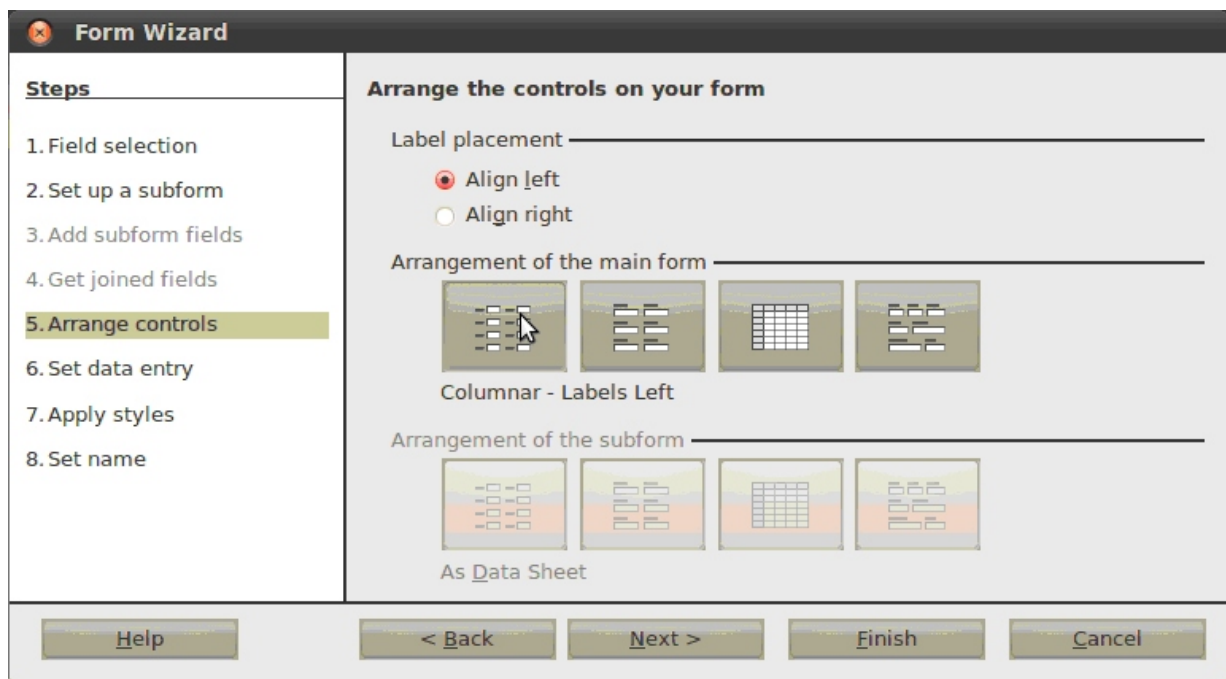


Figure 12.3 : Arrangements of Controls

- This step consists of aligning various controls visible on the form. *A control consists of two parts: a label and a field.* This step when performed determines how the label and field will be visible on the screen. The labels can be aligned on the left side or the right side. In our case *Align left* option has been selected. The field corresponding to a label can be arranged in four ways namely *Columnar – Labels Left, Columnar - Labels on Top, As Data Sheet, and In Blocks - Labels Above.* Under the heading *Arrangement of the main form,* Click on the *Columnar - Labels Left* icon.

Click on the Next button, step 6 of form wizard would be displayed as shown in figure 12.4.

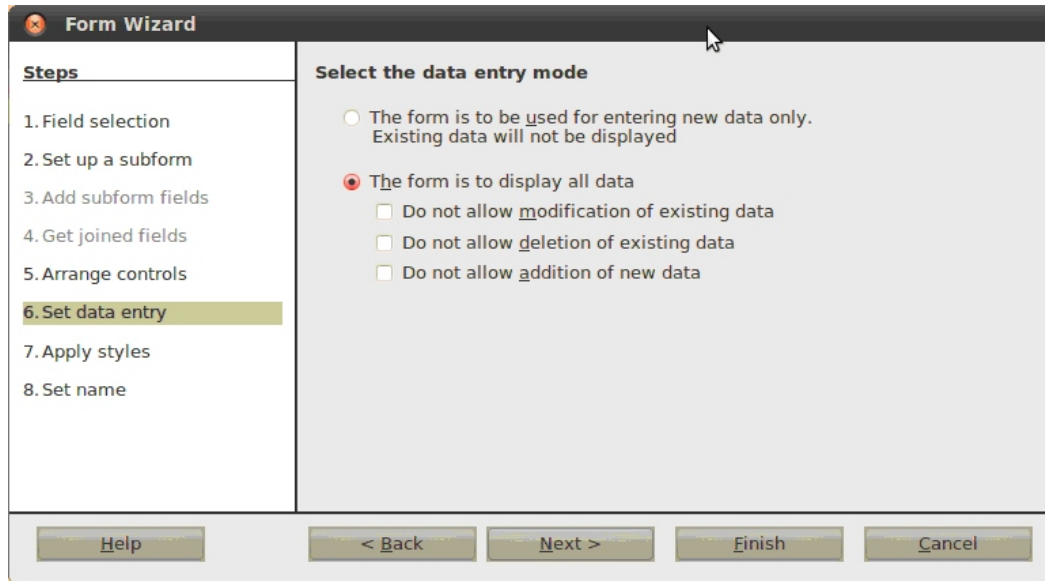


Figure 12.4 : Data entry control settings

- Unless you have a need for any of these entries to be checked, accept the default settings. Click on the Next button and step 7 of form wizard would be displayed as shown in figure 12.5.

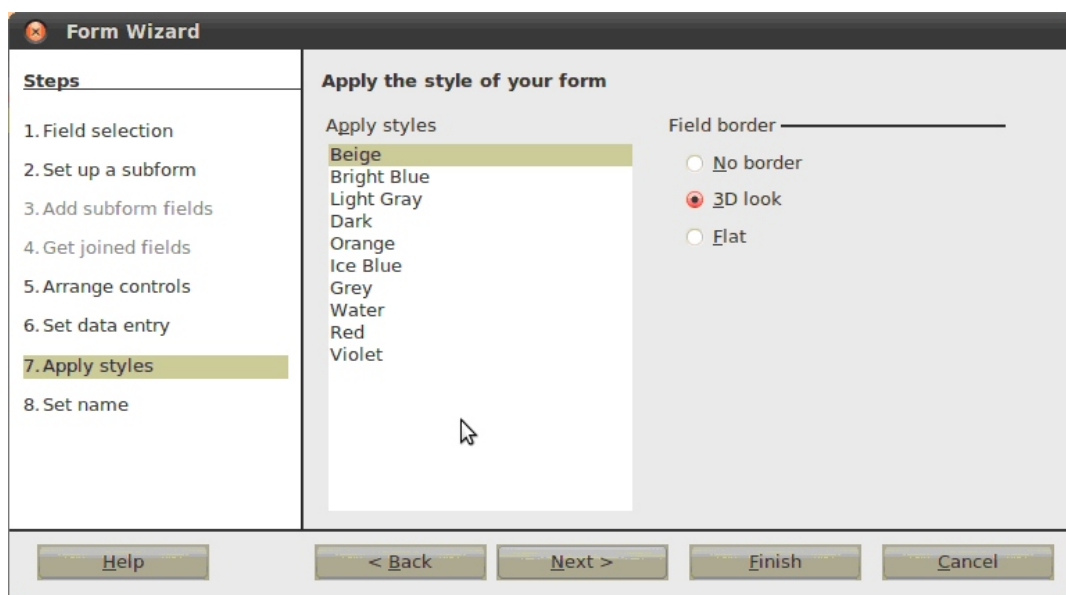


Figure 12.5 : Applying Styles

- Select the color you want in the *Apply styles* list. Figure 12.5 shows that Beige color is selected from *Apply styles* list, while 3D look is selected in *Field border* options. You might experiment with the different possible settings. Click on the Next button to display step 8 of form wizard. The screen of step 8 would look similar to the one shown in figure 12.6.

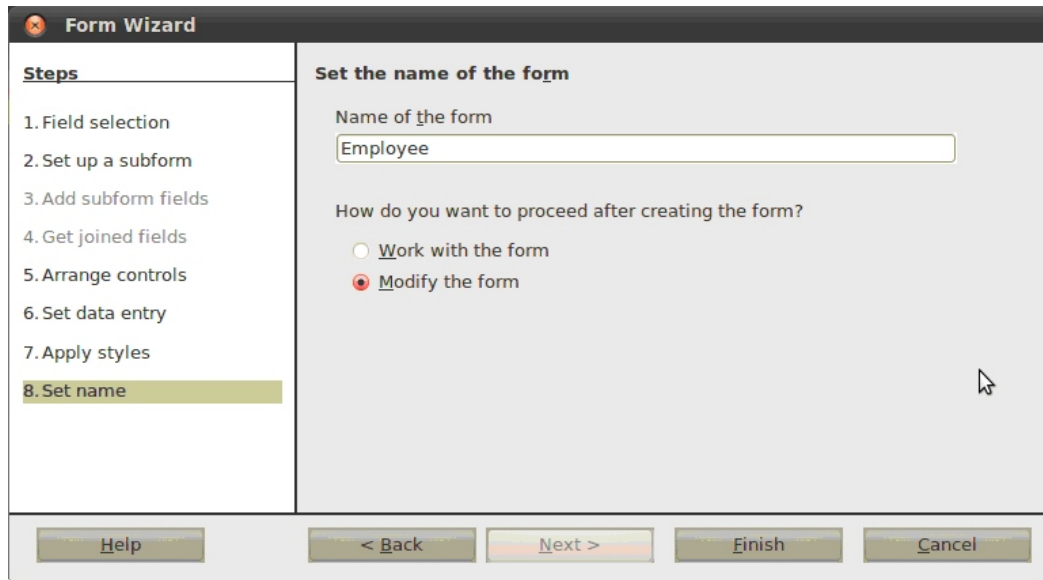


Figure 12.6 : Naming form

- Enter the name for the form. In this case, it is Employee. Click *Modify the form* radio button. Click on the Finish button. The form now opens in the Edit mode as shown in figure 12.7.

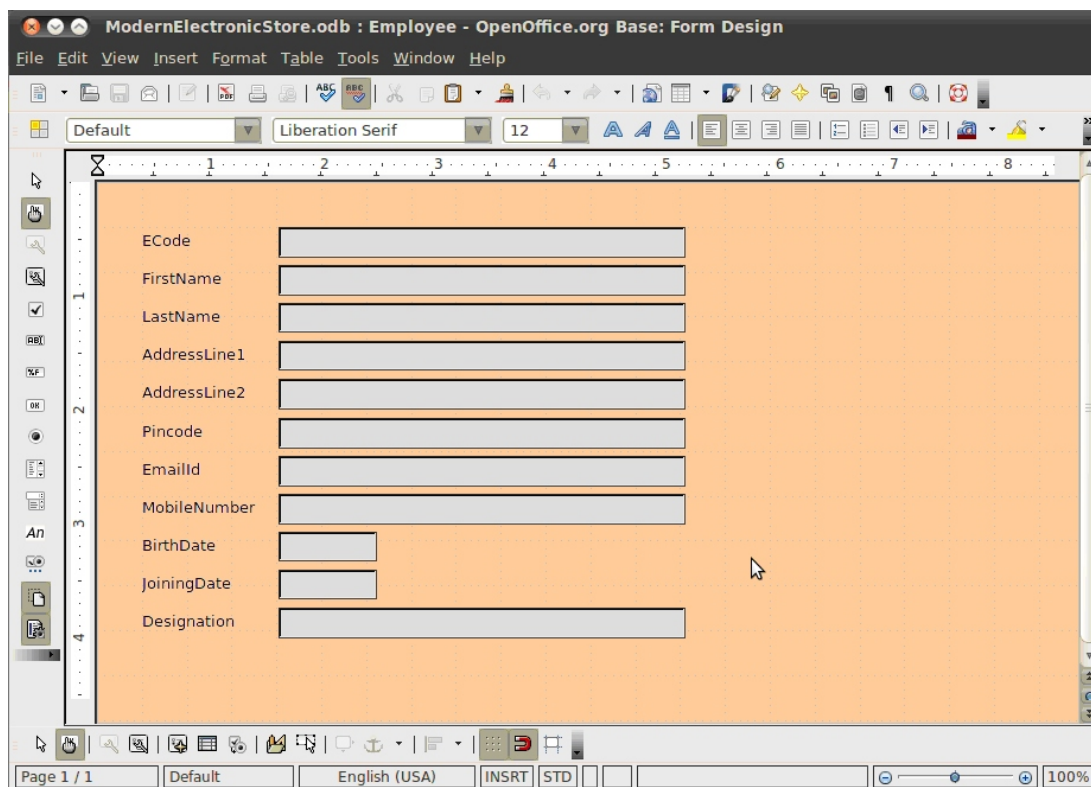


Figure 12.7: Form in modify mode

Modifying Form

The form once created can be easily modified by moving the controls on the form as per our liking. We can move the controls to different places in the form. Background picture can also be changed. We can modify the label for the fields such as the label ECode can be changed to Employee Code. It is also possible to change a text box to a list box. Let us try to modify the form created using wizard.

Changing Label Text

Let us change label ECode to Employee Code by performing the following steps:

- Press CTRL + Click to select the label containing ECode as text.
- Now right click on the label and from the popup menu select *Control...* option. A *Properties: Label Field* dialog box as shown in figure 12.8 will be opened.
- Type Employee Code in the text box after Label..... (See figure 12.8).
- Close the *Properties: Label Field* dialog box and you will observe that the label ECode visible in the Form Design changes to Employee Code.

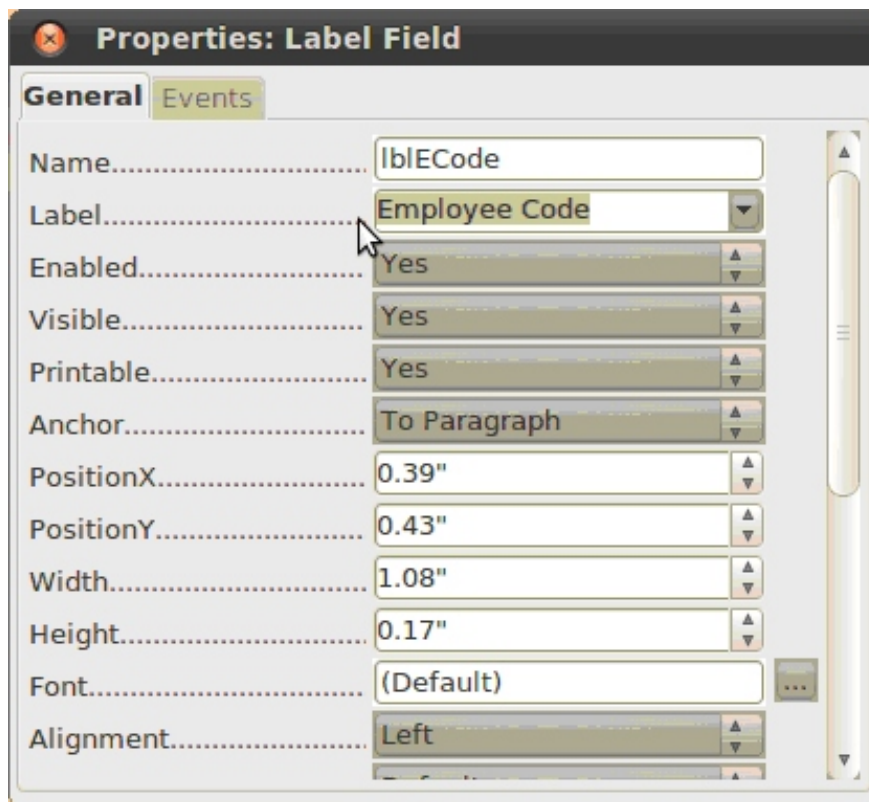


Figure 12.8 : Properties Dialog box

As can be seen in figure 12.8, the *Properties: Label Field* dialog box consists of many properties related to this control. Features like Height, Width, Text Alignment, and Visibility of a control can also be set using it.

Moving Control

The controls in the main form consist of a label and its field. Clicking a label or field selects the entire control. A border appears around the control with eight green handles as can be seen in figure 12.9. You can then drag and drop it anywhere you want within the form.

Many times we may need to modify only label. Hence only one component, which is label, needs to be chosen. To choose either a label or a text field, press CTRL key and click on the label or a text field. Figure 12.10 shows the text field selection.

Changing Control size

Let us increase the width of the Employee Code field.

- Press CTRL and click on the Employee Code field text box to select it.
- Move the cursor over the middle of the green handle on the right side. It should change to a single arrow as seen in figure 12.11.
- Hold the left mouse button down as you drag the cursor to the right until the width is desired width. You can see the changing size at bottom of the screen (see figure 12.12).



Figure 12.9 : A Selected control

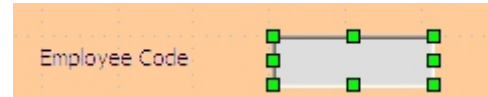


Figure 12.10 :
Selecting a field of control

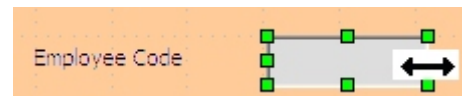


Figure 12.11 :
Changing Control size

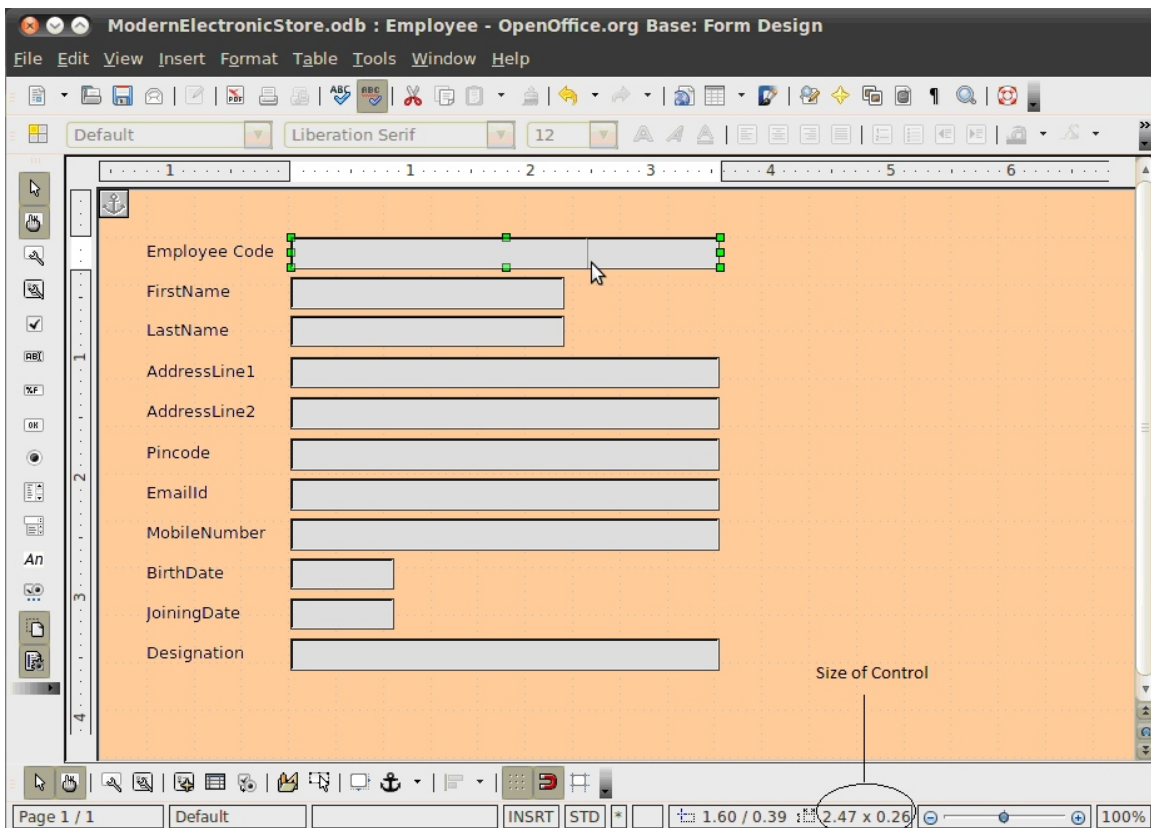


Figure 12.12 : Changing Size of Control

- You can double click the position and size area to open the *Position and Size* dialog box as shown in figure 12.13.

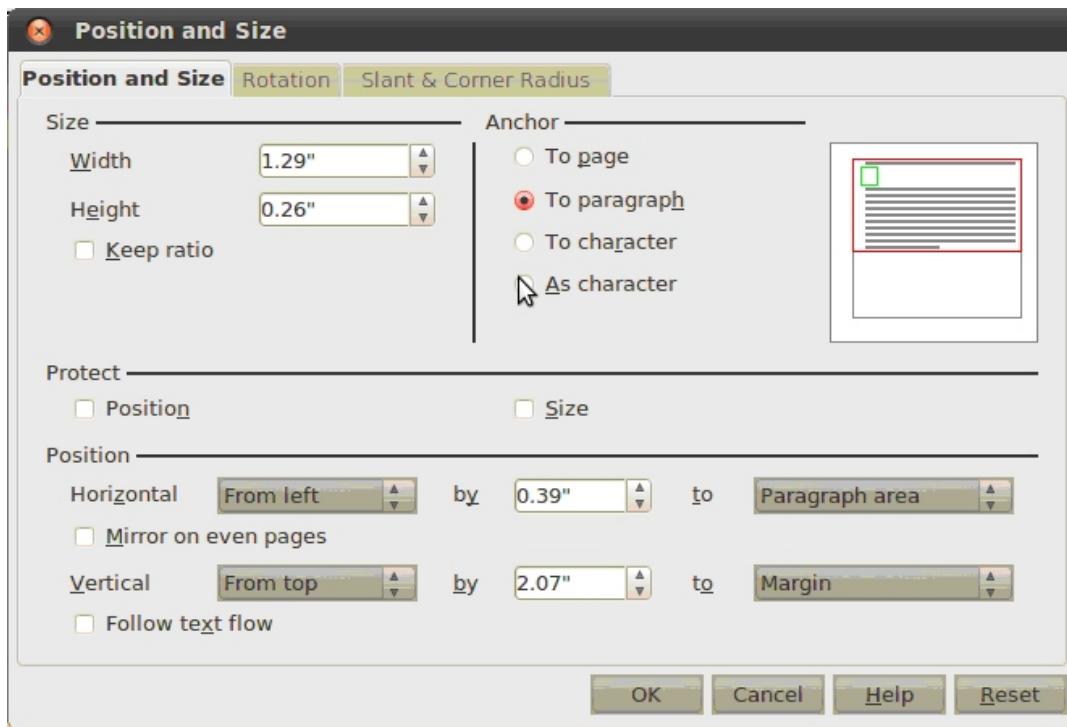


Figure 12.13 : Position and Size

Creating Help Text

Have you ever rested a mouse pointer for a while on buttons in toolbar? Try it. You will find a yellow box showing the text that mentions the purpose of the button. This yellow box is known

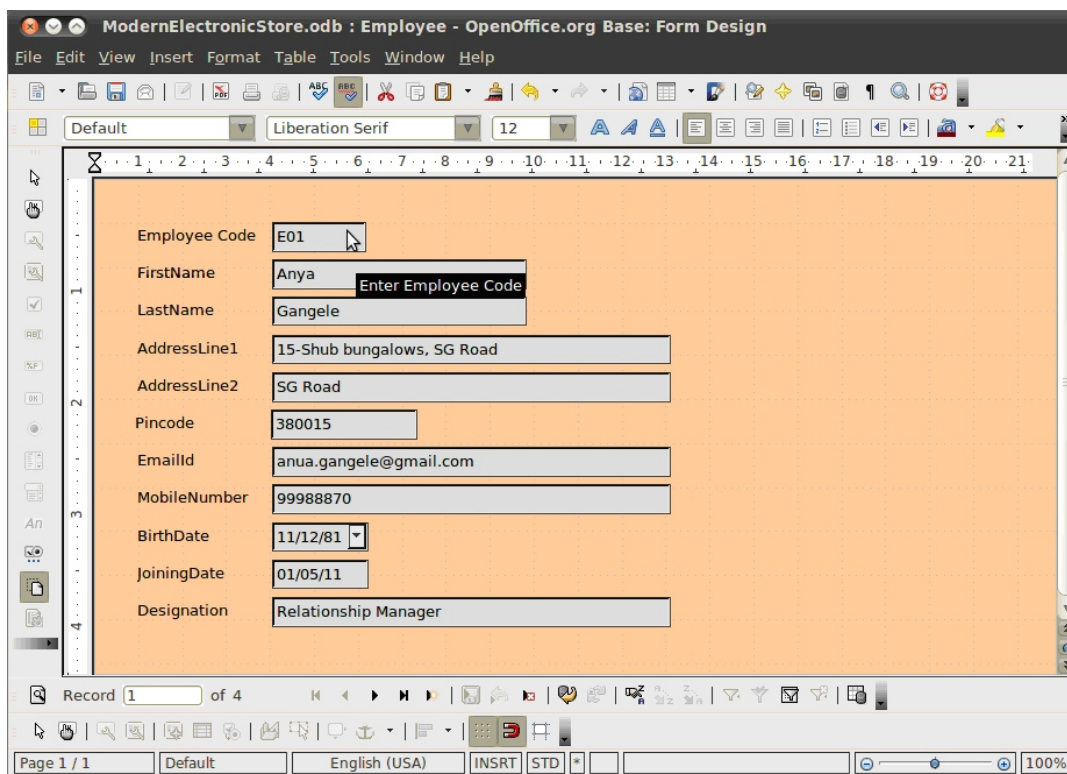


Figure 12.14 : Help Text

as *tool tip text*. Similarly, controls placed on data entry forms in Base can be tagged with help text as can be seen in figure 12.14.

Let us attach a tool tip *Enter Employee Code*, on the text box control associated with Employee Code label. Press CTRL and click on the text box to select the control. Right click the control and choose *Control...* option. The *Properties: Text Box* dialog box as seen in figure 12.15 would be displayed. Scroll down till you see a label *Help text.....* Now enter the text “Enter Employee Code” as shown in figure 12.15.

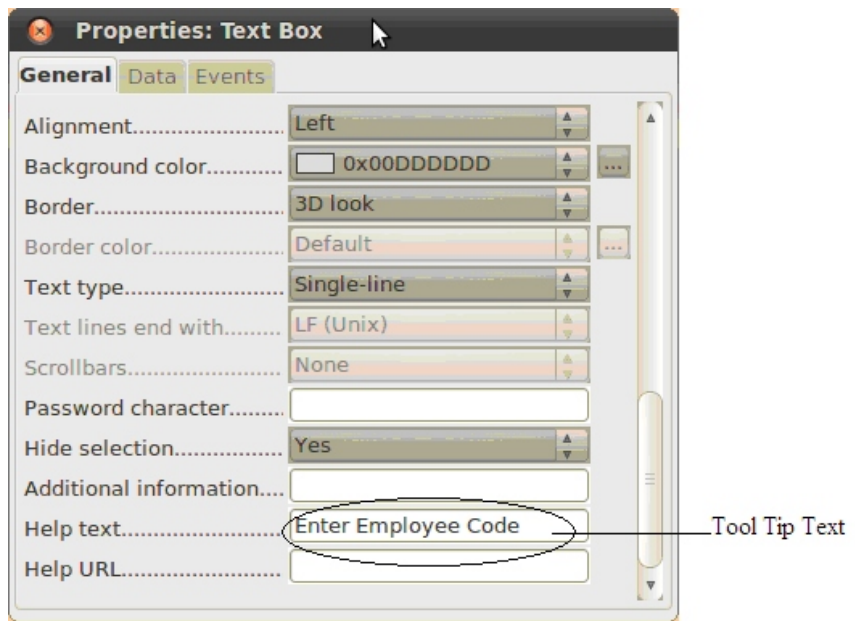


Figure 12.15 : Setting Help text

Change the Date field

Perform the following steps to change the date field to calendar control as seen in figure 12.16.

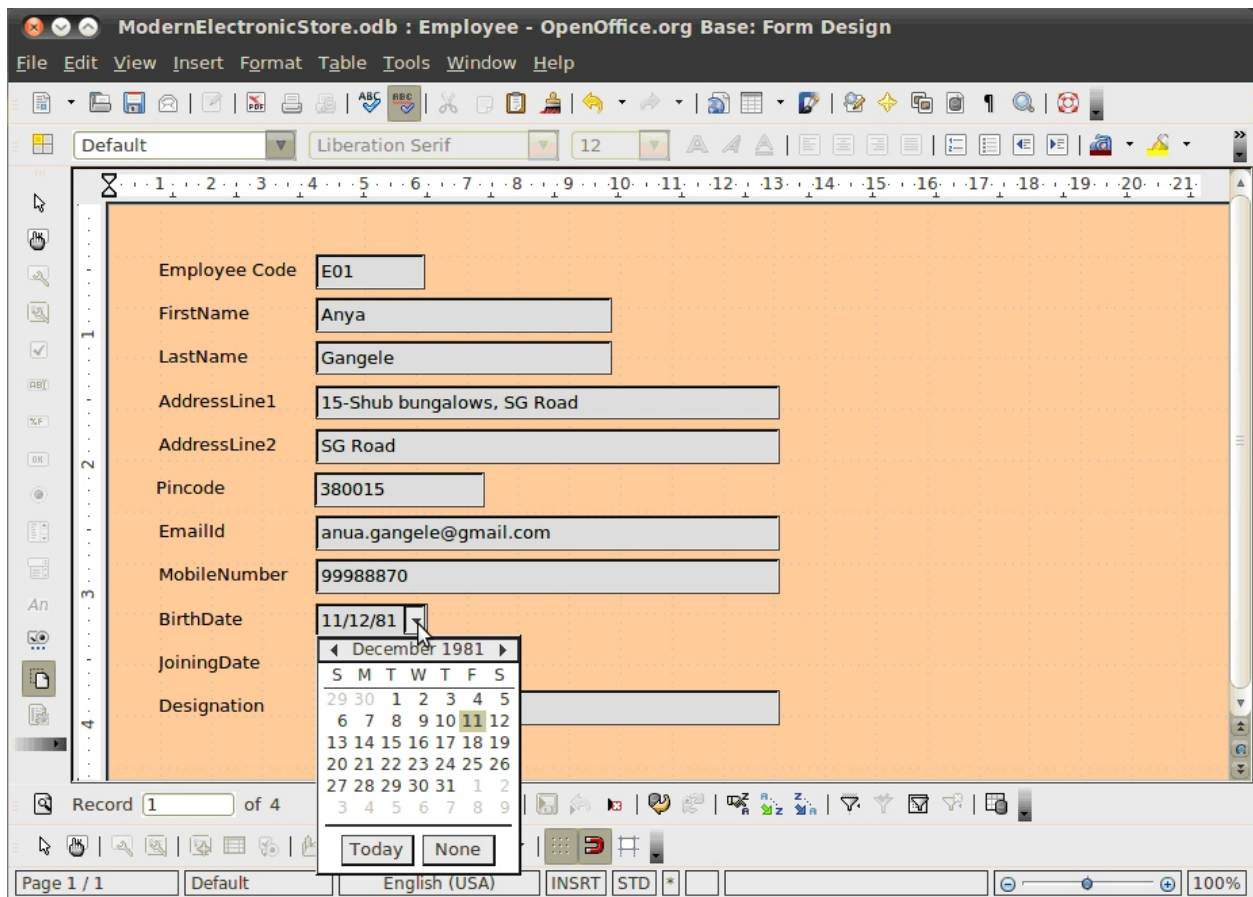


Figure 12.16 : Changing Date field

- Select the BirthDate field text box by clicking on it with CTRL key pressed.
- Move the cursor over the middle of the green handle on the right side. It should change to a single arrow.
- Hold the left mouse button down as you drag the cursor to the right until the length is as per requirement.
- Release the mouse button.
- Right click on the text box and choose *Control...* option. Alternatively you can click on the *Control* icon in the Form Controls toolbar as shown in figure 12.17. This toolbar will be placed vertically on the left side of the form (See figure 12.2 or 12.3). A *Properties: Date Field* dialog box will open.

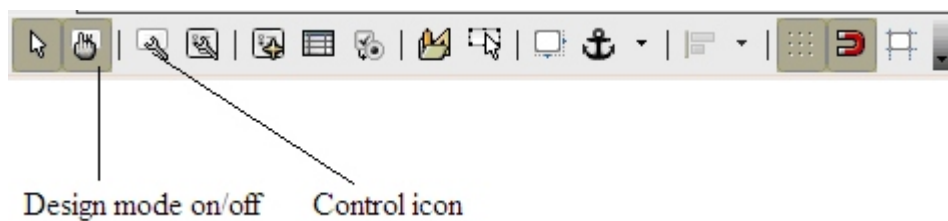


Figure 12.17 : Form Controls toolbar

- Scroll down to the *Date format.....* property. This is a drop down list with *Standard (short)* as the default setting.
- Click on the default *Standard (short)* to open the list. Select the *Standard (long)* option from the list.
- Scroll down to the *Dropdown.....* property. Its default setting is No. Change it to Yes.
- Close the dialog box. You will observe that the text box has now turned into a drop down.

Note : We can also click on the *Design Mode On/Off* icon (the second icon from the left in figure 12.17). This will toggle the form design view to form view and vice-versa.

Changing Background

The background for a form can be a color, or a graphic (picture). You can use any of the colors in the Color Table available in Tools-Options-OpenOffice.org-Colors. You can also use a graphic file as the background. Perform the following steps to change background of form.

- Right click on the blank space in a form. Sub menu as shown in figure 12.18 would appear.

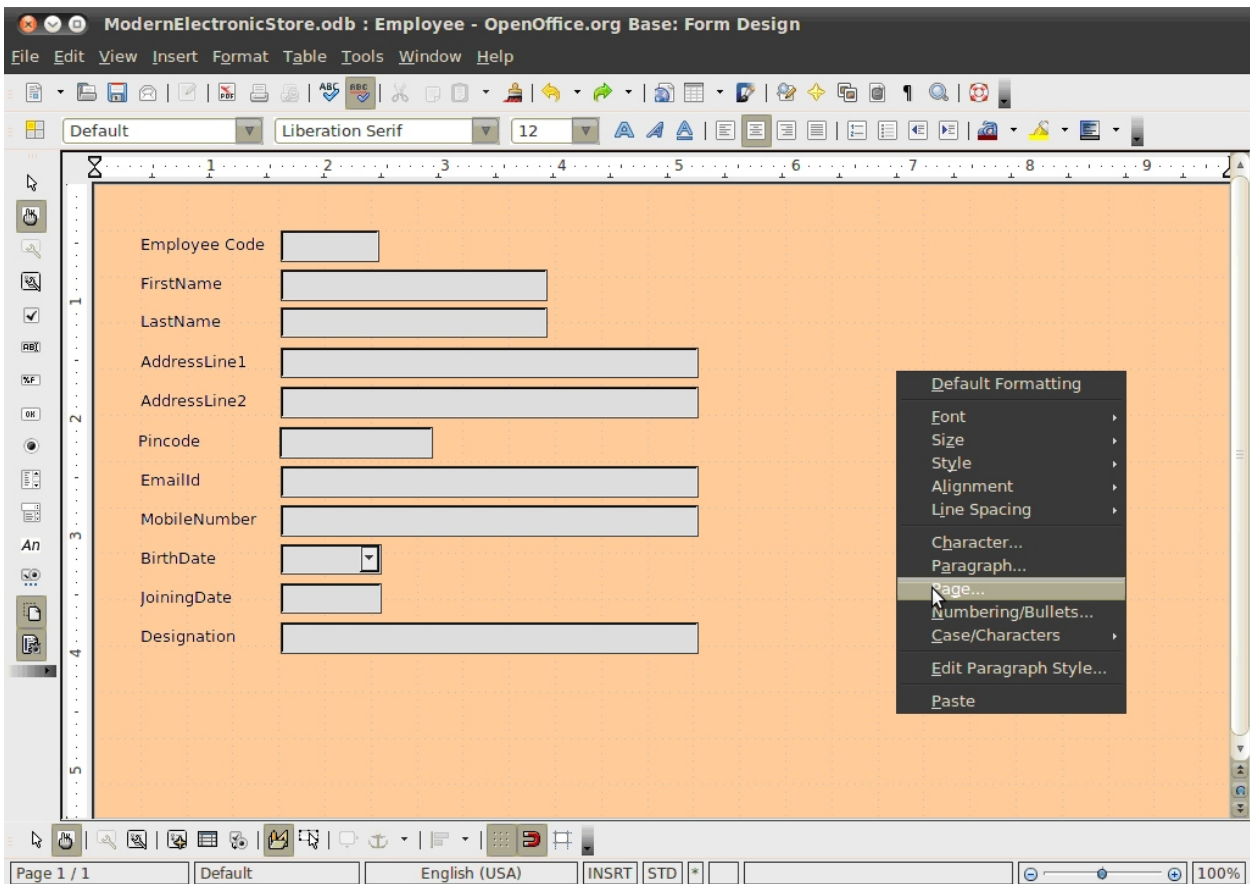


Figure 12.18 : Form Sub-menu

- Choose *Page...* option. A *Page Style* dialog box as shown in figure 12.19 would appear.

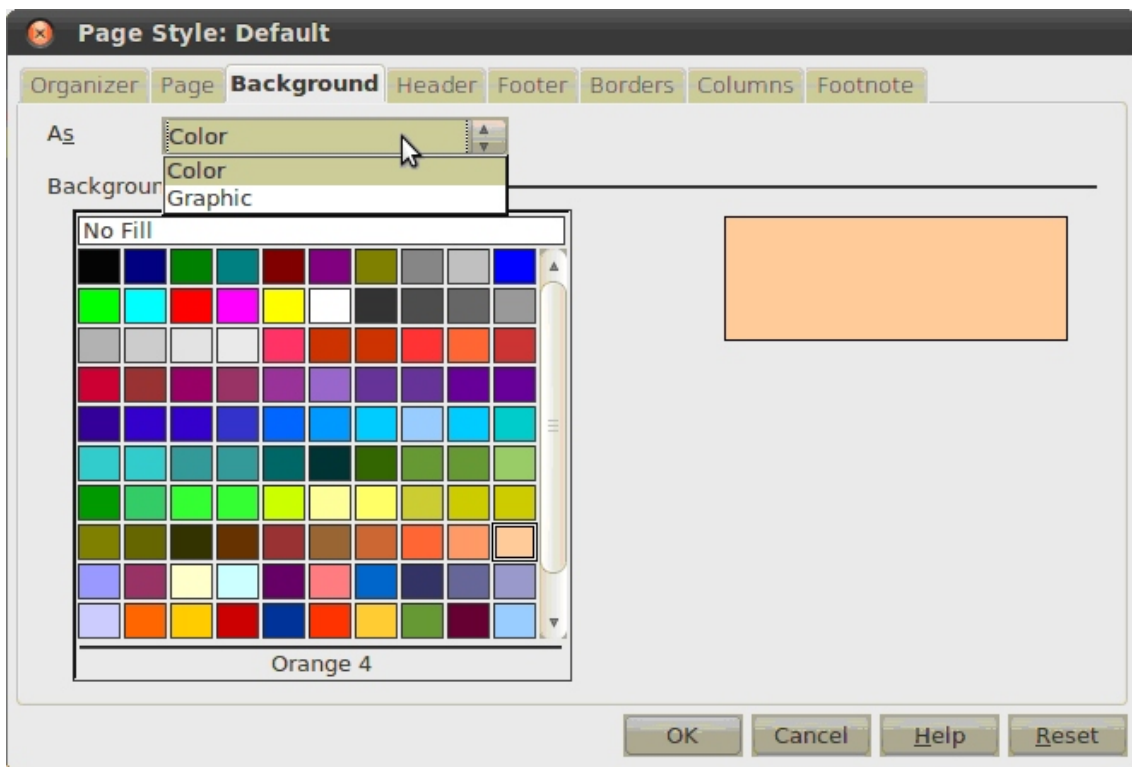


Figure 12.19 : Page Style dialog box

- Choose the desired color and click on OK button. The background of the form will be now changed to the selected color.

Searching a Record using Form

Open the Employee form created by double clicking the Employee icon under Forms tab. The screen will look similar to the one shown in figure 12.20.

Figure 12.20 : Employee form in Data Entry mode

Notice that in figure 12.20 when the Form is opened, the first record is displayed on the screen. You can view only one record at a time in the Form view. To see other records, use the Navigation buttons visible at the bottom of the form. (See figure 12.20).

At times we may need to find a specific record. Perform the following steps to find a particular record:

Select Find Record option on the form navigation bar as shown in figure 12.21.

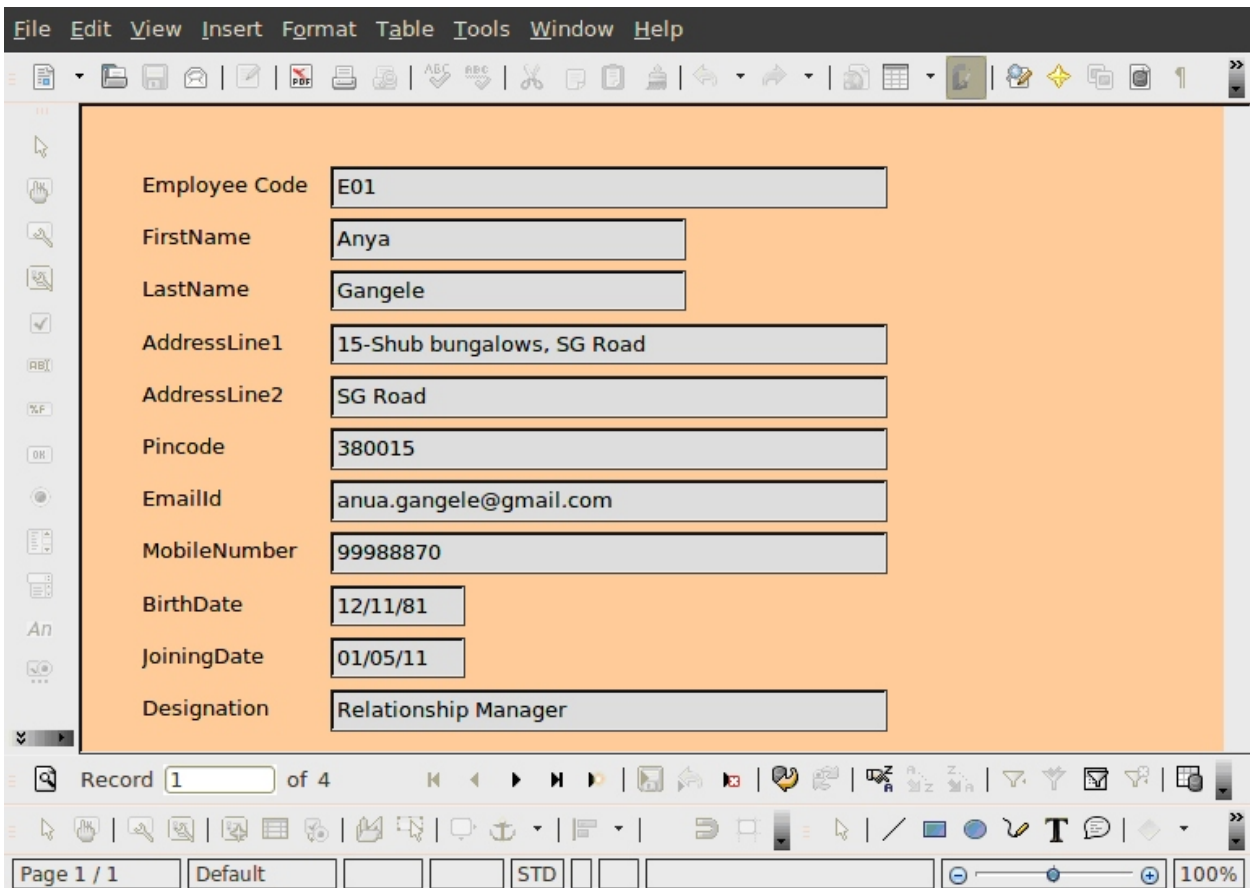


Figure 12.21 : Find Record option

A *Record Search* dialog box as seen in figure 12.22 will appear on the screen.

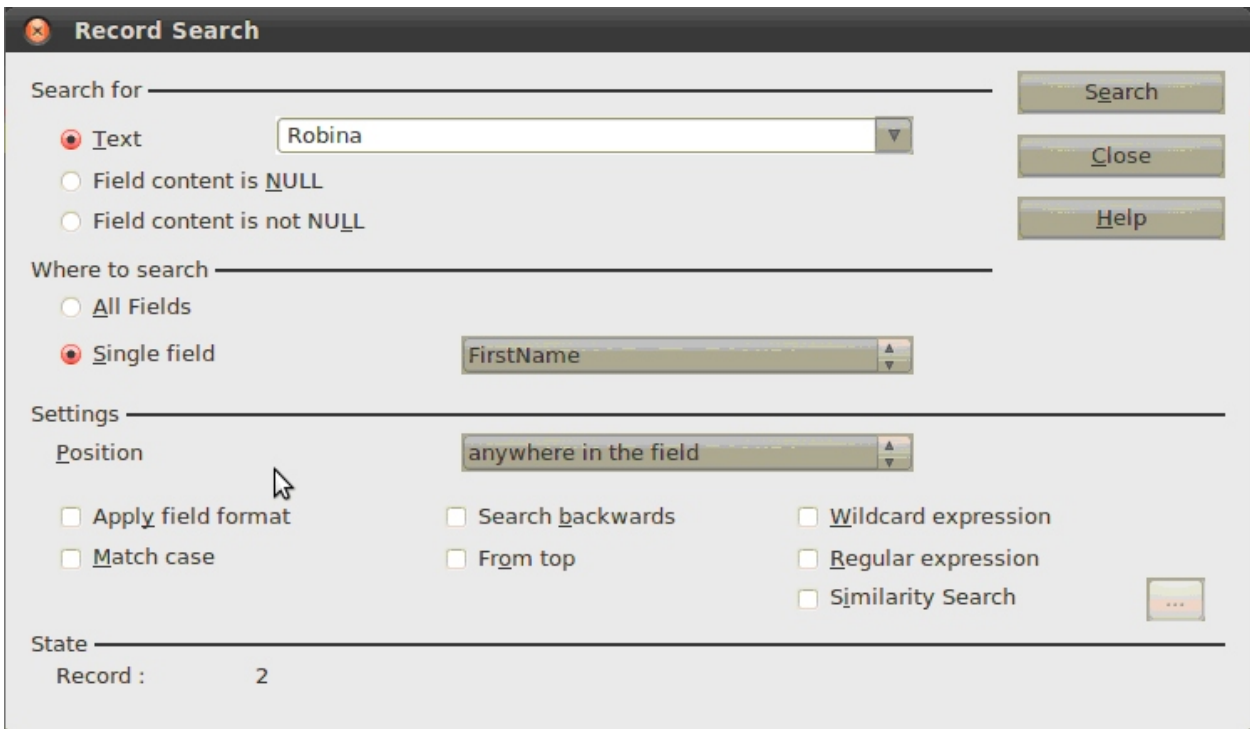




Figure 12.22 : Record Search dialog box

- Select the *Single Field* option under the heading *Where to search*.
- Select the *FirstName* field name in drop down box next to *Single field*. (See figure 12.22). This will populate the drop down box next to *Text* option.
- Select *Robina* from the drop down next to *Text option*. Observe that the radio button in front of *Text* label is selected.
- Click on *Search* button.
- Click on the *Close* button, the entries in the form will now be filled up with the record pertaining to *Robina*.

Inserting and Deleting a Record using Form View

To insert a new record in the table using the form view perform following steps:

- Open the form related to the table that you want to enter the data in Form View.
- Click on the *New Record* button  on the navigation bar.
- Type the data in blank boxes visible.
- Close the Form.
- Click on the *Tables* icon in the Database Window.
- Open the table and you will find that the record inserted by you is now stored in the table.
- You can also delete a record through a form using the *Delete Record*  button on the Form View toolbar. Clicking on this button will delete current record displayed in the form. The next record will be displayed automatically. This operation will also remove the record from the corresponding table.

Reports

After learning how to create the forms, you must now be sure that using forms to enter data in a table is much easier than using its Data Sheet View. We have seen that it is possible to extract any information in Base using a query. The output obtained from a query though presented in a tabular format is not properly aligned. Report provides a way to present the information retrieved in an attractive, arranged and decisive manner. One of the purposes of generating a report is to make a hard copy of the output. Hence the layout of report is generally designed by keeping in mind the look of the hard copy required. We can create a report based on a query, a table or combination of both.

Reports created in this chapter are based on either a single table or a query. If you want to use fields from different tables, it is advised that you create a query that combines these fields as an output. Then create a report required using this query.

For example, in the earlier chapter, we created a query by joining four tables, *Customer*, *City*, *State* and *Country* to display the list of customer names along with their addresses. We named this query

as CustomerList. Let us create a report based on the same query. Report wizard can also be opened using the following two ways.

- Right click on the query or table for which the report has to be created and selecting the *Report Wizard...* option from the popup menu.
- Alternatively click the *Reports* icon in the Database Window and choose *Use Wizard to Create Report...* option.
- When we use either of the options mentioned above, two dialog boxes as shown in figure 12.23 will be opened. At present we will concentrate on the Report Wizard dialog box only.
- The first step is to select the query CustomerList from *Tables or queries* drop down list in *Report Wizard* dialog box. Use the >> button to move all these fields from the *Available fields* list to the *Fields in report* list.
- Click on the Next button.

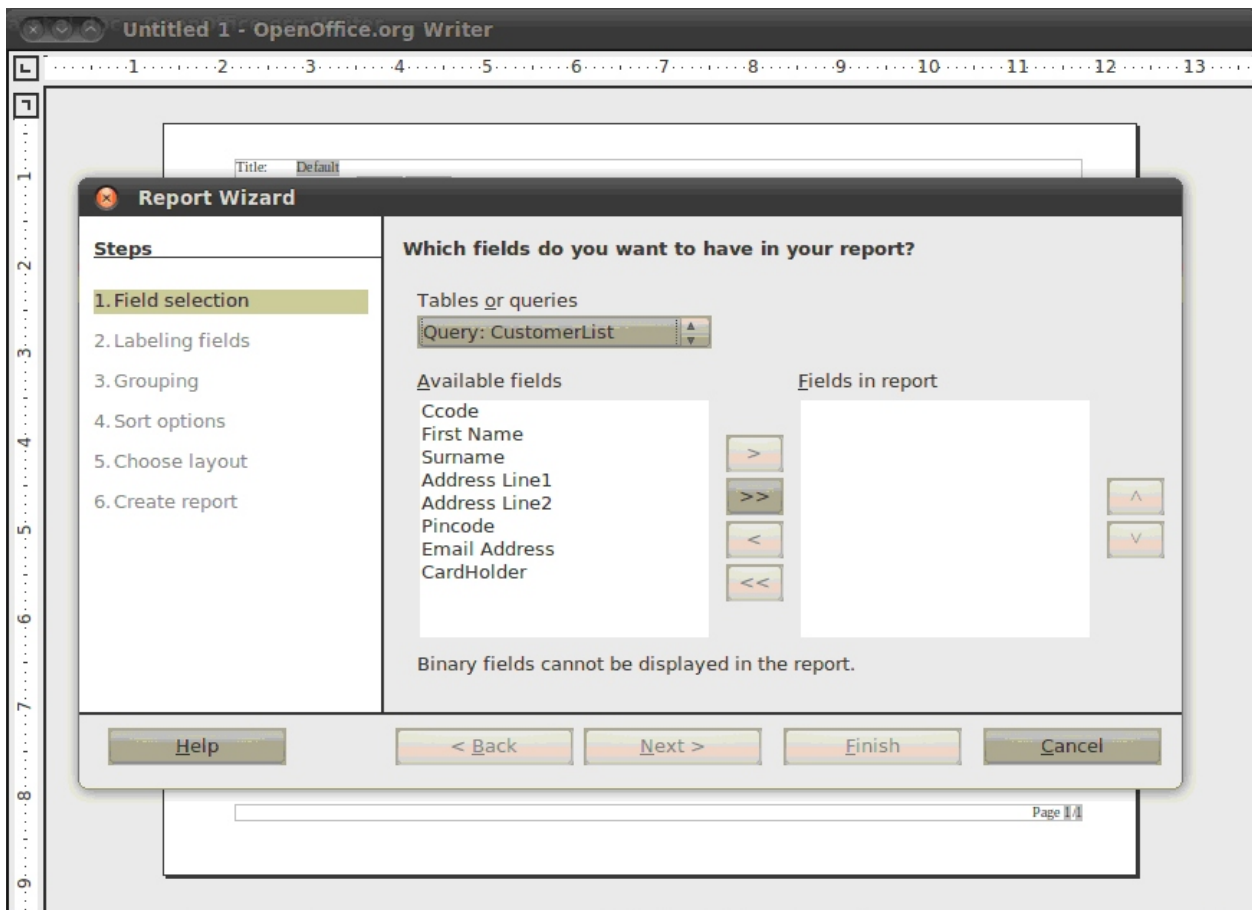


Figure 12.23 : Step 1 of Report wizard

- In second step give appropriate labels to each field *as* per your requirement. Sample labels are as shown in figure 12.24.

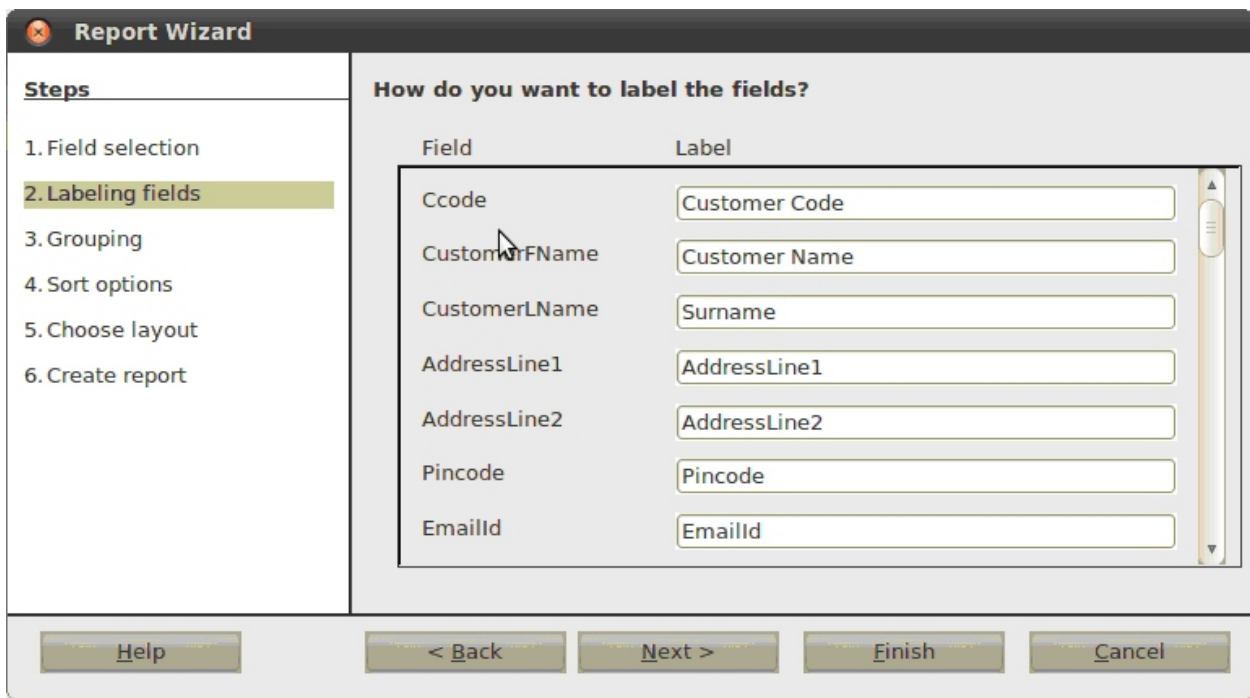


Figure 12.24 : Step 2 of Report Wizard: Labeling fields

- Click on the Next button.
- Third step of wizard is grouping the fields. Since we do not want to group any field in this report, click on the Next button. Step 4 of the Report Wizard as shown in figure 12.25 will be displayed.

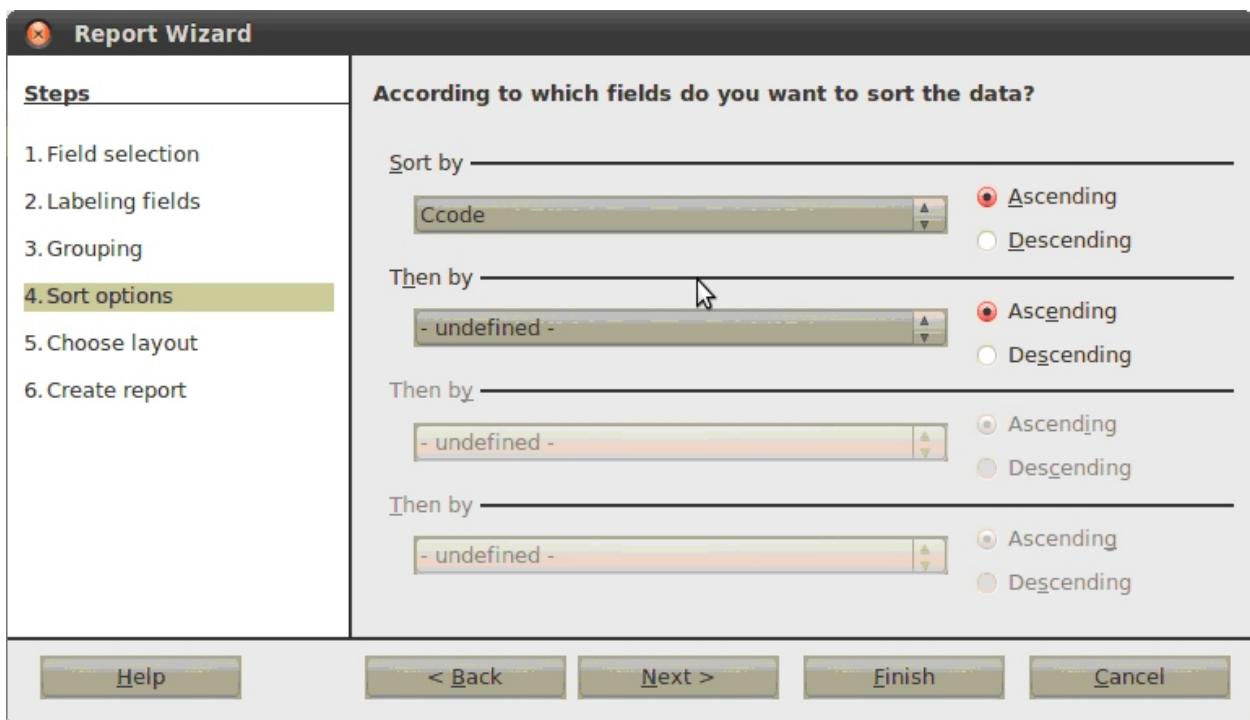


Figure 12.25 : Step 4 of Report Wizard: Mention Sort options

- In fourth step we can mention sort options. Let us sort the records based on the field Ccode in Ascending order. Click on the Next button to display next step as shown in figure 12.26.
- The fifth step of Report wizard gives us choice of various layouts. Layouts include color combinations as well as positioning of field and alignments of texts. You can try each of them one by one. We will be using the default settings for the layout (See figure 12.26).
- Click on the Next button.

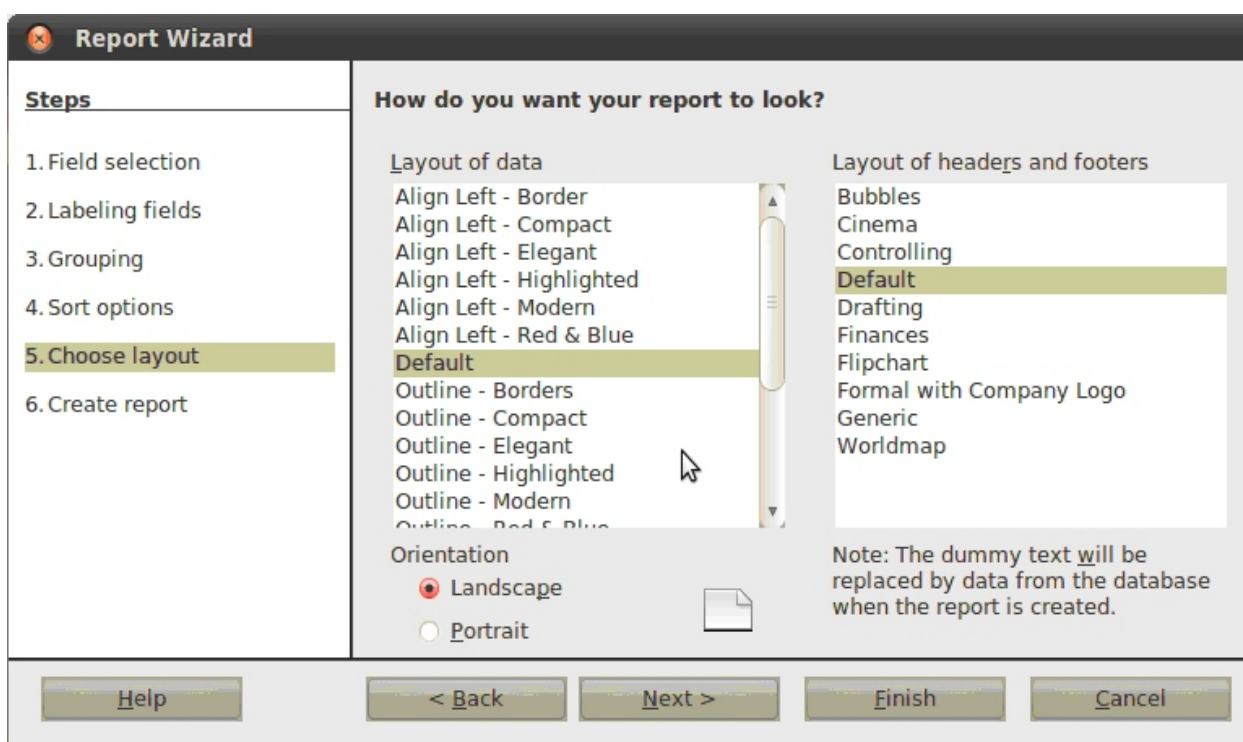


Figure 12.26 : Step 5 of Report Wizard: Choose Layout

- In step six you will be asked to give the title of the report. Type *CustomerList* in the text box under label *Title of report* as can be seen in figure 12.27. Observe that under the label *What kind of report do you want to create?* you have two options. The option chosen here will have an effect on the output of the report. If we choose the *Static report* option, then the data in the output of report will remain same every time we try to open the report. While choosing the *Dynamic report* option will allow us to see the effect of any changes made in the table, every time we open the report.

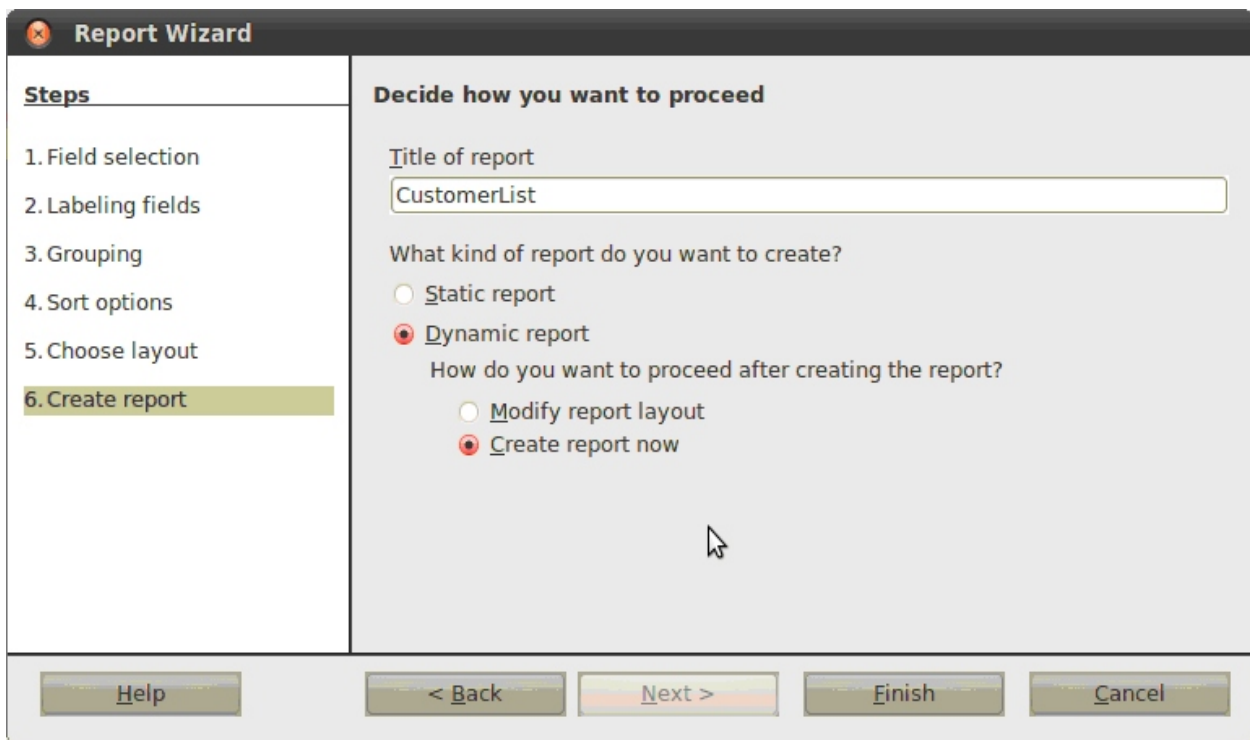


Figure 12.27 : Step 5 of Report creation: Mention Title of report

Note :

The objects created in Base are dependent on each other. This means that if a query Q is created based on a table T, then any changes made to the table T will be reflected in the query Q and vice versa. Similarly if we create a report R based on this query Q, then any change in query Q should be reflected in report R. Albeit changes in report are not possible. Choosing the *Static report* option will permit the changes to be reflected in the report.

- Depending on what you require, choose one of the options mentioned in step six. In our case we have selected *Dynamic report*. Select the *Create report now* option.
- Click on Finish button and you will see a report similar to the shown in figure 12.28.

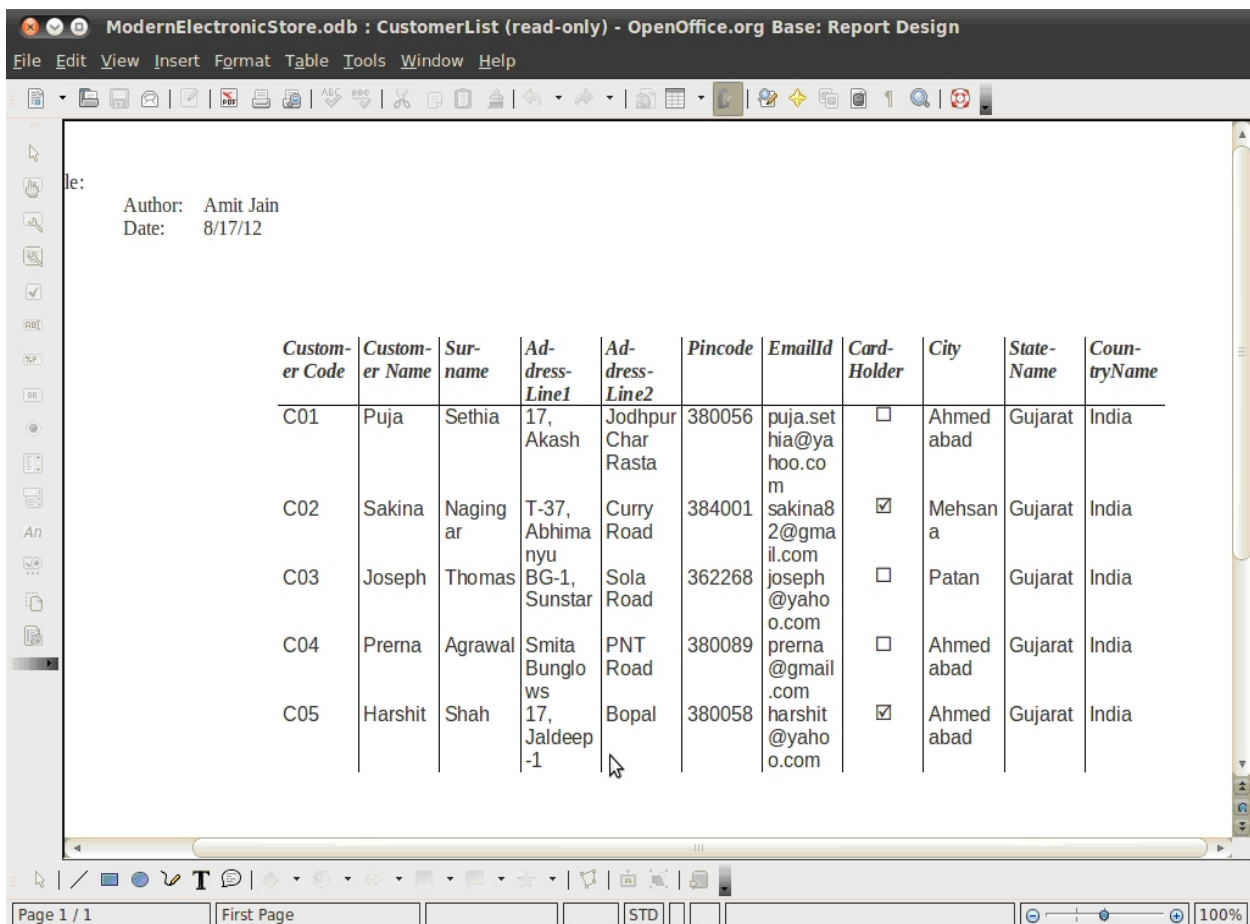


Figure 12.28 : Report containing Customer Addresses

Note : The author name and date will depend on the machine name and day on which you are creating/opening the report. The data contents will be according to the entry that you have done in the table.

Let us now create report that shows the orders placed by each customer between two dates. First we will create a parameterized query so we can create report containing records between any two desired dates. The parameterized query will make our report dynamic, as whenever we try to execute the report we will be asked to enter two dates. The report will then be generated for the data between these two specified dates.

- Open a query in Design View. Add Customer, Order and OrderDetail tables.
- Double click on the Ccode, CustomerFname, CustomerLname, OrderID and OrderDate fields from respective tables.
- In the *Criterion* cell of the OrderDate field, type *BETWEEN :date1 AND :date2* as seen in figure 12.29.

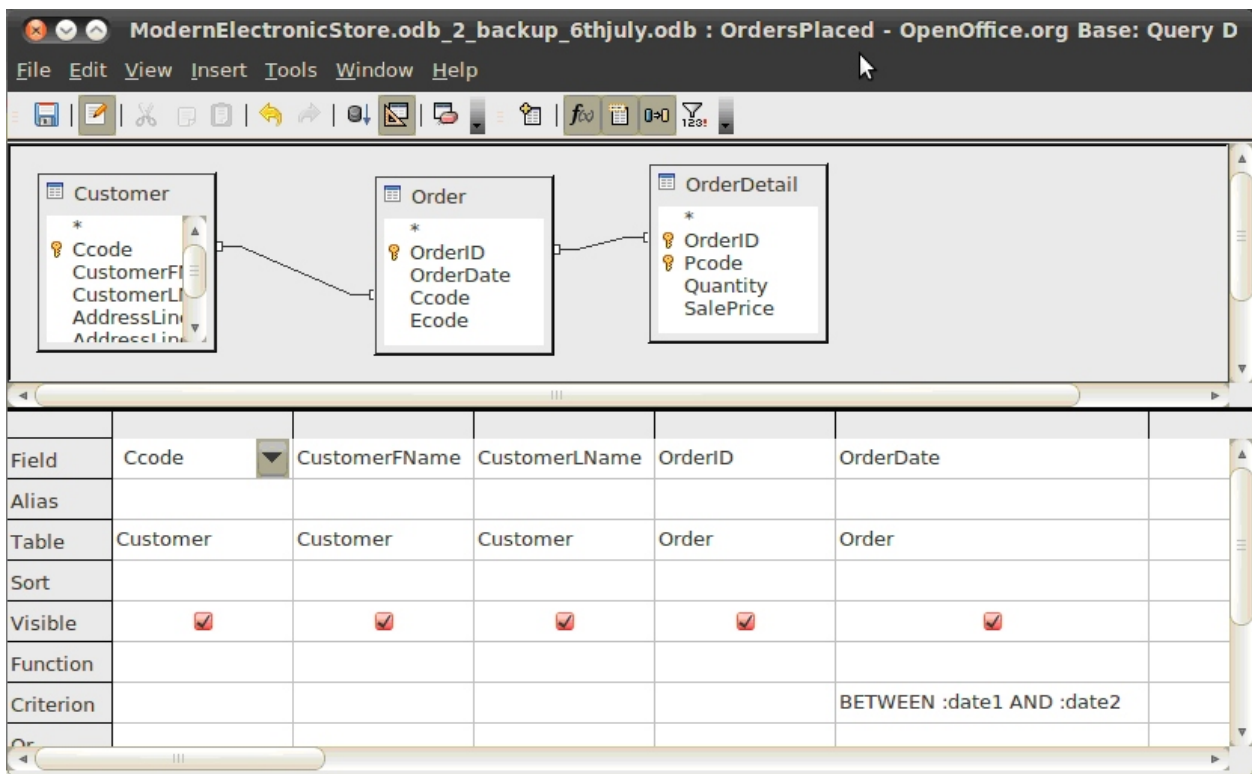


Figure 12.29 : Parameterized query

- Save the query with name *OrdersPlaced*.
- Run the query to view the output to make sure that it works. Two parameters would be expected as an input. (See figure 12.30)

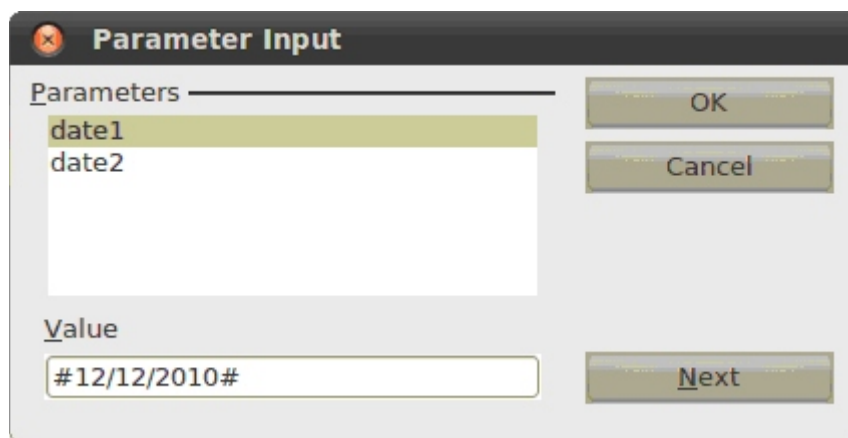


Figure 12.30 : Parameter Input to a query

- Close the query.
- Right click on the query and from the pop up menu select *Report Wizard...* option.
- Use >> to move both fields from the *Available Fields* to the *Fields in report* list. Click Next.
- Give appropriate aliases to field names. Click Next.

- In the Grouping step of the report wizard, Click on the Ccode field to highlight it. Use > button to move the field to the Groupings list. Similarly move the fields CustomerFname and CustomerLname to the Groupings list. Click Next.
- You will observe that sorting has been automatically applied on the Ccode, CustomerFName and CustomerLName fields. Click Next.
- Choose a layout. Click Next.
- Use the suggested name for report; here it will be same as the query.
- Select *Dynamic report* option.
- Click Finish and you will find that input parameter dialog box gets opened.
- Give two parameters for date1 and date2. A report that shows orders placed between two dates would now be displayed as shown in figure 12.31.

The screenshot shows a report viewer window with a menu bar (File, Edit, View, Insert, Format, Table, Tools, Window, Help) and a toolbar. The report content is as follows:

Customer code C01		
Customer Name Puja Sethia		
	OrderID	Order Date
	1	12/31/10
	2	01/20/12
Customer code C02		
Customer Name Sakina Nagingar		
	OrderID	Order Date
	3	02/14/12
Customer code C03		
Customer Name Joseph Thomas		
Surname		
	OrderID	Order Date
	4	02/19/12

The report viewer also shows a status bar at the bottom with 'Page 1 / 2', 'First Page', and 'STD' buttons.

Figure 12.31 : Parameterized Report

Once the report has been created we can make a hard copy or a soft copy of the same. To make a hard copy we can print the report by making use of print button (🖨️) on standard toolbar. Alternatively to save it as a soft copy click on PDF button (📄) on standard toolbar, this will save the report in a PDF format.

Summary

For any application, forms and reports are the objects with which end user interacts. In this chapter we have discussed professional way to enter data in the table using forms. We have also discussed creation of reports using table as well as query.

EXERCISE

1. What are Forms? Why should one design forms ?
2. What are the navigation buttons on the forms used for ?
3. List the default Layouts and Styles provided by Base while creating a Form.
4. What are reports ? Write down the usage of reports.
5. What is the difference between forms and reports ?
6. List the default Layouts and Styles provided by Base while creating a Report.
8. **Choose the most appropriate option from those given below :**
 - (1) For what main purpose a form is designed?
 - (a) To display data
 - (b) To enter data
 - (c) To create tables
 - (d) To view query result
 - (2) For what main purpose a report is designed?
 - (a) To view information in professional manner
 - (b) To enter data
 - (c) To create tables
 - (d) To get statistics of usage of records
 - (3) Form wizard allows creating data entry forms for which of the following?
 - (a) Report
 - (b) Table
 - (c) Query
 - (d) Both b and c
 - (4) Which option is used to select a field?
 - (a) CTRL + Click
 - (b) Click
 - (c) Double Click
 - (d) Right Click
 - (5) Help Text created by user can be generally associated with which of the following object?
 - (a) Table
 - (b) Form
 - (c) Control Field on Form
 - (d) Report
 - (6) Report wizard is used to create report from how many tables at a time?
 - (a) One
 - (b) Two
 - (c) Three
 - (d) More than three

LABORATORY EXERCISES

1. Create forms for all the tables created for School Management System in Chapter 9 and Chapter 10.
2. Create the following reports :
 - Mark sheet of a student for particular term and year.
 - Fees collected by school in each month.
 - Total number of students studying in each standard.
 - For each standard, list the subjects and teacher who is teaching the subject.
 - Total presence of each student every month.

