

9

CREATING REPORTS WITH REPORT WIZARD AND REPORT DESIGNER

9.1 INTRODUCTION

Till now you have learned about creating Table, Query and Form using the respective Wizard and Designer mode. Every application has various types of reports. Report wizard and Report Designer are the main tools available in Visual FoxPro for taking outputs. These report tools are designed to meet a range of needs and requirements from very simple and limited to more complex and versatile. Visual FoxPro provides two types of report wizard: Report Wizard and One-to-Many Report Wizard.

The Report Wizard formats a single table report. The One-to-Many Report Wizard is like the One-to-Many Form Wizard, which uses a parent-child relation between two tables to create a report.

9.2 OBJECTIVES

After going through this lesson, you would be able to

- create a Report with Report Wizard
 - create a Report with One-to-Many Report Wizard
-

- create a Report with Report Designer
- group data in Report Designer
- add Title and Summary Bands in Report
- print Report

9.3 CREATING REPORT WITH REPORT WIZARD

Reports can be created using:

- (i) Report Wizard
- (ii) Report Designer

To create a report by using Report Wizard, choose **New** option from **File** menu or directly choose **New** from the toolbar. The **New** dialog box appears with which you are quite familiar, as you have seen during creating Table, Query and Form using the respective Wizard. Choose **Report** radio button and then click **Wizard** push button. Visual FoxPro displays the **Wizard Selection** dialog box as shown in figure 9.1. There are two types of report wizard available in this dialog box **One-to-Many Report Wizard** and **Report Wizard**. You have to choose one of them. Let us select the Report Wizard to display the “Step 1 - Select Field ” page of the **Report Wizard** dialog box.



Fig. 9.1: Selecting a Report Wizard

9.3.1 Selecting the Table

The first step in the Report Wizard, like the first step in the Form Wizard, is to select the table and the fields you want in your report. This dialog box is similar to the one you have seen in Query and Form wizards. You first need to select the database, followed by the table and then the individual fields you want to include in the report.

The **Database/Tables** option available with the first step of Report Wizard dialog box, displays the current database, if one is open. Otherwise it displays the words Free Tables. If a database is open, the names of the tables it contains appears in the scrollable list and you can choose the required table. If the database is not open, or if you want to use a free table, click the ellipsis button (...), which opens a dialog box that allows you to select the required table as shown in figure 9.2. Let us select the STUDENT.DBF table from the open dialog box for creating a report.

9.3.2 Selecting Fields

The “Step 1-Select Fields” dialog box also includes Field picker buttons or movement buttons, which are found between the **Available fields** list and **Selected fields** list. The arrow directions indicate the way they move fields. A single arrow moves a single field. Double arrow buttons move all the fields. To move a field from the Available fields list, first select the field you want to move by clicking or by using the up and down arrow keys and then click the top buttons with the right arrow. This moves the highlighted field to the Selected fields list. Repeat this process to move more fields from the Available fields list to Selected fields list as shown in the figure 9.2.

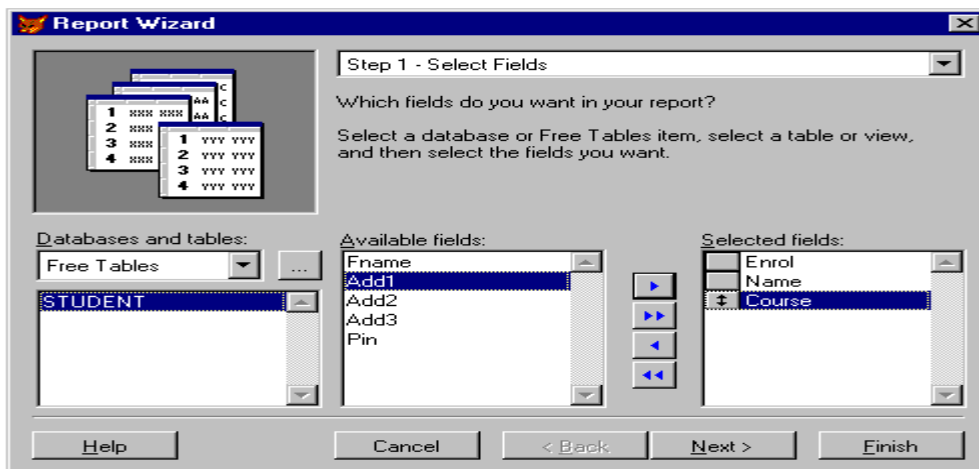


Fig. 9.2: Step 1 - Selecting Fields for the Report Wizard

If you want to move all the fields from **Available fields** list to **Selected fields** list, just click the double-right arrow. If you have selected the wrong fields or change your mind, then you can deselect a field from the Selected fields list. Select that field and click the left arrow. Similarly, you can choose the double-left arrow to move all the fields from the Selected fields list to Available fields list. Choose **Next** push button to proceed further.

Let us select *Enrol*, *Name* and *Course* fields from the Available fields and move them to Selected fields list as shown in the figure 6.2. Choose **Next** to move to next step of the Report Wizard.

9.3.3 Group Records

The Step 2 - Group Records of Report Wizard allows you to define grouping of records. You can select up to three levels of grouping as shown in the figure 9.3. In the three different levels of grouping of records, you have to select the field on which the grouping is done or select **<none>** if no grouping of records is required. Choose **Next** to proceed further.



Fig. 9.3: Group Records of Report Wizard

9.3.4 Selecting Style

The Step 3 - **Choose Report Style** of **Report Wizard** allows you to define the over all report style. Visual FoxPro provides five standard report styles

- Executive
- Ledger
- Presentation
- Banded
- Dff

In the upper left corner of the dialog box, you can preview an illustration of each style as you select it, see figure 9.4.

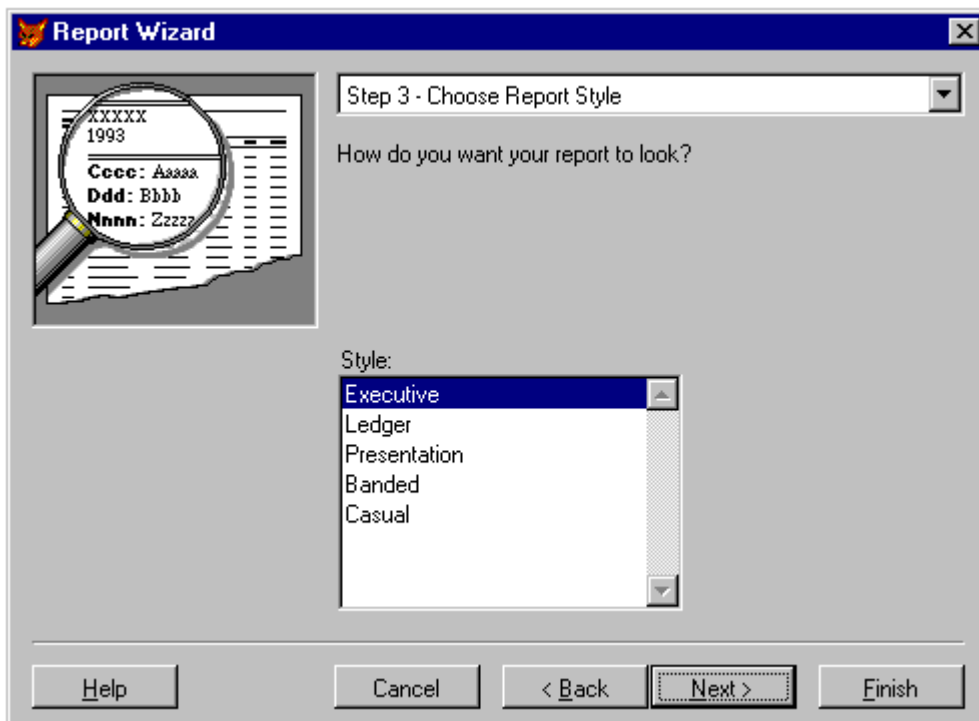


Fig. 9.4 : selection of Style of the Report Wizard

9.3.5 Specifying Layout

The step 4 - Define Report Layout of Report Wizard allows you to define the over all layout of the report as shown in the figure 9.5. The first option defines the field layout. The two options are either

Columns or Rows. If you have few fields which can fit across the page horizontally, consider the Column style report because it fits more records on a page. However, if you have many fields in each record to display, you may have to consider a Row style layout.

Use the **Orientation** buttons to identify the paper orientation, either portrait or landscape. The **number of columns** determines the number of columns or repeated data that can appear across a page. For example, if you use a row style field layout, the data may not extend beyond the middle of the page. In this case, you can consider having two columns on the page to double the amount of information printed on each page.

Choose **Next** to proceed further.

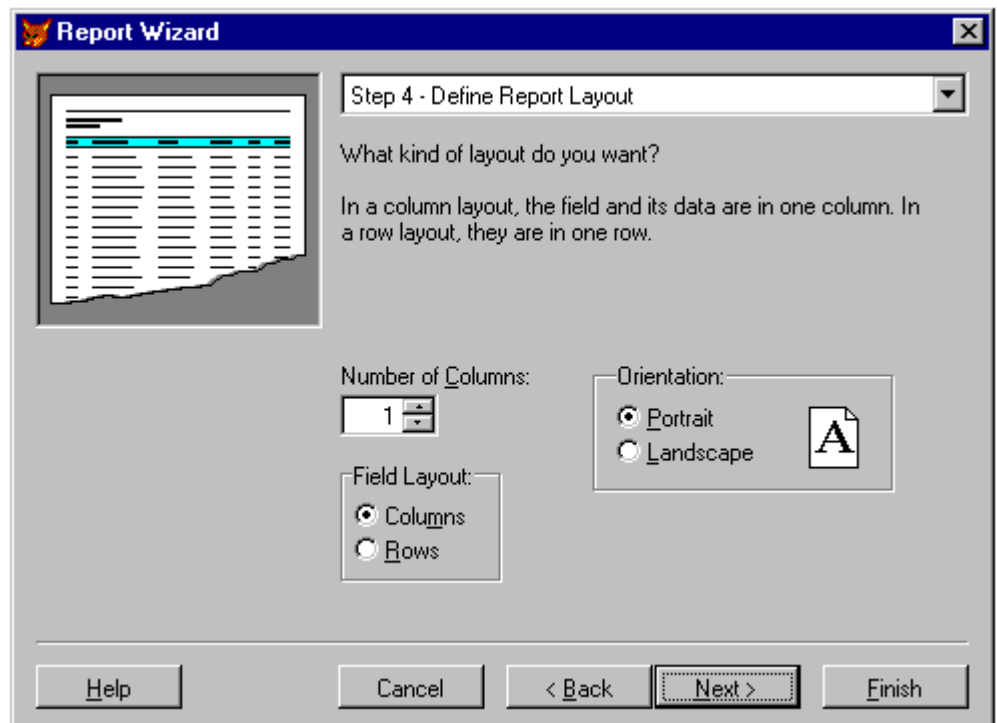


Fig. 9.5: Define Report Layout

9.3.6 Specifying Sort Order

Choosing **Next** option brings you to the “Step 5 - Sort Records” of the Report Wizard. It allows you to specify the sort order for the records, as you do in other wizards. You can select any field from the Available Fields list and move it to the Selected Fields list by

clicking the **Add >** key. You can select even more than one field for the sorting order. However, the order in which you select these fields determines their sort priority. You can change the sort priority by moving the selected field using the double-headed buttons to the left of the field names. Just click a double-headed button and drag it up or down to a new position. If you have selected a wrong field for the sorting order or if you want to remove any field from the Selected Fields list to the Available Fields list, then select the field you want to remove and then click the **<Remove>** push button. Let us select **Enrol** field from the Available Fields list and move it to the Selected Fields list for specifying the sorting order as shown in the figure 9.6.

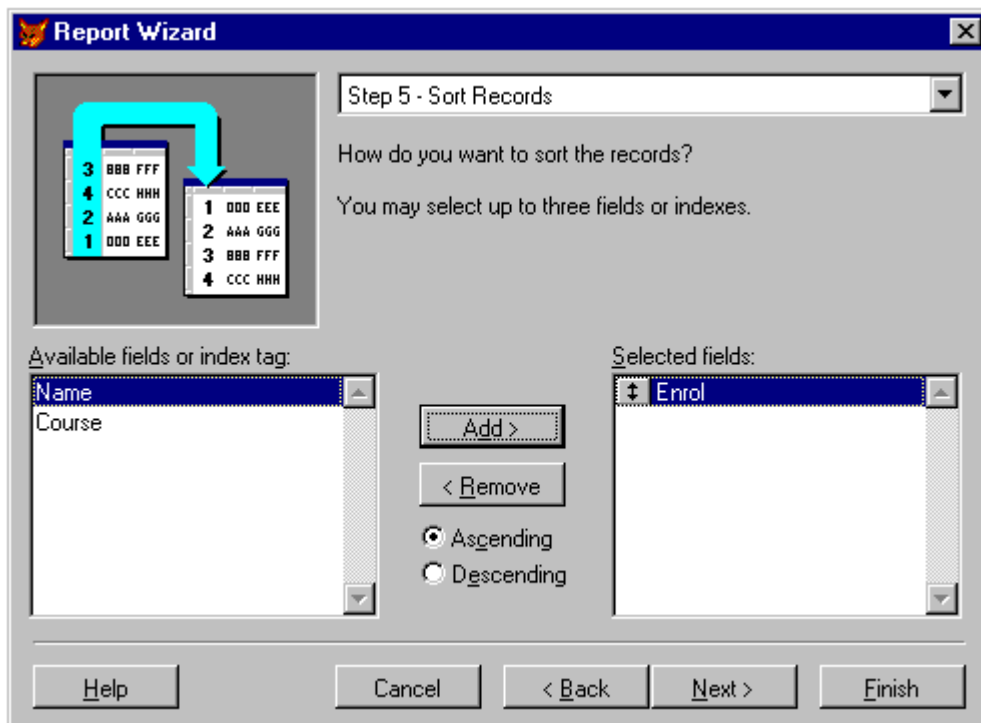


Fig. 9.6: Sort Records of Report Wizard

You can also sort the data in ascending or descending order. Choose **Next** push button to proceed further.

9.3.7 Generating the Report

The final step of the Report Wizard, as shown in the figure 9.7, appears when you click **Next** push button from the Sort Record

Step. Here you only need to supply the report title. The text appears at the top of the report. You can have three options:

- ❑ Save report for later use
- ❑ Save report and modify it in the Report Designer
- ❑ Save and Print report

The first option lets you save the report for later use and then returns you to whatever you were before you started the Wizard. The second option saves the report and immediately opens the Report Designer with the new report allowing further customization. The third option saves the report and immediately prints it.

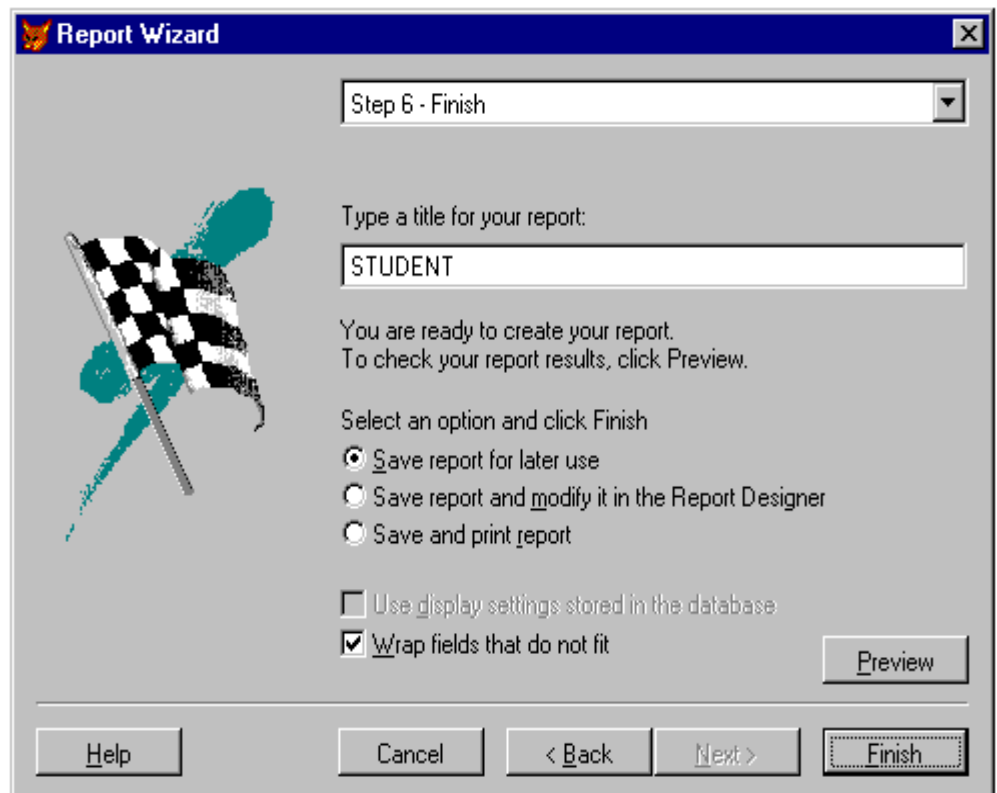
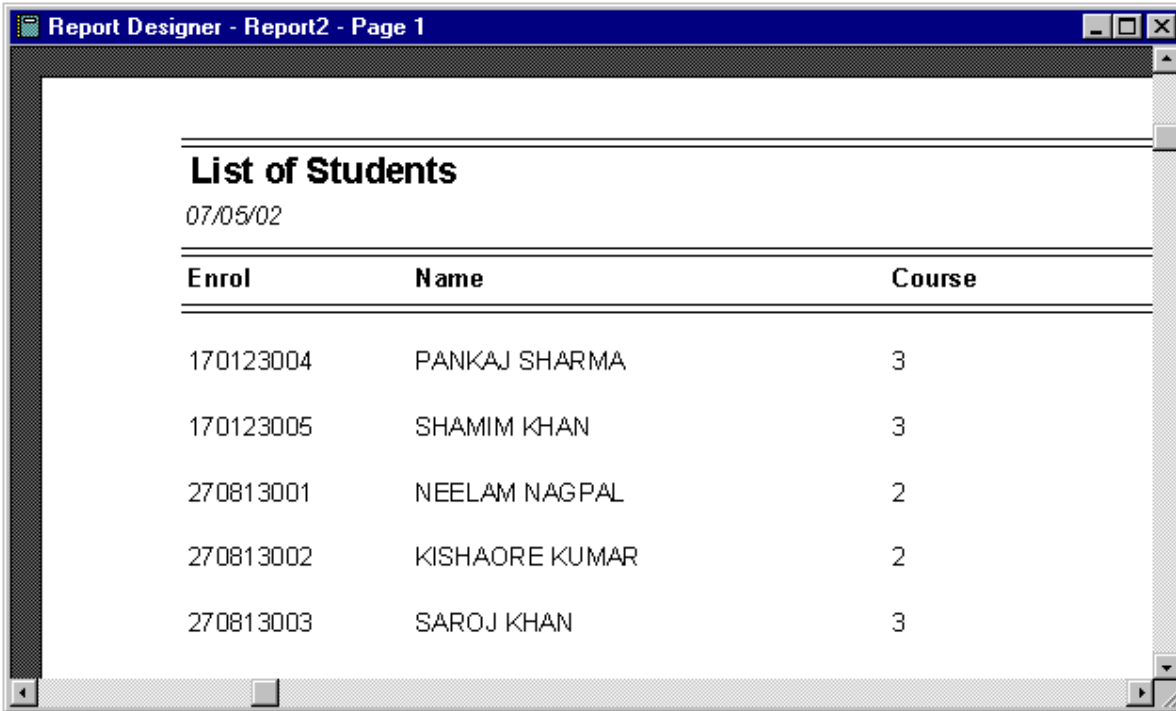


Fig. 9.7: Finish of the Report Wizard

You also have an option to wrap fields onto continuation lines, if they do not fit the column widths defined. You can use the **Preview** push button to preview the reports before actually saving it. Figure 9.8 shows the Preview window of the report.



The screenshot shows a window titled "Report Designer - Report2 - Page 1". Inside the window, there is a report titled "List of Students" with a date "07/05/02". Below the title and date is a table with three columns: "Enrol", "Name", and "Course". The table contains five rows of student data.

Enrol	Name	Course
170123004	PANKAJ SHARMA	3
170123005	SHAMIM KHAN	3
270813001	NEELAM NAGPAL	2
270813002	KISHAORE KUMAR	2
270813003	SAROJ KHAN	3

Fig. 9.8: The print Preview Window

You can still return to the previous steps in the wizard by clicking the **Back** button. However, if you save the report any subsequent modifications in the report must be made through the Report Designer. Note that you can not re-enter the Wizard for an existing report. Once you are satisfied with your report, click the **Finish** push button to save your report. The **Save As** dialog box appears on the screen, where you need to mention the name of your report in the text box. Visual FoxPro save the report file with an extension name **.frx** You can save the report as STUDENT.FRX.

9.4 CREATING A REPORT WITH ONE-TO-MANY REPORT WIZARD

The One-to-Many Report Wizard is similar to the One-to-Many Form Wizard. The various steps involved in creating a One-to-Many Report Wizard are similar to the Report Wizard that was covered in the previous section of this lesson. The primary difference is that it creates reports using two or more tables. More specifically it creates a report to display individual parent records and all of their children.

To create a One-to-Many Report, choose **New** option from **File** menu or click the **New** tool box. The **New** dialog box appears. Select the **Form** radio button and then click the **Wizard** push button. Visual FoxPro displays the **Wizard Selection** dialog box as shown in figure 9.9.



Fig. 9.9: Wizard Selection Box

Choose the **One-to-Many Report Wizard** form **Wizard Selection** dialog box. The “Step 1- Select Parent Table Fields“ dialog box appears to select the fields from the main or parent table. It is similar to the first step of the regular Report Wizard shown in figure 9.10.



Fig. 9.10: Fields from Parent Table of One-to-Many Report Wizard

As with a normal Report Wizard, you start by selecting a database or table to use as the main or parent table. From the **Available Fields list**, select fields which are to be included on this report.

For example, click the ellipsis (...) button to the right of **Database and Table** option and use the **Open** dialog box to choose “STUDENT” as the main table. Click the double-right arrow to select all the fields from the **Available fields** list to **Selected Fields** list, as shown in Figure 9.10.

Please note the small, red arrow pointing to the top half of the report in the report image area in the upper left corner. This visually reminds you where the main data appears in the report.

Click the **Next** push button to go to “Step 2: Select Child Table Fields” as shown in figure 9.11. The second step looks very much similar to the first step, except that in this step prompts for the fields from the related or child table are displayed in the Available Fields list. Note that the red arrow in report image has shifted down to the lower half of the screen. All child records appear in a browse like control. Therefore, all fields must fit horizontally across the report. If you select more fields than those which can fit horizontally, the wizard adds a horizontal scroll bar to view them.



Fig. 9.11: Fields from Child Table of On-to-Many Report Wizard

Click again the ellipsis (...) button to the right of the Databases and Table option and choose “RESULT” as the related or the child table, click the double- right arrow to add all the fields from the **Available Fields** list to **Selected Fields** list, as shown in figure 9.11.

Note that the most important fields when creating a one-to-Many Report are the fields that define the relation between the parent and child. In this case, ENROL appears in both STUDENT and RESULT tables. Choose **Next** push button to proceed further to the Step 3 - Relate Tables of the One-to-Many Report Wizard.

The Wizard sets this relation between the Parent table and the Child table in step 3 automatically when a persistent relation exists between the two files in their database. Otherwise, you can easily establish the relationship using the drop down field lists from both the tables as shown in the figure 9.12. The line joining the two Tables shows the relation formed between parent and child table.

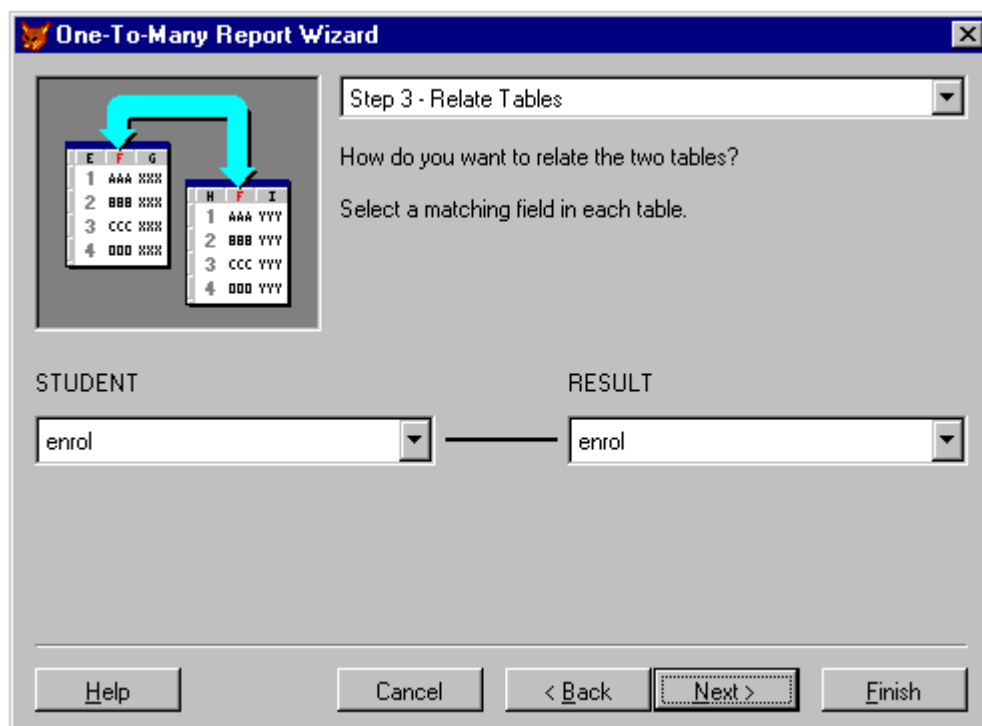


Fig. 9.12: Relation between Parent and Child Table

Click **Next** push button to go to “ Step 4- Sort Records”. Note that the sort is only on fields in the main or the parent table. Double-click on **Enrol** as the basic sort order, as shown in figure 9.13.



Fig. 9.13: Sort Records of One-to-Many Report Wizard

Click **Next** push button to go “Step 5 - Choose Report Style” dialog box. The fifth step defines the report layout option. This is similar to the normal Report Wizard. Select **Executive** Style and **Portrait** radio button as paper orientation as shown in the figure 9.14.

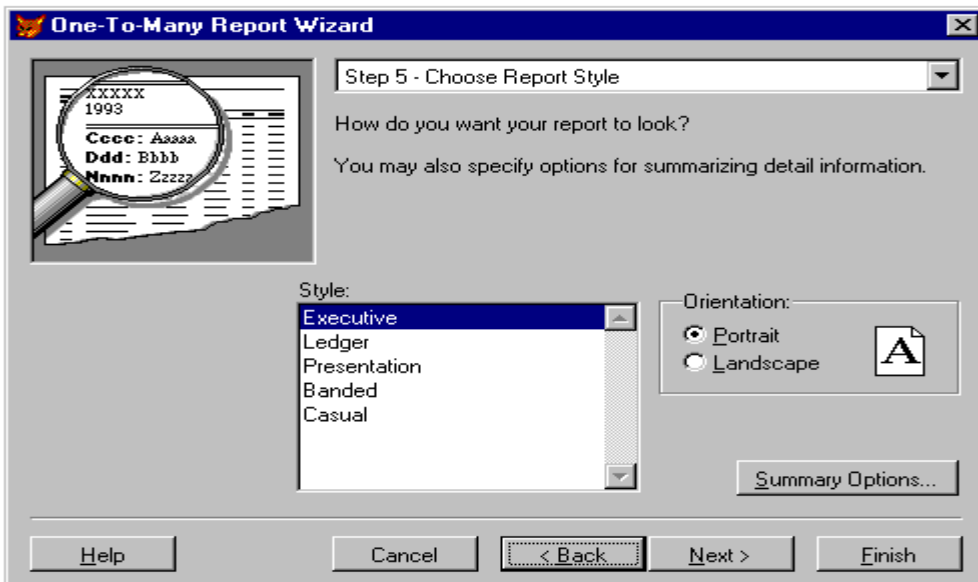


Fig. 9.14: Report Style of One-to-Many Report Wizard

Click **Next** push button to go to the “Step 6- Finish” dialog box.

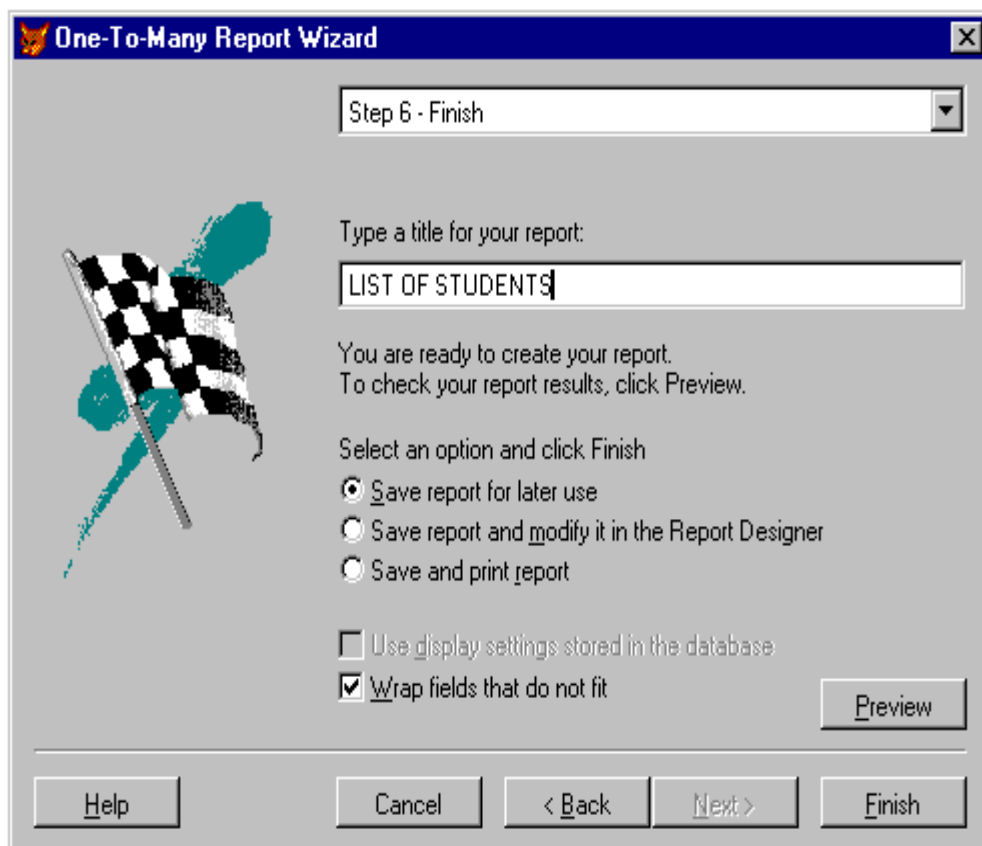


Fig. 9.15: The final step of One-to-Many Report Wizard

In this last step as in the case of Report Wizard, you need to give the title of the Report. Enter “**List of the Students**” as the title of the Report as shown in the figure 9.15. Click the **Preview** push button to see the reports based on the definitions provided. Figure 6.16 shows as the preview window of the report. Click the **Close** Preview button to return to the Wizard. If you want to make some changes in the report, return to the specific step used in its design by clicking **Back** push button and make the required change. You can move between the steps and the preview mode as long as you do not leave the Report Wizard.

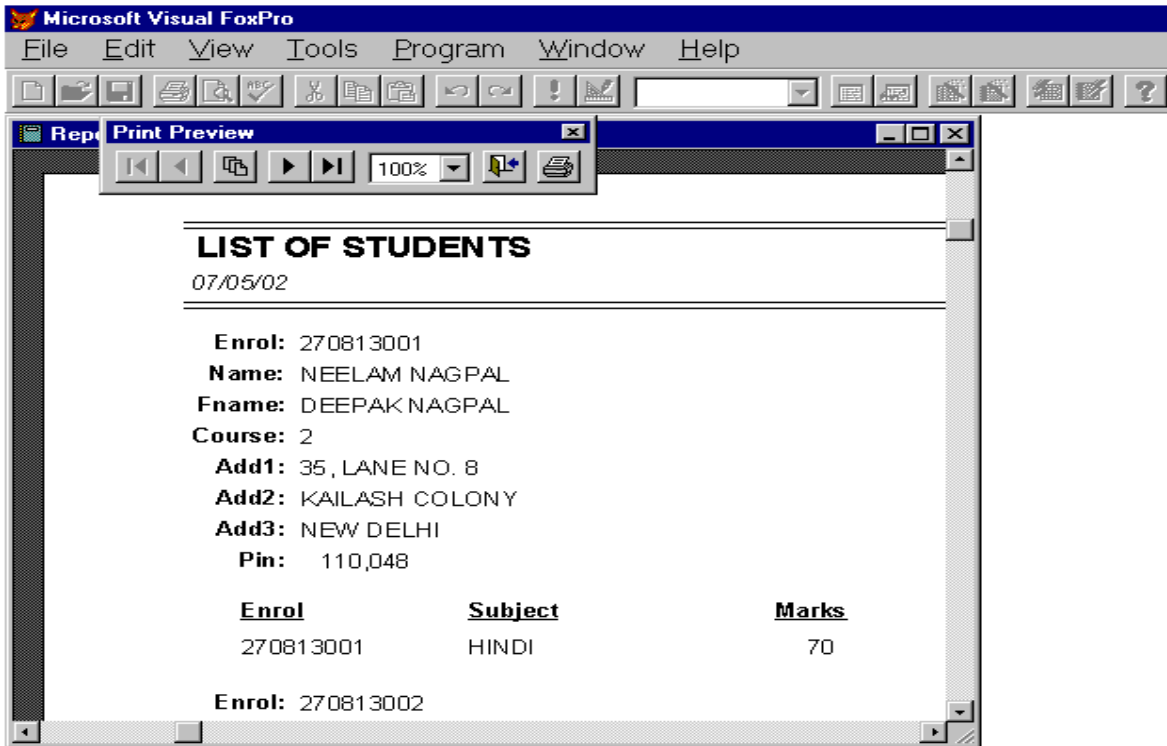


Fig. 9.16 The Print Preview Window

Once you are satisfied with your report, click the **Finish** push button to save your report. The **Save As** dialog box appears on the screen, where you need to mention the name of your report in the text box. Visual FoxPro save the report file with an extension name **.frx**. You can save the report as STUDENT1.FRX. Any subsequent changes in your report can be done only through the Report Designer. You cannot re-enter the Wizard for an existing report.

INTEXT QUESTIONS

1. Write True or False for the following statements
 - (a) You can select up to three levels of grouping of records.
 - (b) You can not select more than one field for the sorting order.
 - (c) You can customise the report created through Report Wizard.
 - (d) The extension name given to report file is .FRX
2. How do you relate any two tables used in a report?
3. What is the difference between Print and Print Preview commands?

9.5 CREATING A REPORT WITH REPORT DESIGNER

Visual FoxPro provides a powerful tool to create new report through Report Designer. However, it is always convenient and good to create a report through Report Wizard and then open it in Report Designer for making any subsequent changes as per the requirement.

As you know that each report is based on a Database or a Table. Therefore, in order to create a report, first you need to open a table on which your report is based. Choose **Open...** option from the **File** menu and choose **Table** from the **List Files of Type** popup of **Open** dialog box. Select the existing table named STUDENT.DBF from the **File Name** list and choose **OK** push button.

Now to create a new report by using the Report Designer, do the following steps:

- ❑ Choose **New...** option from the **File** menu.
- ❑ In the **New** dialog box, choose **Report** radio button and then choose **New File** push button. A new report form appears in the Report Layout window as shown in the figure 9.17

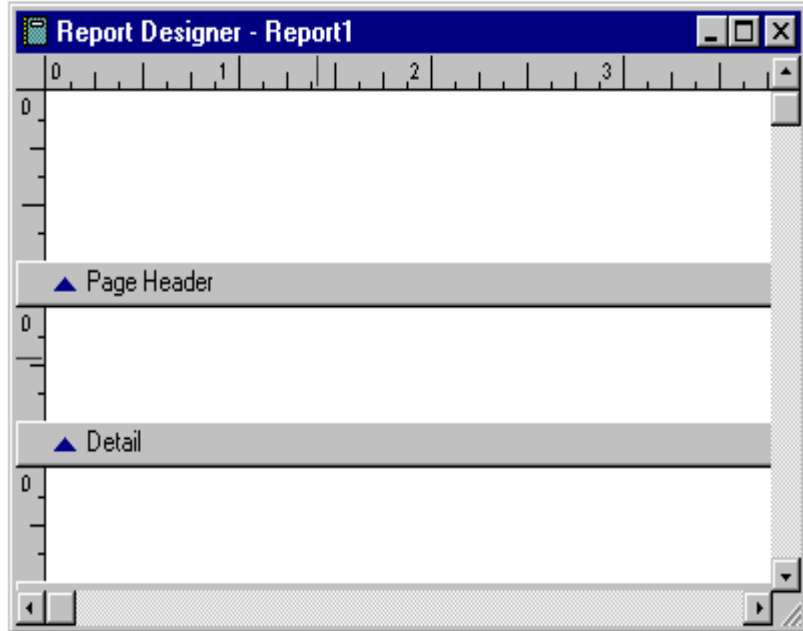


Fig. 9.17: Report Layout Window

You can also create a new report form by typing:

CREATE REPORT Press <RETURN> key in the command window.

A Report Layout Window appears with default title name. You can also type

CREATE REPORT <filename> Press <RETURN> key in the command window to get a new report form named “filename.frx” in the Report Layout.

Choose **Quick Report...** option from the **Report** menu to open the Quick Report dialog box as shown in the figure 9.18. Click the **Fields...** push button from the Quick Report dialog box to open the Field Picker dialog box as shown in the figure 9.19.

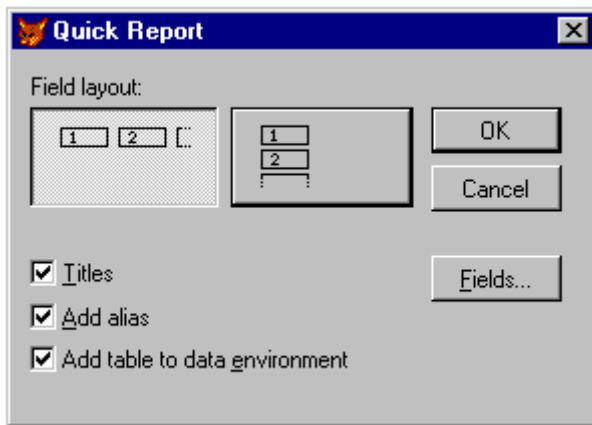


Fig. 9.18: The Quick Report Dialog Box

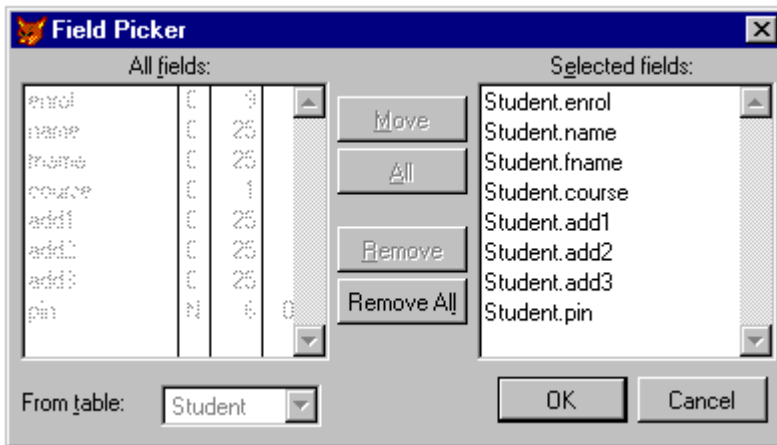


Fig. 9.19: The Field Picker Dialog Box

Double click on the fields, which you want to be included in your report. For example double click on the following fields to move them from All Fields list to Selected Fields list:

Enrol
Name
Fname
Course
Add1
Add2
Add3
Pin

Choose **OK** push button to return to the **Quick Report** dialog box, again choose **OK** push button to return to the **Report Designer** window as shown in the figure 9.20.

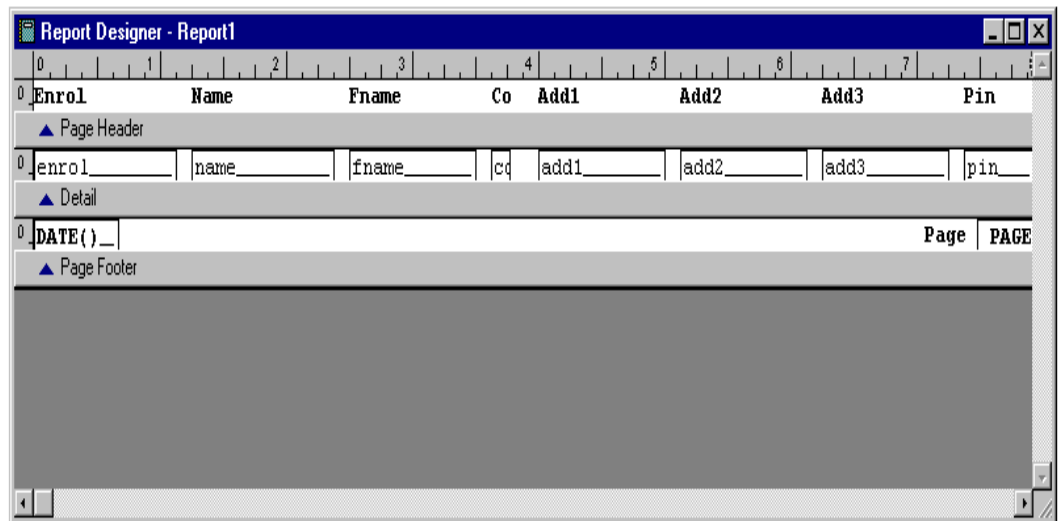


Fig. 9.20: The Report Designer Window

To create some workspace in your report form, click on the **Page Header** band button and drag it down so that the Page Header area looks like as shown in the figure 9.21. Similarly you can create some workspace by clicking on the **Page Footer** band button and drag it down so that the Page Footer band area look like figure 9.21.

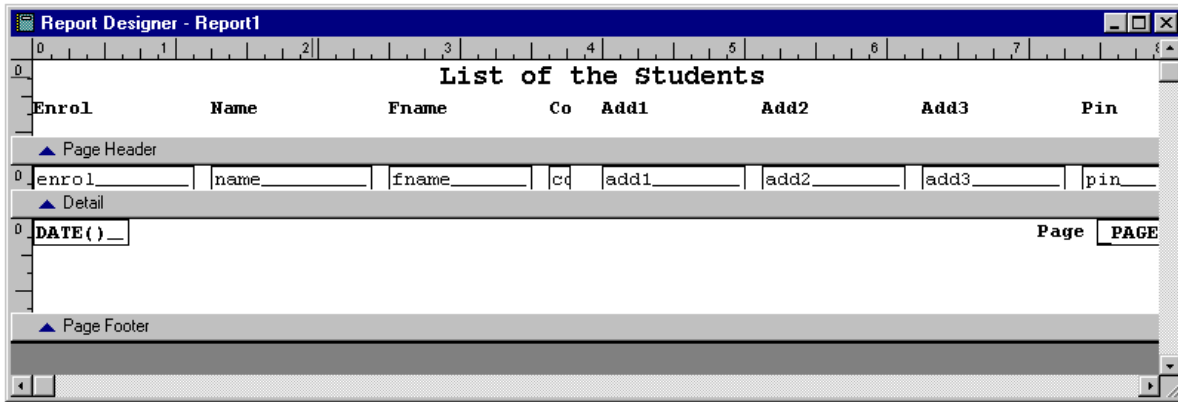


Fig. 9.21: The Report Designer with Added Space

To move field headings in a Report Designer, select the field heading and drag it to the require position. To select several headings at once, hold down the <Shift> Key while clicking on each field and drag them to the required position.

To create a title in the Report Designer, you need to use the **Report Control Toolbar** available in the **View** menu. Click the label tool and move the mouse pointer at the top of the Report Layout Window and type “**List of the Students**”. Choosing the **Format** menu, you can **align** the title at the centre and increase the point size and make it bold from the Font Style as per your requirement.

Now, choose **Print Preview** option from the **File** menu or click the **Print Preview tool** to see how the report layout look like as shown in the figure 9.22.

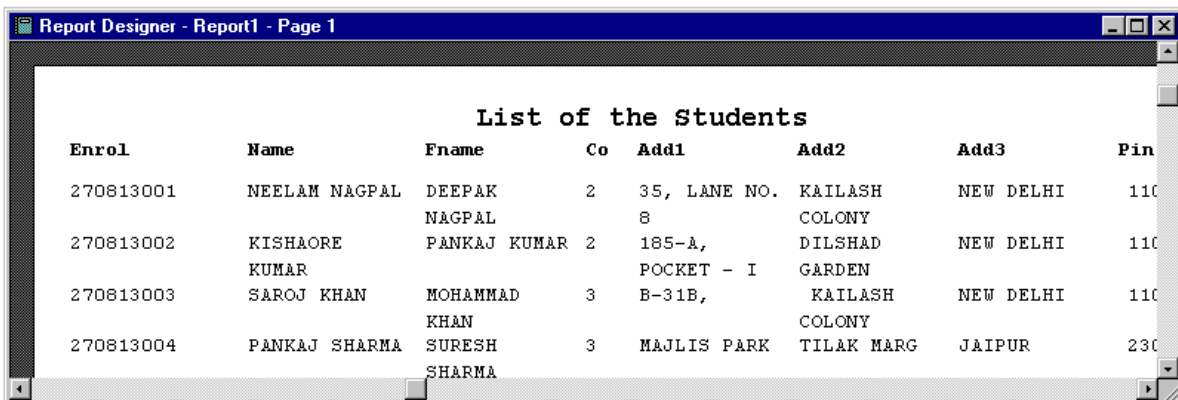


Fig. 9.22: The Print Preview Window with Title

9.6 MODIFYING AN EXISTING REPORT

To modify an existing report form, do the following steps:

- ❑ Choose **Open...** option from the **File** menu.
- ❑ Select **Report** from the **List Files of Type** popup.
- ❑ Choose the report form file you want to open from the **Open** dialog box.

You can also open an existing report through the command window by typing:

MODIFY REPORT <filename> Press <RETURN> Key

The report named “filename.frx” appears in the Report Layout window as it was previously saved. Now, you can modify the report as per your requirement in the same way as was discussed during previous section of Creating Report with Report Designer.

9.7 PRINTING A REPORT

Before you print a report, you need to open the report in the **MODIFY REPORT <filename>** mode. After you open an existing report in the Report Layout window, choose **Print** option from the **File** menu or click the **Print** tool to display the **Print Setup** dialog box as shown in the figure 9.23.

Fig. 9.23: The Print Setup Dialog Box

The options available with the Print Setup dialog box are self explanatory, which allows you to select the Printer device, paper orientation and the paper size.

9.8 WHAT YOU HAVE LEARNT

In this lesson you have learned about two types of Report Wizards. The first is general Report Wizard which formats a single table report. The second is one-to-many Report Wizard which uses a parent-child relation between two tables to create a report. You have also learned how to Group the report and to include the total of numeric fields based on a grouping of records in the Report Wizard. You have also seen the limitations of the Report Wizard and beyond these limits how to create a report by using Report Designer.

In the Report Designer you have learned about the basics of creating a custom report, adding report controls to create a professional image and title in your report.

9.9 TERMINAL QUESTIONS

1. Describe two types of reports available with Report Wizard?
2. List out the various options available while saving a report.
3. Describe the one-to-many report format.
4. What are the steps for adding one more field 'Income' of numeric width 7 in the report created in figure 9.8.
5. Write steps for typing Title of the report when the report is created using Report Designer.
6. What is the difference between Executive style and Presentation style of reports.

9.10 KEY TO INTEXT QUESTIONS.

1. (a) T (b) F (c) T (d) T
 2. on the common field.
 3. Print Preview command is used to view the data in advance on the screen before final printing on the paper. The modifications can be done, if the arrangement of data/text is not proper. Print commands takes the final output on the printer and provides a hard copy of it.
-