

USING REPORT WIZARD

File → New → Report → Wizard

Wizard selection → Select Report wizard → Click OK

Select table fields → Select student table (rollno, name, address) → Shift 'Rollno' , 'name', 'address' to 'selected fields' list. Click Next

Sorting Records → Select Name . Click Next

Choose **style** for report Ex Banded, ledger, casual Click Next

Finish; Type a title for your report → click finish

Give a name for your report

Generating the report

Close tables

Use student

Report form studentmrksrep.frx → TO view report

Report form studentmrksrep.frx preview (to get preview of report)

QUERY WIZARD TO WORK WITH

RELATIONAL DATABASES

File → New → Query → Wizard

Wizard Selection → Select Query Wizard → Click OK

Select Fields (Select any table by going to 'Free tables') →

Transfer fields to 'selected fields' from 'available fields' → click Next

Filter Records

Field	Operator	Value
oct23.dowek	equals	Friday
	O AND	O OR
Oct23.dtowek	equals	{^2013-10-23}

Click Next

Sort Records

Available Fields

Selected fields

Oct23.Dowweek
Oct23.Dtweek

Add

Remove

Click Next

Limit Records

Percent of Records

No of Records

All Records → Select

Click Next

Finish

Select → Save Query for later use

Click Finish

Give name of query when asked for

Queryoct23

Run Query

do queryoct23.qpr(OR Program → Do → select queryoct23.qpr)

LABEL WIZARD

File → New → Label → Wizard → OK

Step 1: Select tables

Select any table from free tables

Step 2: Choose Label Type

Select "Avery 4166 3"*5" "

Step 3: Define Layout

Transfer all fields from available to selected fields

Step 4: Sort Records

Select any field for sorting

Step 5 : Finish

Select "Save and print labels"

When SAVE dialog box appears given label name as s1lab

Chapter 3

Working from the command window

- **Creating a new table using commands**

```
CREATE TABLE STUDENT;  
(ROLLNO INT(5), NAME CHAR(20), CONTACT INT(10))
```

- **Creating a new table using table designer**

CREATE → invokes 'Save As' dialog box where you got to give the table a name.
Then table designer box appears where you can enter the field names and specify their data types.

CREATE ACCOUNTS → directly invokes table designer window

- **Inserting values into the table**

```
INSERT INTO STUDENT;  
VALUES(1,'ASHA',9895213221)
```

```
INSERT INTO STUDENT;  
VALUES(2,'RAJU',9887654387)
```

The above command inserts 2 records into the table student.

- **Modify table structure**

```
OPEN STUDENT  
USE STUDENT  
MODIFY STRUCTURE
```

The above command opens the table designer window.

1. In the **Table Designer**, choose **Insert**.
2. In the **Name** column, type the name of the new field.
3. In the **Type** column, select a data type for the field.
4. In the **Width** column, set or enter a width for the field.
5. If the field has a type of **Numeric** or **Float**, set the number of decimal places in the **Decimal** column.
6. If you want the table to accept null values, select the **NULL** column.
7. Choose **OK**.
8. Choose **Yes** to make the table structure changes.

OR

Use the **ADD COLUMN** clause of the [ALTER TABLE](#) command to modify the table using commands

```
ALTER TABLE customer ADD COLUMN fax c(20) NULL
```

- **Displaying data**

SELECT * FROM STUDENT; displays records of the table STUDENT.

- **Editing data**

USE CUSTOMERS

```
UPDATE CUSTOMERS SET CUSTOMERID=1 WHERE ACCTNAME='MEERA'
```

- **Append**

Append command is used to add new record in the table.

```
CLOSE TABLES
```

```
USE CUSTOMER
```

```
APPEND
```

The above command opens customer table so a new record can be added

- **Record Pointer:-**

FoxPro marks its position with a table by means of an internal marker called the record pointer. A table first opens the Record Pointer normally pointing to the first record in the table.

Go to:-

GO TO command is used to change position of the record pointer

Go 2 command is used to show the positioning of the record pointer on the 2nd record.

Go Top command moves the record pointer on first record.

Go Bottom moves the record pointer on last record.

- **Deleting Records**

DELETE FROM customers WHERE countval < 5 sets a black mark close to the records but they are not physically deleted.

```
SET DELETED ON
```

```
SELECT * FROM CUSTOMERS -- > using these commands, the deleted records will be invisible
```

- **Delete records permanently**

CLOSE TABLES

USE CUSTOMERS EXCLUSIVE

PACK The pack command permanently deletes records marked for deletion

- **Viewing the Records:-**

After adding the record to the table, the next logical step is to view the data. Data can be viewed with the LIST and DISPLAY command with the command window.

The default scope of the List command is to display all the records on the screen. The scope can be changed by using various options of the list command.

For example,

--> LIST record 4 displays the record no. 4

--> LIST studno, studname, fee (field names) displays the said field names only.

--> LIST studname, Fee +50 displays the figures of student name adding 50 to the previous amount.

LIST studname, Fee -50 displays the figures deducting 50 from previous amount.

Note: Val is used for the conversion of characters into numeric.

LIST FOR VAL (MARKS) > 50

LIST STUNAME, FEES X 2 → multiplies

LIST STUNAME, FEES / 2 → divides

LIST FOR FEES > 2450 → displays the fees greater than the amount 2450.

LIST FOR STUNAME = "RAO" displays rao's data only. Here strings used for characters only and for numbers there is no usage of any strings.

LIST FOR STUNAME != "RAO" OR LIST FOR STUNAME <> "RAO" displays data except rao's.

LIST FOR STUDNAME = "RAGHU" AND FEES >200 displays the data for Raghu if the fee is greater than 200. Here note that the character names are unique as in data.

LIST FOR DOJ>{06/11/99} displays data of students joined after the specified date of joining (doj).

Display Command

Display command is somewhat similar to LIST command. **Display All** and **List** commands are interchangeable. Both commands display the list of the records in the table. The default scope of the Display command is current record position. For example, using the command, GO 6 DISPLAY → we can display the 6th record.

DISP ALL STUDNO, STUDNAME, FEES displays all the field names.

DISP ALL STUDNO FOR COURSE = "FOXPRO" displays the number of students in foxpro course.

Browse Command:-

- It is usually difficult to view a number of records on the screen at the same time. **FoxPro browse mode displays the large amount of information at the same time.**

Browse displays the records shows in a spreadsheet format.

Browse fields stuno, stuname, fee Displays those fields only.

Browse fields stuno, stuname, fee Freeze fee command restricts the edition of the specified Id

• DATA TYPES IN FOXPRO

Type	Maximum	Default
Character	254 chars`	10
Currency	900 trillion	8
Numeric	20	8
Float	20	8
Date	8	8
DateTime		14
Double	More accurate than numeric	
Logical	True/False , T,t,Y,y,F,f,N,n	
Memo	Store letters, no.s, blank, special symbols	
Character(Binary)	Include any 8 bit value, incl. null chr. Max width = 254	

Logical expressions evaluate to either true or false, which are represented by the values .T. and .F. in Visual FoxPro. Compose logical expressions by combining logical operators with the following Visual FoxPro elements:

- Logical type fields.
- Functions that return logical values.
- Variables and array elements that contain logical values.
- Any expression that evaluates to a logical value.

Visual FoxPro evaluates logical expressions from left to right, and only for as long as necessary. In the following example, the **AND** operator is used to create a logical expression. If any of the

values in the expression are false (.F.), the entire expression is false. When Visual FoxPro encounters the first logical false (.F.), it doesn't evaluate the rest of the expression.

- **&& command**

&& used as comments

- **SORT command**

-

CLOSE DATABASES

OPEN DATABASE

USE customer && Opens Customer table

CLEAR

LIST FIELDS company, cust_id NEXT 3

SORT TO temp ON cust_id

USE temp

LIST FIELDS company, cust_id NEXT 3

SET DEFAULT

You can also move the default directory one directory toward the root directory with the following command:

SET DEFAULT TO ..

SET DEFAULT TO [cPath]

SET DEFAULT TO A

SET DEFAULT TO A:

SET DEFAULT TO A:\sales

SET DEFAULT TO C:\sales\data

- **Using Logical Expressions**

Visual Foxpro has mainly two logical expressions i.e. True and False. They are generally used to find individual records or to isolate records that meet certain criteria.

Ex: - If you wanted to find the students who reside in city "Thrissur", you would have to use the expression **City="Thrissur"**.

Visual Foxpro looks at each record to see letters Thrissur. If they are, the expression **City="Thrissur"** is evaluated as True. If not, the expression is evaluated as False.

- **Logical Functions**

Common examples of Logical functions are EOF() i.e. End of File and BOF() i.e. Beginning of File.

- **EOF()**

End of File means the logical end of the file,i.e. The system has reached the last record of the file. The normal format of the function is simply EOF(). The function EOF() returns a logical True(.T.) value when the record pointer is at the end of a file and is then moved forward by one more record. The SKIP command can move the record pointer forward by one record at a time. The syntax for this is

EOF ((< NUMERIC EXPRESSION > / < CHARACTER EXPRESSION >))

USE STUDENT
 GO BOTTOM
 SKIP 1
 ?EOF() → .T.
 GOTO TOP
 ? STD_CODE, NAME → Displays STD_CODE,NAME of the first record
 SKIP 1 → Goes to beginning of the file

• **BOF()**

It gives a logical value of .T. when an attempt has been made to push the record pointer above the first record in the file. Otherwise it returns a logical values of .F. . ***If the record pointer is positioned at the first record of a table, the SKIP 1 command sets BOF() to True.***

The syntax for this is :

BOF ((< NUMERIC EXPRESSION > / < CHARACTER EXPRESSION >))

USE STUDENT
 GOTO TOP → CONTROL TRANSFERRED TO FIRST RECORD
 ? RECNO() → 1
 ?BOF() → .F.
 SKIP 1
 ? RECNO () → .T.
 ?BOF() → .T.
 GO BOTTOM → You reach last record
 ?STDCODE, NAME → Shows STDCODE and NAME of last record

• **Relational Operators**

Operator	Action	Code
<	Less than	? 23 < 54

>	Greater than	? 1 > 2
=	Equal to	? cVar1 = cVar
<>, #, !=	Not equal to	? .T. <> .F.
<=	Less than or equal to	? {^1998/02/16} <= {^1998/02/16}
>=	Greater than or equal to	? 32 >= nHisAge
==	Character string comparison	? status == "Open"

• Logical Operators

Operator	Action	Code
()	Expression groups	cVar AND (cVar2 AND cVar3)
NOT, !	Logical negative	IF NOT cVarA = cVarB IF ! nVar1 = nVar2
AND	Logical AND	lVar0 AND lVar9
OR	Logical inclusive OR	lVarX OR lVarY

• Mathematical operators

Operation	Symbol
Exponentiation (raising to a power)	^ or **
Division	/
Multiplication	*
Subtraction	-
Addition	+

• String Operators

Are used to combine two or more character strings, known as Concatenation. The plus (+) sign is used to combine strings including blanks. The minus (-) sign is used to concatenate strings eliminating embedded blanks between them.

Ex

```
? TRIM(FNAME)+ " " + TRIM(MNAME)
```

- **Sorting records**

```
USE STUDENT
```

```
SORT TO STUD ON NAME /A
```

```
SELECT * FROM STUD
```

```
CLOSE TABLES
```

FILTERS IN FOXPRO

Specifying or setting a filter condition is an efficient way of selecting a group of records from a table.

Ex: - By using filter, you can display all records where city is Delhi or those records with marks_eng greater than 50.

Records that meet the criterion are filtered out indefinitely, until you remove the filter. You can create a filter from the command window by entering,

```
SET FILTER TO <LOGICAL EXPRESSION>
```

Before you can view the entire table again, you must remove the filter, If you want to remove the filter just enter "SET FILTER TO" command without any logical expression.

You can also create filter conditions in a special dialog box called the **Expression Builder**.

1. Open table in Browse window
2. Click Table menu
3. Choose Properties to open "Work Area Properties" dialog box.
4. Click "Data Filter" button.
5. Double Click on Field to be affected.

6. Type Filter Expression

OR

Choose operator from logical drop down list

OR

Type String from string drop down list

7. To verify whether expression is valid click “Verify”

8. Click OK to return to “Work Area Properties” dialog box.

Change Filter Condition

1. Open table in Browse window

2. Click Table menu

3. Choose Properties to open “Work Area Properties” dialog box.

4. Click “Data Filter” button.

5. Double Click on Field to be affected.

6. Change Filter Expression

7. To verify whether expression is valid click “Verify”

8. Click OK to return to “Work Area Properties” dialog box.

Remove Filter condition

1. Open table in Browse window

2. Click Table menu

3. Choose Properties to open “Work Area Properties” dialog box.

4. Click “Remove All”

5. Click OK

Indexing in Foxpro

Indexing a database creates an index file. Index file helps to locate where a particular record is available in the database file. Unlike sorting, indexing a database file does not duplicate the DB file. It just stores the index field(s) and the

corresponding record number in the index file. Index file is normally smaller than the sort file.

Using the INDEX command

```
USE ADDRESS
```

```
INDEX ON NAME TO NAME_IND  
LIST
```

The INDEX command creates an index file on the NAME field.

When you use the LIST command after creating the index file, Foxpro uses the index file for selecting order of records for display.

You can create more than one index file for a database file.

```
USE ADDRESS
```

```
INDEX ON PIN TO PIN
```

Now ADDRESS.DBF HAS 2 INDEXES NAME_IND AND PIN

At a time only one of them is used to select the order of records. At present PIN.idx is controlling index file. If you use LIST now, Foxpro will use PIN.idx to determine the order of records for display. If you want to select NAME_IND index file, there are 2 ways.

1. Open the database file afresh with desired index file.

```
USE ADDRESS INDEX NAME_IND
```

2. Specify index file name with SSET INDEX command

```
USE ADDRESS
```

```
SET INDEX TO NAME_IND
```

Updating Single Index files

When you make any change in the database file, Foxpro can automatically update the corresponding index files, provided they are active. You can edit, delete/add records in the database and foxpro keeps the index file updated in an on-line manner.

```
USE ADDRESS
```

```
SET INDEX TO NAME_IND, PIN
```

```
APPEND BLANK → ADDING BLANK RECORD
```

```
EDIT → Brings newly added record for editing.
```

```
Enter Nitish Jain
```

Hyderabad

Then press ^ END to exit from EDIT mode.

LIST

Because Foxpro updated NAME_IND.idx file, we get updated list of records.

When you specify more than one index file with SET INDEX COMMAND as done above, Foxpro uses the first index file as the controlling index file.

To set the index to PIN index file, write the following command

SET ORDER TO PIN.

Corrupted Index files and reindexing

If you do not keep all index files active and modify data in the database file, you end up with corrupted index files. That is, some records do not appear when you use the database file. You also get a message such as "Index does not match DB file. Recreate index". You should immediately open all index files and use REINDEX COMMAND.

USE ADDRESS INDEX NAME_IND, PIN

Now, Foxpro rebuilds index files. All records appear in the DB file.

Creating Index on Multiple fields

USE ADDRESS

INDEX ON CITY+NAME TO CITYNAME (First index on CITY field & for those records that have same city, arrange names in alphabetical order)

CITY+NAME → Both the fields must have the same data type.

Else operator/operand type mismatch error will occur.

1. Difference between DELETE, PACK and ZAP commands

DELETE

SYNTAX : DELETE RECORD RECORD_NUMBER

EX: DELETE RECORD 7

With the delete command the record is only marked for deletion but not physically deleted from the table. It is marked for deletion with a * symbol.

PACK

Pack command permanently deletes the records marked for deletion from the table. The command can be given as

PACK

ZAP

Suppose we have created a table called student and inserted records into it. Now imagine we need to create a new student table(file) without changing the structure. The ZAP command deletes all data in the table without deleting the structure of the table so that new data can be entered into it.

Definitions:

The best way of creating anything in Visual Foxpro is through Wizard.

Query Wizard

You can call the query wizard from the Wizards submenu found in the Tools menu. The query wizard dialog box gives the choice of creating queries of various types.

- a. Cross tab wizard
- b. Graph wizard
- c. Local view wizard
- d. Query wizard
- e. Remote view wizard

Since our query is of simple type we would click Query Wizard option from the above.

After this write down each step of Query wizard in detail. (select table, fields, query criteria, sort records, limit records and finish and saving query)

Query Designer

Select New option from the file menu.

Select Query and click at New File. You would be asked to add a table or view the query. We can select the table based on which we want to solve our query.

After this write down each step of Query designer in detail. (fields, Join, Filter, Order by, Group by, miscellaneous)

System requirements for installing Foxpro

You can install Visual FoxPro from CD-ROM or a network to a local hard drive

Note If you use a virus protection program on your computer, override it or turn it off before running the Installation Wizard. The Installation Wizard might not run properly with virus protection turned on. After installation, be sure to restart your virus protection program.

You can install Visual FoxPro on computers running Windows 98, Windows ME, Windows NT 4.0, or Windows 2000 or later operating systems.

Minimum hardware requirements are:

- An IBM-compatible computer with a Pentium processor.
- A mouse or pointing device.
- 64 MB RAM (recommended: 128 MB or higher)
- Diskspace for Visual FoxPro: 115 MB for a minimum installation, 200 MB for the maximum installation.
- Diskspace for the Windows Component Update: depends on the Operating System but typically might require 50 MB.

To install Visual FoxPro from CD-ROM

1. Insert the **Visual FoxPro** CD, and launch the **Installation** wizard (Setup.exe).

2. Insert the **Windows Component Update** CD, and install the **Windows Component Update**. Depending on the operating system you are using, your computer might restart several times. Click **Done** to return to the **Installation** wizard.
3. Click **Install Visual FoxPro**.
4. From the feature list in the wizard, select all of the tools you want to install.
5. Click **Install Now!** to continue with Setup.
