

FOXPRO

The 1st DBMS software for PC was developed by “ASHTON-TATE” in 1979 called dbase2. Then that company introduced the updated version of dbase3 as dbase2 in 1984. To get a share of the expanding of DBMS market for the PC segment for software. They came out with fox base+ that was compatible with dBASE3 then it was updated and the new software was called FoxPro. Gradually new version of FoxPro were released to market earlier version of FoxPro are available for dos, FoxPro, 2.5, 2.6. It can run by different operating system as dos, UNIX. In 1992 fox software merged with Microsoft and released a new version of FoxPro known as visual FoxPro 3.0,ms gradually release advance version of visual FoxPro as 4.0,5.0,6.0,7.0 using this we can design a database as per user requirement of any organization. It also help you to enter and manage data in database in database file using this we can edit, view, change, delete, using of data from the database file. We can also create & report using data of the database file. According to user requirement, we can also write program to create customize software in FoxPro.

FoxPro is a Relational Database Management System (RDBMS) developed by Microsoft.

It is:

1. File-based DBMS
2. Table-oriented
3. Command-driven
4. Supports programming (procedural language)

It is mainly used for:

1. Small to medium database applications
2. School, office, billing systems
3. Desktop-based database programs

Important Concepts of FoxPro in DBMS

There are following important concept of FoxPro in DBMS

1. Database
2. Table
3. Field
4. Record
5. Primary Key
6. Index
7. Command in FoxPro
8. Relational Concept

1. Database: It is a collection of related data. A database is a collection of related and organized data that is stored in a structured form so that it can be easily accessed, managed, and updated. In FoxPro, a database is saved with the file extension .DBC.

Example: Student.dbc is a database file in FoxPro that may contain related tables such as student details, marks, attendance, etc.

2. Table: A table is a database object used to store related data in the form of rows and columns. In FoxPro, a table is saved with the file extension .DBF. Each row in a table is called a record, and each column is called a field.

Example: A student table may contain fields like Roll, Name, and Marks, where each record stores information of one student.

Roll	Name	Marks
1	Ali	80
2	Riya	75

3. Field: A field is a column in a table that stores a specific type of data for each record. In FoxPro, every field has a name, data type, and size. Fields define the structure of a table and determine what kind of data can be stored.

Field Types in FoxPro:

1. Character (C) – Stores text values
2. Numeric (N) – Stores numbers
3. Date (D) – Stores date values
4. Logical (L) – Stores True/False values

5. Memo (M) – Stores large text data

Example:

Name C(20) – Character field with maximum 20 characters

Marks N(3) – Numeric field with maximum 3 digits

4. **Record (in FoxPro):** A record is a single row of data in a table that contains complete information about one entity. In FoxPro, each record stores data for all the fields defined in the table structure.

Example: In a student table, the record 1, Azam, 80 represents one student's complete information, where 1 is the Roll number, Azam is the Name, and 80 is the Marks.

5. **Primary Key:** A primary key is a field in a table that uniquely identifies each record and does not allow duplicate or null values. In FoxPro, the primary key ensures data integrity and helps establish relationships between tables.

Example: In a student table, the *Roll Number* can be used as a primary key because it uniquely identifies each student record.

6. **Index:** An index is a database feature used to arrange records in a specific order and to search data quickly. In FoxPro, indexing improves the speed of data retrieval and helps in sorting records based on a particular field.

Command Example:

```
INDEX ON Roll TO roll index
```

This command creates an index file named roll index based on the Roll field, which allows faster searching and sorting of records in the table.

7. **Commands:** Commands in FoxPro are instructions used to create, manage, and manipulate data in database tables. These commands help the user perform operations such as creating tables, inserting records, displaying data, searching records, and deleting records.

Important FoxPro Commands:

1. **CREATE TABLE student**

This command is used to create a new table named student.

2. **APPEND**

This command is used to insert or add new records into a table.

3. **LIST**

This command is used to display the records of a table.

4. **LOCATE FOR Roll = 1**

This command is used to search and find a specific record where the Roll number is 1.

5. **DELETE**

This command is used to mark a record for deletion from the table.

8. **Relational Concept:** The relational concept in FoxPro refers to the method of establishing a relationship between two or more tables using a common field. FoxPro, being a Relational Database Management System (RDBMS), allows tables to be linked together so that related data can be accessed and managed efficiently.

Example: A Student table and a Marks table can be related through a common field such as Roll Number. The Roll Number acts as a linking field that connects records of both tables.

This concept of linking tables using a common field is known as the Relational Database Concept.