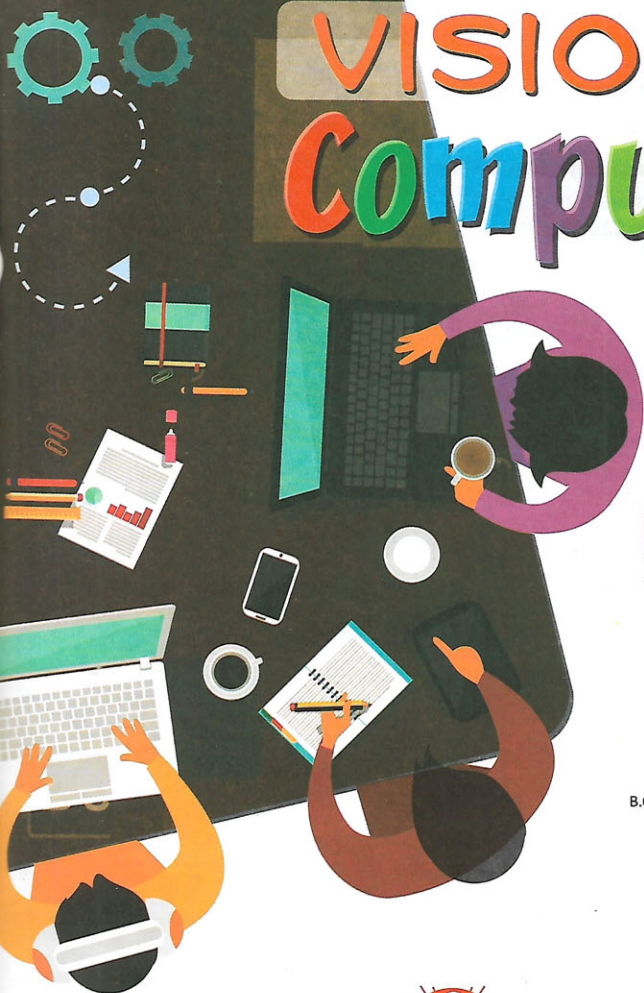




VISION *Of* Computer



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Preface

Dear Reader,

In the current world, it's almost impossible to imagine that someone can live without computers. Computers have become an electronic device of almost everyday use for individuals of every age. And today, the parents and teachers also think that learning computer is just as important to a student's future success as math, science, history and English. So, we need the book that can help the students learn computer in an easy manner.

'**Vision of Computer**' is a series of eight books for class I to VIII. The series covers the latest syllabus and guidelines and each and every topic that is essential for the children's knowledge. The language used is very simple and easy to understand. The main focus of the series lies on the teacher/facilitator to optimise the use of this book to result in efficient teaching and effective learning.

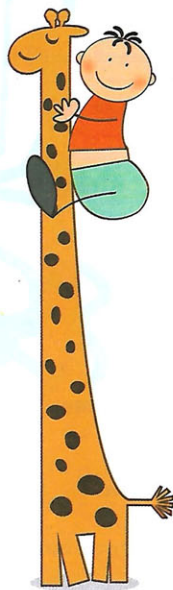
The special features include

- | | |
|-------------------------|---|
| Learning Points | - The topics taught in the chapter. |
| Do Yourself | - Some activities/tasks related to chapter that motivate the student to do the tasks himself/herself. |
| Extra Point | - It contains some extra knowledge related to the chapter. |
| Quick Recap | - It is the backup of the chapter with main points learnt in the chapter. |
| Performance Time | - It includes different exercises to check the learning power of the students. |
| Learn With Fun | - It includes the activities that are helpful in enhancing the knowledge of students without stressing their brain. |

We hope the series would prove very beneficial to all the readers. And also your suggestions would be accepted for the betterment of the series.

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Introduction to MS Access 2007 (An Introduction)

Learning Points

- | | | |
|--------------------|---------------------------|---------------------|
| 1. Database | 2. Table | 3. Data |
| 4. Getting Started | 5. Parts of Access Screen | 6. Creating a Table |



Dear friends, Ms Access is a program where we can store data in different tables in one file. We can store different types of records such as students, books, fees, marks scored etc.

MS Access is a database management tool that enables one to have good command of data collected. The program enables one to retrieve, sort, summarize and report results speedily and effectively. It can combine data from various files through creating relationships and can make data entry more efficient and accurate.

DATABASE

A database is defined as an organized collection of data on people or things. In raw form, a sheet of paper divided into columns and rows or a table in Microsoft Word or Excel is considered a simple database. Simple table databases are very limited in their uses and would not be considered as a business solution.

In Access, information is stored in tables. The information can be seen in tables or through forms and reports. A database will be able to store data in a structured manner across multiple tables, use queries to locate specific information according to given criteria, produce detailed reports, perform calculations and much more.

An example of a multi-table database is a database of classes, which might consist of tables showing information on several of these: classes, lecturers, students and rooms.

TABLE

Tables are used to store data in a structured and organized format. As previously mentioned, tables are similar to those of Word and Excel, in that they contain rows (records) and columns (fields).

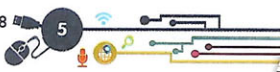


Table1							
Student_ID	Street Address	First Name	Last Name	City	State	Zip code	Add New Field
1	222, Ashok Vihar	Sam	Sony	Delhi	New Delhi	1100001	
2	110, Block 1, Preet Vihar	Reena	Shah	Delhi	New Delhi	1100002	
3	121, N.K 1st, Indirapuram	Krish	Saxena	Ghaziabad	Uttar Pradesh	201014	
4	211, S.K Iind, Indirapuram	Shewta	Sinha	Ghaziabad	Uttar Pradesh	201014	
5	211, S.K Iind, Indirapuram	Rishi	Sinha	Ghaziabad	Uttar Pradesh	201014	
*	0						0

Record

A record applies to data entered into a single row of a table. All data in that row would belong to a individual or item. A record would normally include a unique ID number, name, description, plus other relevant information. With each new record, a new row is created. For example, the figure above has all the information on Sam in the row beginning with '1'.

Field

Each field is used to define what specific information is to be entered into that particular column. A column titled, Class for example would signify this to be the place in a record to enter the Class name when creating each new record. For example, the figure above has an residential address for each row in the column headed "Street Address".

DATA

Data is the information entered into tables within the database. Databases are used in businesses and in education, often without people realizing they are using a database. Something as simple as entering contact details into the Contact or Address Book section of an email client, involves entering data into a database.

Data entered will generally be alphabetical (names, addresses) or numerical (dates, currency), however Access is also able to store other forms of data, such as links to websites, documents created in other programs such as files and images.

Data can be entered into the database manually, via the keyboard, imported from or linked to external sources or even collected through email or an internet form.

Data Types

Data types define what type of data will be entered into each, column in a table. If you create a table by typing in the data in new fields, Access will determine the data type for you based on what you type. If you type a name, it sets the type for that field to Text. If you type a date either as "15/08/2016" or "December 9, 2016" it will set the type to Date/Time. If you type a digit or digits it will set the type to Number. If you also type \$ as in \$81.65 or a specific number of decimal places, like '9.00', then this will also be included as a numeric field.

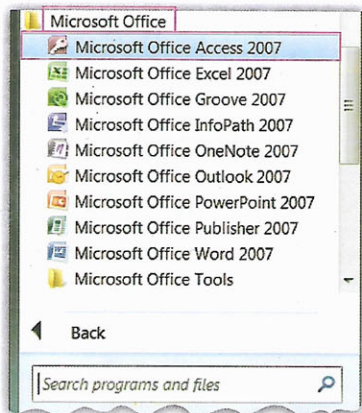
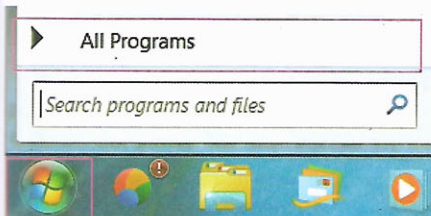
Although you can enter data without setting up the fields first, you should create the table and specify the data types for each field before entering data. You should also set defaults, limits and use Input Masks as needed.



Data Type	Use
Text	It contains alphanumeric data. It is used for text and for numbers that are not used in mathematical calculations. It is used for names, addresses and other relatively short pieces of text. It can store up to 255 characters.
Memo	Long text with all kinds of data. It is used for long pieces of text, such as notes and long descriptions. It can store up to 64,000 characters.
Number	It contains numeric data. It is used for numbers you want to use in mathematical calculations.
Date/Time	It is used for date and time.
Currency	It contains symbols for currencies, decimals and commas.
AutoNumber	It is unique sequential numbers or random numbers automatically inserted when you create a record. It is used to create a primary key.
Yes/No	It contains logical data. It is used when only one of two values is valid. Yes/No, True/False, etc.
Hyperlink	It is used to store hyperlinks.
Attachment	It is used to store attachments.
OLE Object	It is used to attach an OLE object such as a Word document, Excel spreadsheet or PowerPoint presentation.

GETTING STARTED

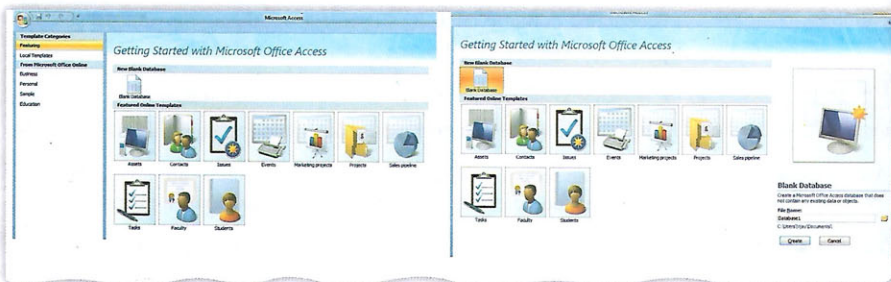
1. Open the **Start** button and choose **All Programs**.
2. Select **Microsoft Office** then click **Microsoft Access 2007**.



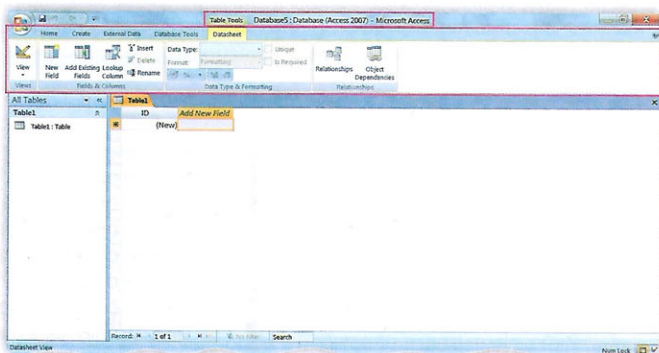


You use windows to interact with Access. To begin, start Access 2007. Your screen will look similar to the one shown here.

On entering Access you are presented with a screen showing available templates, which have been designed to help you create your own databases. You can either choose **Blank database** from the available templates or any other form of database from office.com Templates. Click on the **Blank Database**. Then click on the **create option** on the right hand.



Once the new database is created, the following main Access screen will appear.



PARTS OF ACCESS SCREEN

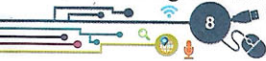
The following parts will appear on the screen.

The Title Bar

The Title bar is located at the top in the center of the Access window. The Title bar displays the name of the database on which you are currently working.

The Ribbon

The following tabs will appear on the top ribbon.

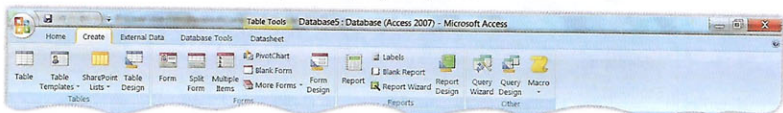




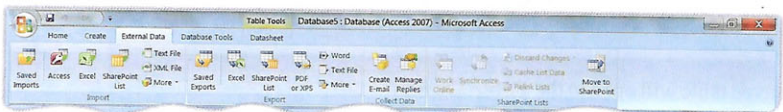
Home – Controls changing of fonts, performing queries, copy/paste/cut data, etc.



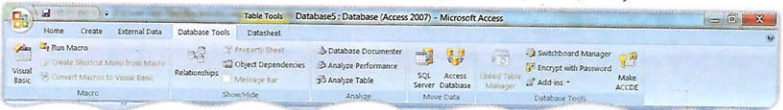
Create – Controls creation of tables, forms, reports, etc.



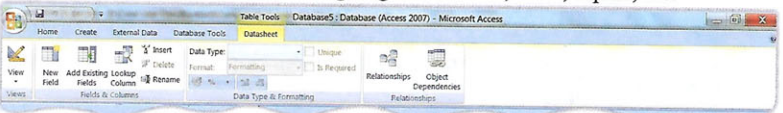
External Data – Controls loading data from other data sources into MS Access.



Database Tools – Helps Manage databases (security, switchboard, etc.)



Datasheet – These will appear while designing a new table, form, report, etc.



Database Objects

Tables
Queries
Forms
Reports

In Access, the data is stored in tables. A table is a set of columns and rows, with each column referred to as a field. Each value in a field represents a single type of data. Each row of a table is referred to as a record.

You use queries to retrieve specific data from your database and to answer questions about your data. For example, you can use a query to find the names of the employees in your database who live in a particular state.

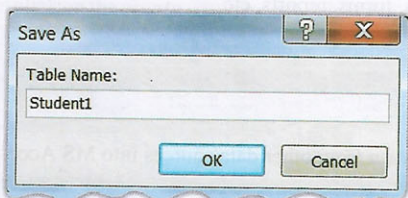
Forms give you the ability to choose the format and arrangement of fields. You can use a form to enter, edit and display data.

Reports organize or summarize your data so you can print it or view it onscreen. You often use reports when you want to analyze your data or present your data to others.

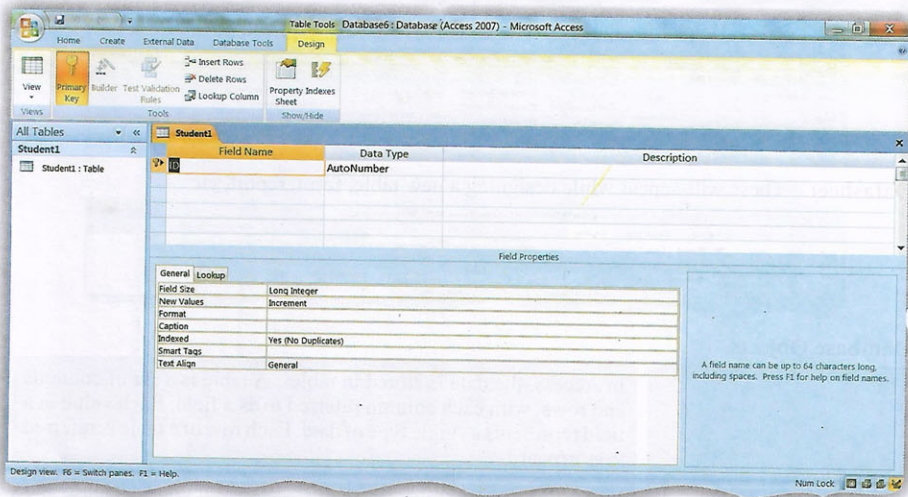


CREATING A TABLE

1. Click on the **Home** tab and click on the **View** command in the **View** group. Then pull down the **View** menu and choose **Design View**.
2. A **Save As** dialog box appears. Enter the table name and click the **OK** button.



3. The saved table will open in the **Table Design**.



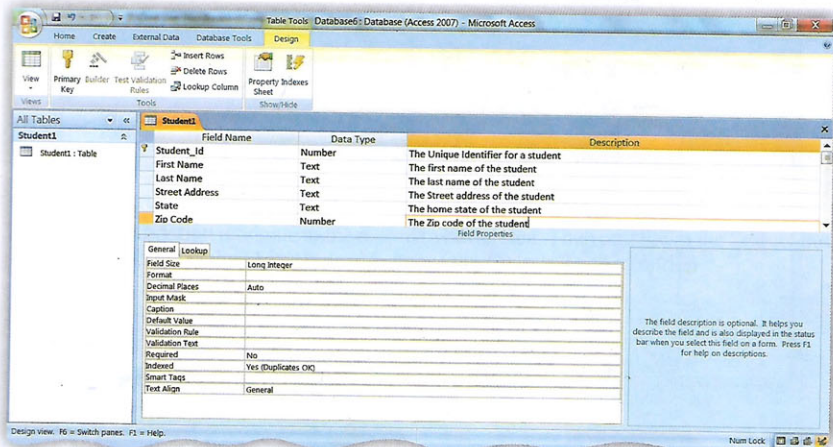
4. Fill in the **Field Name**, **Data Type** and **Description** for each column/field in the table. The **Student_ID** field has already been filled for your reference.

Fill in the information for the fields as follows:

Field Name	Data Type	Description
Student_ID	Number	The Unique Identifier for a Student
First Name	Text	The first name of the Student
Last Name	Text	The last name of the Student

Street Address	Text	The street address of the student
State	Text	The home state of the Student.
Zip	Number	The zip code of the Student.

A figure showing the design view with the new table definitions filled is given below.

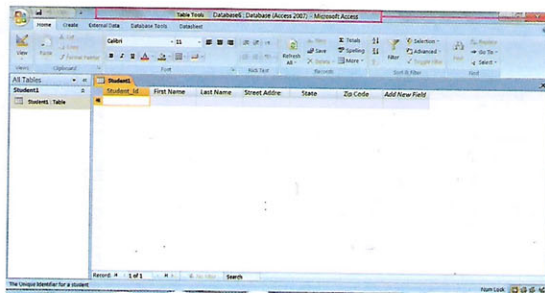
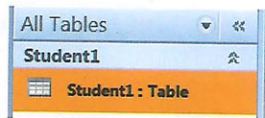


Viewing and Adding Data to a Table

Data can be added, deleted or modified in tables using a simple spreadsheet like display.

Viewing data

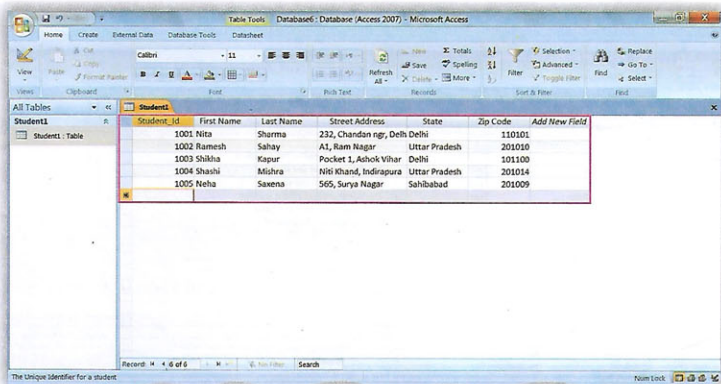
- To view of a single table's data, highlight the name of the table and then double-click on the name of the table.
- In this view of the **Student** table, shown in the figure below, the fields (columns) appear across the top of the window and the rows or records appear below.



Added Fields in a Table

Adding data

1. To add data to the table, simply type in the values for each of the fields (columns). Press the **Tab** key to move between fields within a record. Use the up and down arrow keys to move between records. Enter the data as given below.



SAVING A TABLE

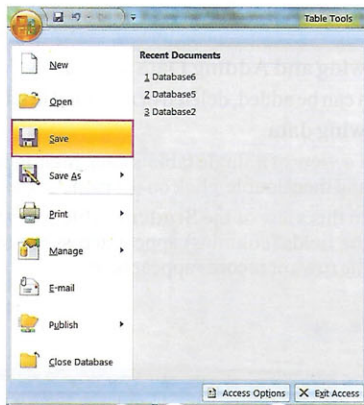
To save the new data, click the **Office button** and choose **Save** from the menu that appears.

The table will be saved.



Extra Point

You should decide on a naming convention for the objects in your database and use it consistently.



Do Yourself



Create a data named 'Dear ones', which contains all the details of your friends. Create a table named 'Close Friends' which will have the following fields:

Name, Phone No., Address:



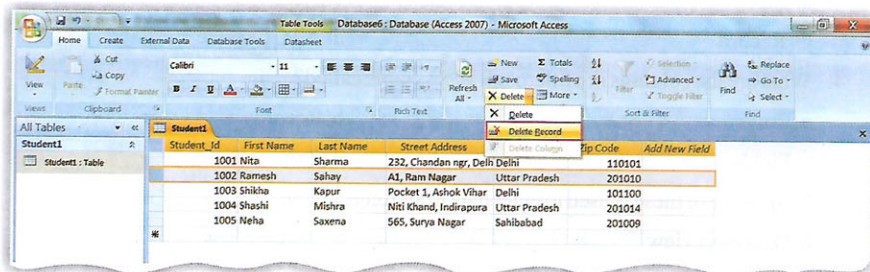
Modifying Data

- To modify existing data, simply navigate to the record to be modified. Use the arrow keys and the delete or backspace keys to change the existing data.

Student1						
Student_Id	First Name	Last Name	Street Address	State	Zip Code	Add New Field
1001	Nita	Sharma	232, Chandan ngr, Delh	Delhi	110101	
1002	Ramesh	Sahay	A1, Ram Nagar	Uttar Pradesh	201010	
1003	Shikha	Kapur	Pocket 1, Ashok Vihar	Delhi	101100	
1004	Shashi	Mishra	Niti Khand, Indirapura	Uttar Pradesh	201014	
1005	Neha	Saxena	565, Surya Nagar	Sahibabad	201009	

Deleting a Record

- To delete a record, first navigate to the record to be deleted. Then pull down the **Delete** button in the **Records** group in the **Home** tab and choose the **Delete Record** option.



Quick Recap

- Microsoft Access is a database management tool.
- A database is defined as an organized collection of data on people or things.
- In Access, the information can be seen in tables or through forms and reports.
- Tables are used to store data in a structured and organized format.
- A record applies to data entered in a single row of a table.
- Each field is used to define what specific information is to be entered into that particular column or 'field'.
- Data is the information entered into tables within the database.
- Data types define what type of data will be entered into each, field (column) in a table.





Performance Time

A. Tick (✓) the correct answer.

1. MS-Access is a

a. Database software ☐

b. Drawing software ☐

c. Document software ☐

d. Presentation software ☐

2. is a collection of fields and records.

a. Table ☐

b. Field ☐

c. Reports ☐

d. All of these ☐

3. In a database table, a category of information is called _____

a. Table ☐

b. Field ☐

c. Record ☐

d. All Of Above ☐

4. What are the columns in a microsoft access table called?

a. Rows ☐

b. Records ☐

c. Fields ☐

d. Columns ☐

5. Which one of these is used to enter data in an Access table?

a. Datasheet view ☐

b. Design View ☐

c. Template ☐

d. All of them ☐

B. Write 'T' for true and 'F' for false statements.

- a. Access is a relational database, where as Excel is a flat database. ☐
- b. The ribbon is located near the top of the Access window, above the Quick Access toolbar. ☐
- c. A table is a set of columns and rows. Each column is called a record. ☐
- d. A database is an organized collection of records. ☐
- e. After creating a database a table can be modified. ☐

C. Answer the following questions.

1. What is a Database? Give some examples.



2. Explain the components of the MS-Access screen.

3. Define the following.

- a. Report

- b. Field

- c. Record

- d. Form

- e. Table

4. What are the two parts of view?

5. Name any four data types available in Microsoft Access.



Learn With Fun

1. Creating a Table

a. Create a new table with the name **Member**.

b. Add the following fields to a table:

Stu_Id	Stu_name	School_name	Class
--------	----------	-------------	-------

c. Set the following data type for each field in a table.

Stu_Id:	Number	School_name	Text
Stu_name	Text	Class	Number



- 
2. The head librarian of your locality wants to create a database in Access. Suggest her the following:

Table Name:

Fields Name:

Data type for each field:

3. Rohan's uncle is a manager in a publishing house. He needs to manage records for books, employees, authors and schools. Can you help Rohan's uncle to manage records.

1. Suggest how many tables he needs to create.
2. For each table what fields does he requires to add in the table.

4. Make a group of 4-5 students and discuss the following topic:

Topic: MS Access is the best program for managing database and enables one to have good command on data.

Write your views here.
