

MS Access

What is MS-Access?

MS-Access is a RDBMS (Relational Database Management System) application developed by Microsoft Inc. that runs on Windows operating System.

What is Database?

A database is an organization of data related to a particular subject or purpose so that the data can be retrieved or processed.

What is the extension of Access database file?

The extension of MS-Access data file is **.mdb** , **.accdb**

What is primary key?

A primary key is a rule which ensures that unique data is entered for the field and the field is not left blank. This is the field that would identify a record uniquely in table

What is relational database?

A database with tables related to each other on a common field to facilitate the data retrieval from multiple tables is known as relational database.

What is a key field?

A common field on which two tables are linked is known as key field.

What are the elements of a database?

The major six elements of a database are

Tables, Queries, Form, Reports, Macros, Modules

What is a table?

A table is a collection of data about a specific topic such as products, students or suppliers. A table organizes data into columns (fields) and rows (records or tuples).

What is a field?

A field in a database is a piece of information about a subject. Each field is arranged as a column in table.

What is a record?

A record is complete information about a subject. A record is a collection of fields and presented as a row in a table of database.

What are the objects of Access Database?

The objects of Access Database are: Tables, Forms, Reports, Queries, Macros and Modules

What is the meaning of following field properties?

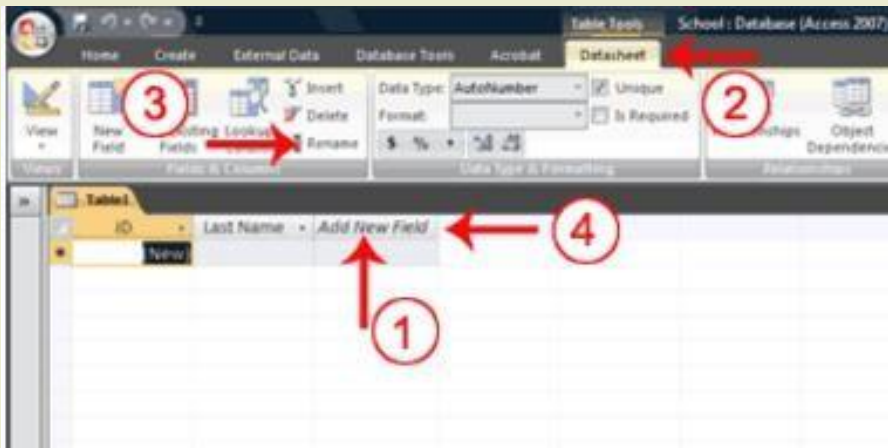
Field Size, Format, Input Mask, Caption, Decimal Places, Default Value, Validation Rule, Validation Text, Required, Allow Zero Length, Indexed.

Tables

Tables are the foundation of an Access database. Access stores data in tables.

A table is a set of columns and rows. Each column is called a field. Within a table, each field must be given a name and no two fields can have the same name. Each value in a field represents a single category of data.

To add fields to a table:



- 1) Click the Add New Field column label.
- 2) Activate the Datasheet tab.
- 3) Click Rename in the Fields & Columns group.
- 4) Type the field name.
- 5) Press Enter. Access creates the field.
- 6) Type the next field name. Access creates the field. Continue until you have created all of the fields in your table.
- 7) Press Enter without entering a field name to end your entries.

Or

- 1) Right-click the Add New Field column label. A menu appears.
- 2) Click Rename Column.
- 3) Type the field name.
- 4) Press Enter. Access creates the field.
- 5) Type the next field name. Access creates the field. Continue until you have created all of the fields in your table.

To use Design view to create a new table:



- 1) Activate the Create tab.
- 2) Click Table Design in the Tables group. Access changes to Design view and the Table Tools become available.
- 3) Type the first field name in the Field Name field.



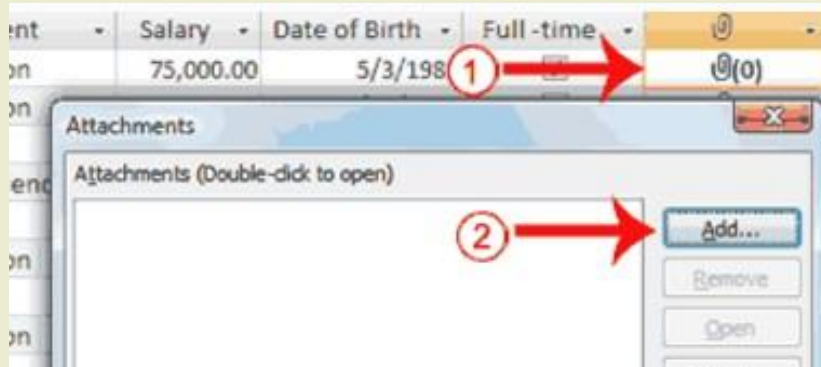
- 4) Press the Tab key.
- 5) Click the down-arrow that appears when you click in the Data Type field and then select a data type.

- 6) Click Primary Key if the column you created is a primary key. A small key appears next to the field name.
- 7) Press the Tab key.
- 8) Type a description. The description is optional.
- 9) Press the Tab key. Access moves to the Field Name field.
- 10) Repeat steps 3 through 10 until you have created all of your fields.

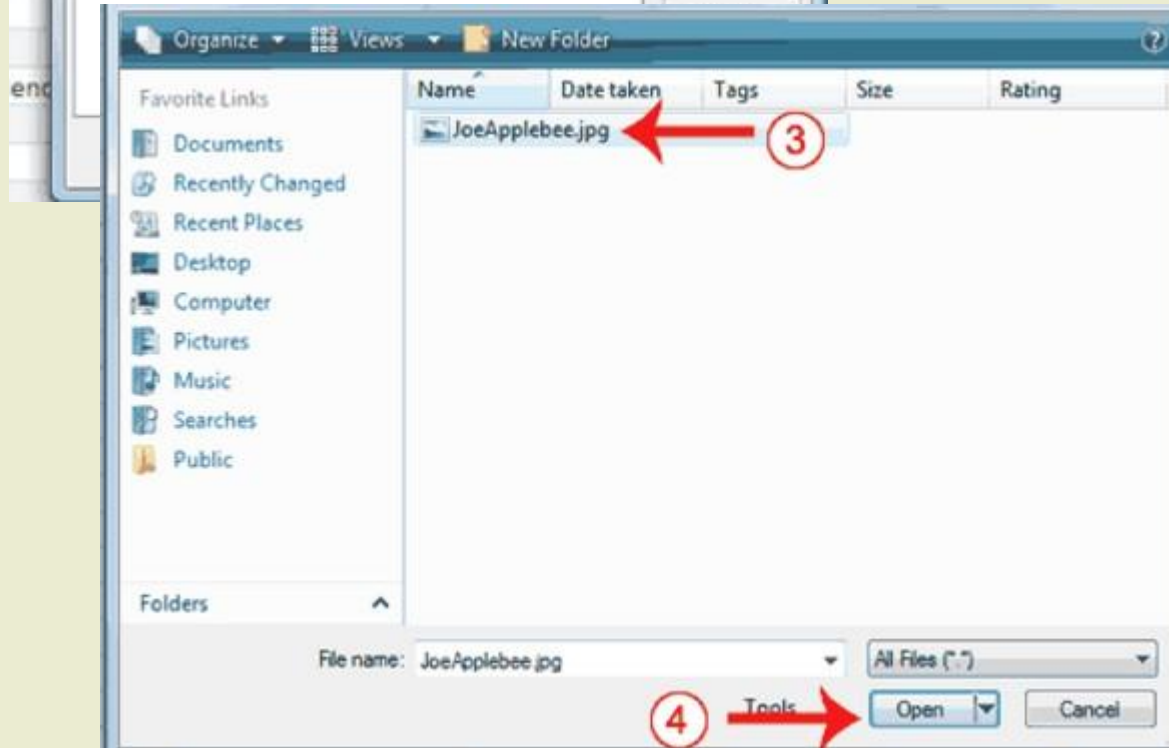
Understanding Data Types

Data Type	Use
Text	Alphanumeric data. Use for text and for numbers that are not used in mathematical calculations. Use for names, addresses, and other relatively short pieces of text. Can store up to 255 characters.
Memo	Long text. Use for long pieces of text, such as notes and long descriptions. Can store up to 64,000 characters.
Number	Numeric data. Use for numbers you want to use in mathematical calculations.
Date/Time	Use for dates and times
Currency	Use for currency.
Auto Number	Unique sequential numbers or random numbers automatically inserted when you create a record.
Yes/No	Logical data. Use when only one of two values is valid. Yes/No, True/False, etc.
Hyperlink	Use to store hyperlinks.
Attachment	Use to store attachments.
OLE Object	Use to attach an OLE object such as a Word document, Excel spreadsheet, or PowerPoint presentation.

To add an attachment to an attachment field:

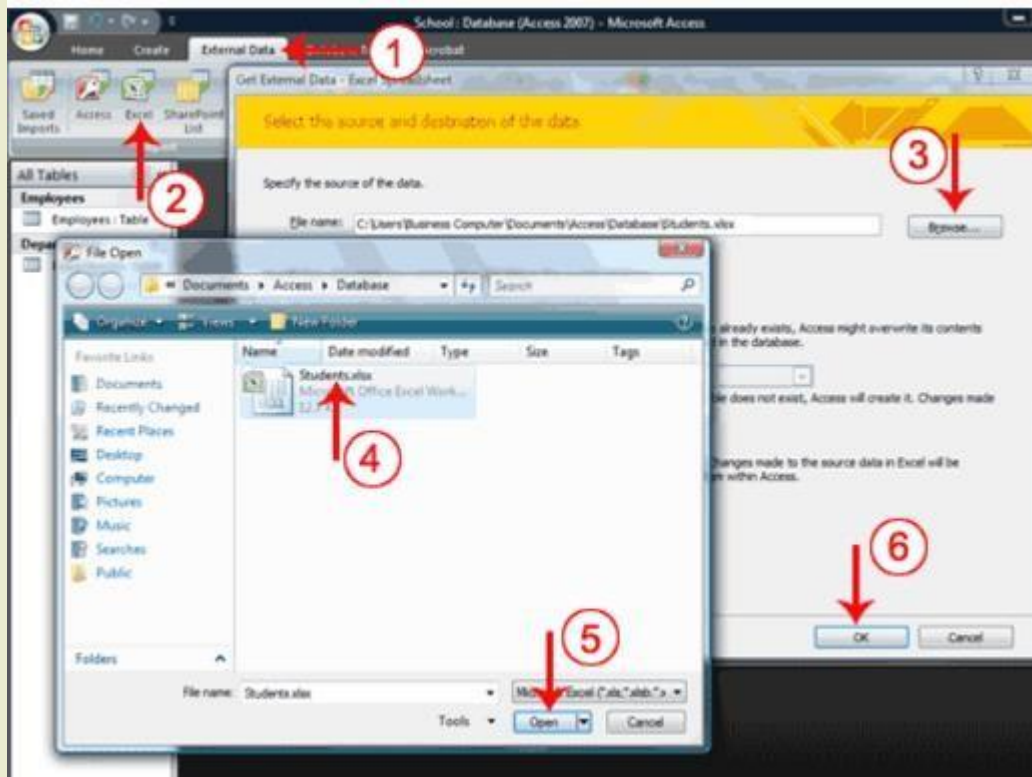


- 1) Double-click in the attachment field. The Attachments dialog box appears.
- 2) Click Add. The Choose File dialog box appears.



- 3) Click the file you want to add.
- 4) Click Open. The Choose File dialog box closes.
- 5) Click OK. Access attaches the file.

To import data from Excel:



- 1) Activate the External Data tab.
- 2) Click the Excel button in the Import group.
- 3) Click the Browse button. The File Open window appears.
- 4) Locate the spreadsheet you want to import.
- 5) Click the Open button. The path to the file you selected appears in the File Name field.
- 6) Click OK. Access moves to the next page.

7) Choose the sheet or named range you want to import



8) Make the first row your field names



9) Set data types

You can specify information on each of the fields you are importing. Select fields in the table below. You can then modify field information in the 'Field Options' area.

Field Options

Field Name: Student Number Data Type: Double

Indexed: Yes (No Duplicates) Do not import field (Skip)

	Student Number	First Name	Last Name	Street Address	City	State	Postal Code
1	1	John	Smith	123 Main Street	Grand Rapid	PA	08971
2	2	Mark	Adams	45 Elm Street	Geno	DE	10777
3	3	Valerie	Kilm	67 Spruce Street	Holbrook	NJ	05589

Annotations: (a) points to the 'Field Options' header, (b) points to the 'Data Type' dropdown, (c) points to the 'Student Number' field name, and (d) points to the 'Street Address' field name.

10) Choose a primary key

Microsoft Access recommends that you define a primary key for your new table. A primary key is used to uniquely identify each record in your table. It allows you to retrieve data more quickly.

Let Access add primary key.

Choose my own primary key. Student Number

No primary key.

	Student Number	First Name	Last Name	Street Address	City	State	Postal Code
1	1	John	Smith	123 Main Street	Grand Rapid	PA	08971
2	2	Mark	Adams	45 Elm Street	Geno	DE	10777
3	3	Valerie	Kilm	67 Spruce Street	Holbrook	NJ	05589
4	4	Bart	Singleton	89 Pine Street	Morris	NJ	05645

Annotations: (1) points to the 'Choose my own primary key' radio button and the 'Student Number' dropdown.

10) Name your table

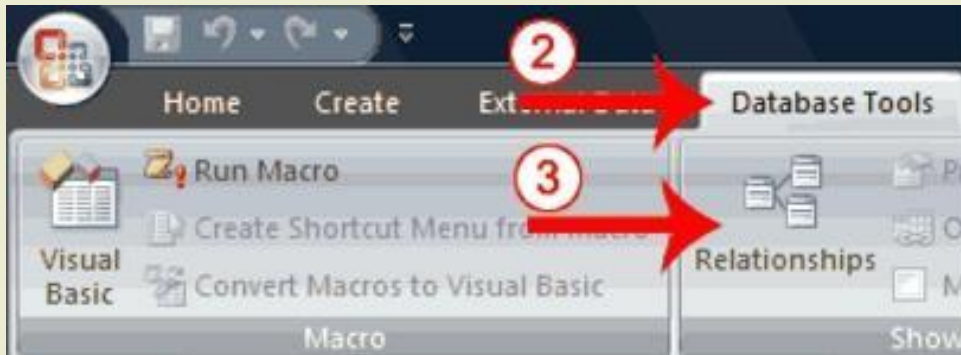
That's all the information the wizard needs to import your data.

Import to Table:
Students

Annotation: (1) points to the 'Students' text in the 'Import to Table' field.

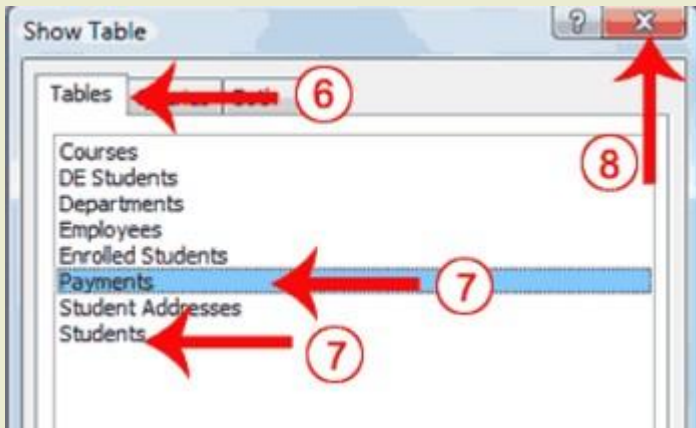
To create relationships:

- 1) Close all tables and forms. (Right-click on the tab of any Object. A menu appears. Click Close All.)



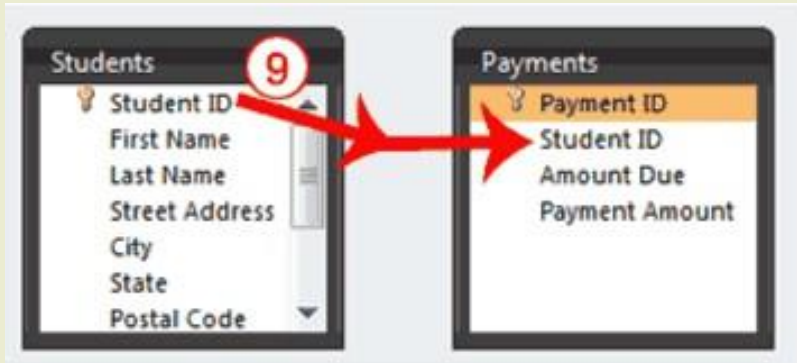
- 2) Activate the Database Tools tab.
- 3) Click the Relationships button in the Show/Hide group. The Relationships window appears.

- 4) If anything appears in the relationships window, click the Clear Layout button in the Tools group. If you are prompted, click Yes.
- 5) Click the Show Table button in the Relationships group. The Show Table dialog box appears.

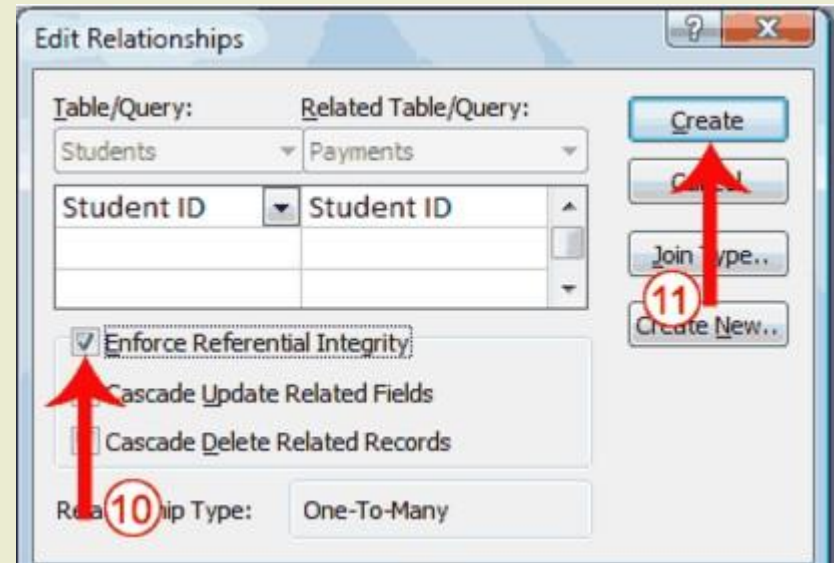


- 6) Activate the Tables tab if your relationships will be based on tables, activate the Queries tab if your relationships will be based on queries, or activate the Both tab if your relationships will be based on both.
- 7) Double-click each table or query you want to use to build a relationship. The tables appear in the Relationships window.
- 8) Click the Close button to close the Show Table dialog box.

- 9) Drag the Primary table's primary key over the related table's foreign key. After you drag the primary key to the related table's box, the cursor changes to an arrow. Make sure the arrow points to the foreign key. The Edit Relationships Dialog box appears.



- 10) Click the Enforce Referential Integrity checkbox.



- 11) Click Create. Access creates a one-to-many relationship between the tables.

