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RDMS – III

M. S. Access Walkthrough



Class 8 & 9

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Starting Access

On the Windows desktop, scrolling to the right reveals the Office 2013 products that you have installed on the machine.

When you start an application, the application opens on the desktop.

If you are using an older version of Windows, such as Windows 7, click the Start button on the taskbar, and then click All Programs | Microsoft Office | Access 2013.

Start Access

1. On the desktop, scroll to the right.
2. Click Access 2013.

TIP:- When working on the desktop, if you point to the lower-left of your screen on the taskbar and click the miniaturized desktop Tile, you will quickly return to the Windows desktop, where you can start other applications.

Creating a desktop database

A desktop database uses tables to hold your data and is stored on your local computer or network. The data is displayed in rows (horizontal layout), with each row including a list of column or field names (vertical layout) like a worksheet. Using database tables differs from using several worksheets in a workbook. Generally, you will find it more natural and beneficial to create additional tables than to create more worksheets. In addition, the rules for data consistency in any column are more strictly enforced in a database, which helps you to improve the quality of the data that you are recording.

Each field in the table can be of a different data type, depending on the data to be held. Storing data in the correct field type is important because you can take advantage of special features in the database—for example, displaying a date picker when working with date data, or validating that sensible data is being entered for the chosen field type, or relating the data in one table to a list of values in another table.

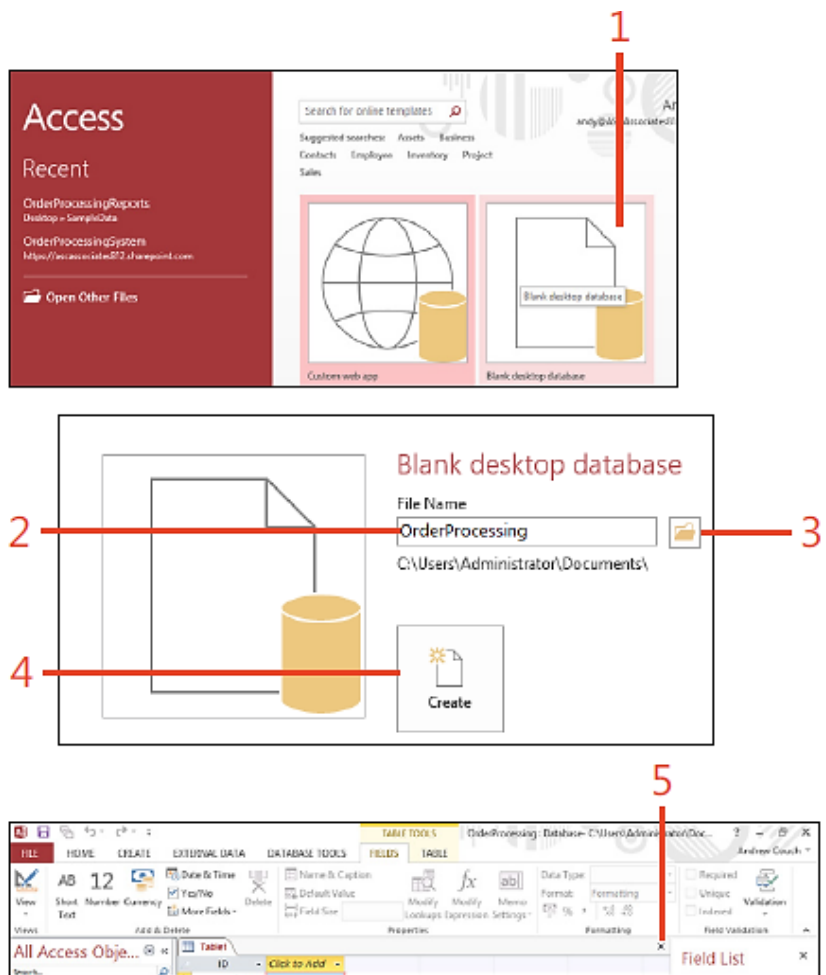
A database normally consists of more than one table, and having the tables correctly related to one another will save you a lot of subsequent work. An invaluable tool in Access is the Lookup Wizard, which can automatically build the required relationships between the tables.

Creating a blank desktop database

After starting Access, you can use one of the available template databases, or you can create a blank database as described in this section. Access offers you the flexibility to use templates of commonly encountered database structures or to start with, an empty database into which you can either import existing data or create a solution tailored to your specific needs.

Create a blank desktop database

1. Click Blank Desktop Database.
2. Type a name for your database.
3. Select a file location in which to save the database.
4. Click Create.
5. When the new blank database opens in layout view (described later in this section), you will see that Access has created a table called Table1. At this point, we can close this table without saving any changes to the new table. Click the Close button to close the table.



TIP: - The templates for a desktop application all begin with the word desktop, and you can scroll down the list of templates to see these. Other templates are for creating a Web App.

The following table lists the available data types when you are adding fields to a table in a desktop database.

Data type	Description
Short Text	Text up to 255 characters. In earlier versions of Access, this data type was called Text.
Long Text	Large amounts of text, up to 65,536 characters. In earlier versions of Access, this data type was called Memo.
Number	Field Size property provides for Byte, Integer, Long Integer (default), Single, Double, Replication ID, Decimal.
Date/Time	Date and Time field.
Currency	Currency field.
AutoNumber	Sequential Automatic Number, Long Integer (default).
Yes/No	True/False (default is False).
OLE Object	Can hold images or other documents.
Hyperlink	Hyperlink to the Internet and local documents.
Attachment	Allows multiple documents to be saved.
Calculated	Calculated field.
Lookup	Creates a foreign key lookup.

Creating a table in design view

Creating tables in design view gives you the greatest control over how the fields and properties are set, but it also involves more work than other techniques. Each field in the table design has a set of properties that you can safely leave at the default values. You can change these properties as you gain a deeper understanding of the product's features.

A fantastic feature of Access is that the design view can always be used to modify an existing table structure, regardless of which technique you use to create the table.

Create a table

1. Click the Create tab.

2. Click Table Design.

3. Type a name in the Field Name column for each field you want—for example, CustomerName.

4. In the Data Type drop-down list, select a data type for each field—for example, Short Text.

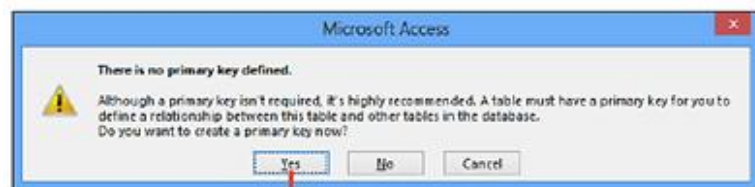
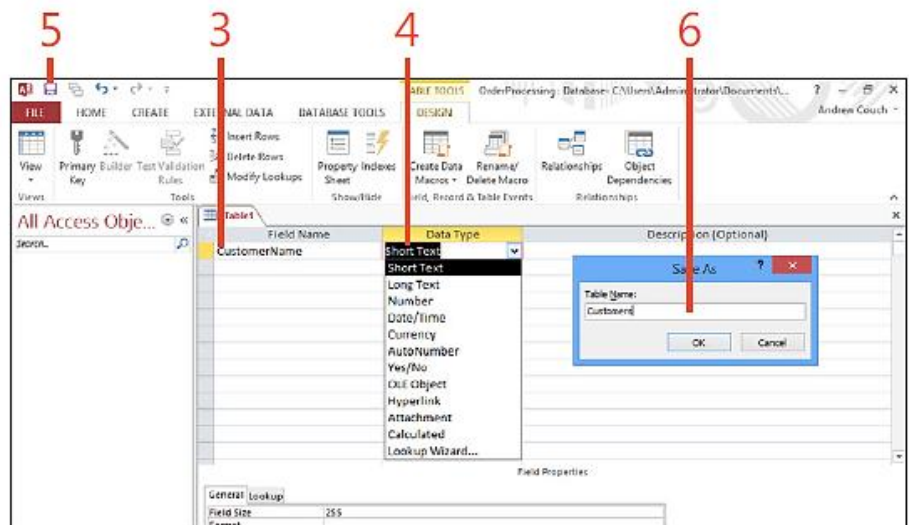
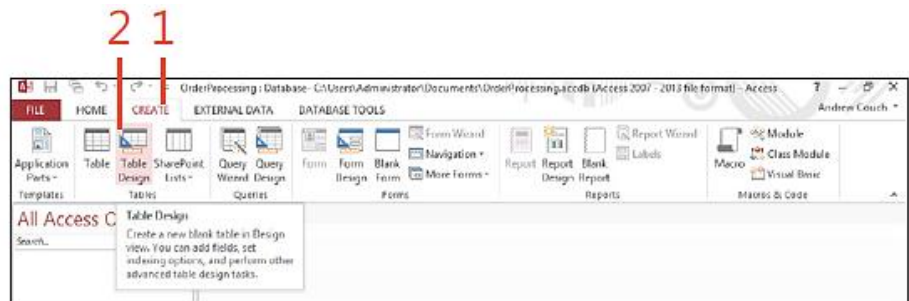
5. Click Save.

6. Provide a name for the table, and click OK.

7. If you have not created a primary key, you will be prompted to add a key. Click Yes to add a primary key.

8 After saving your table, the new ID primary key is added to the table.

9 The table now appears in the navigation pane.



TIP:- Designers sometimes begin table names with a prefix, such as tbl—for example, tblCustomers—to distinguish tables from queries (which are prefixed with qry) when both appear in one list. Having a naming convention is a good idea when you're creating complex databases.

TIP:- Because there are several different choices here for numbers, you might find it easiest to use a Long Integer for whole numbers and use a Double for numbers with decimal places.

TIP:- If you know which field(s) would make a good choice for a unique primary key, select the fields and click the primary key button. A primary key must be unique for each record in the table and cannot be null (blank). You can use more than one field to create a composite primary key, where each field does not contain unique values, but the combination of fields will always be unique.

Creating a table in layout view

Create a table

1. Click the Create tab.

2. Click Table.

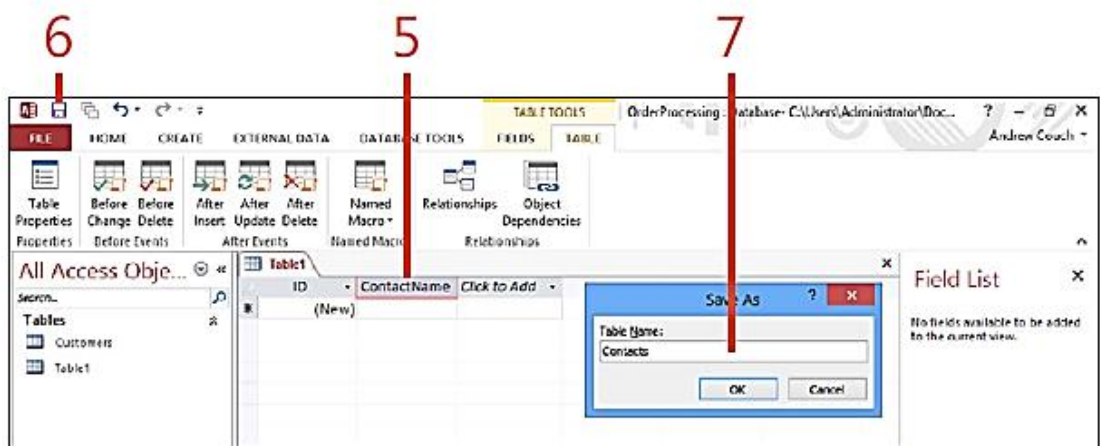
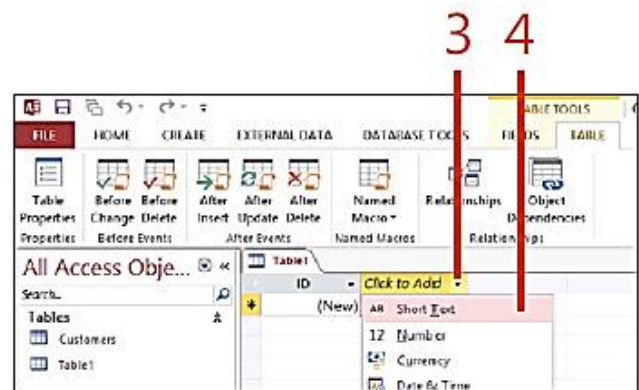
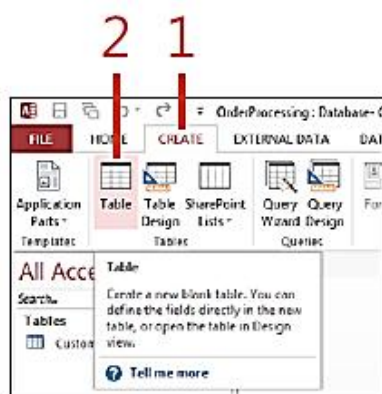
3. Click the Table drop-down list.

4. Select a data type.

5. Replace the default caption Field1 with a name for the field.

6. Click Save.

7. Provide a name for the table, and click OK.



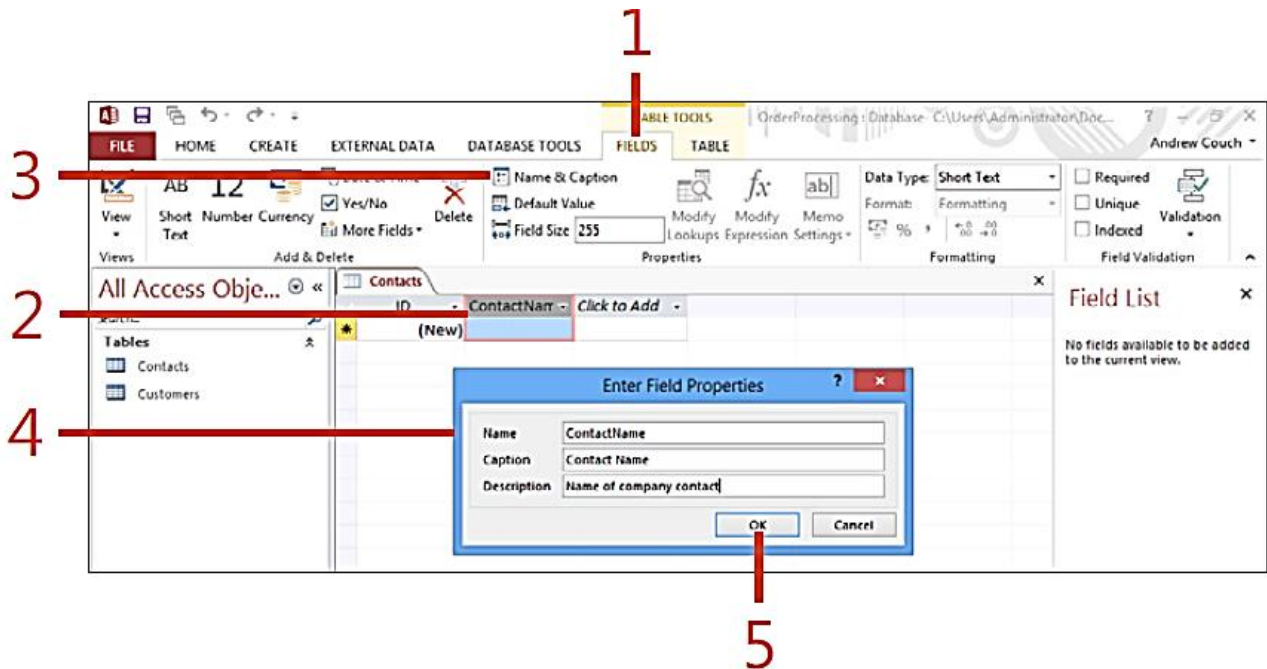
TIP:- At this point, you will find it easier both to close the Field List pane on the right and to switch from the Table Tools tab to the Fields tab, which displays the full set of choices for setting properties on each field.

The layout view in Access can be used for tables, forms, and reports, and it enables you to make design changes without using the more complex design view. You can make changes and, at the same time, see how the design will finally look. In layout view, you have less control over detailed choices, but you have a faster and more intuitive interface through which to interact with the table.

In layout view, Access automatically adds a unique AutoNumber primary key, called ID, to your blank table design. After working in the layout view, you can always switch to the design view to refine your choices.

Change field captions and descriptions (Pre-requisite for Visual Basic)

1. Click the Fields tab.
2. Click the ContactName field.
3. Click Name & Caption.
4. In the Enter Field Properties popup window, change the Caption field to Contact Name, and for the



Description type Name of company contact.

5. Click OK. The title for the column is now displayed with a space via the Caption property, and the description will be displayed on the lower left on the status bar.

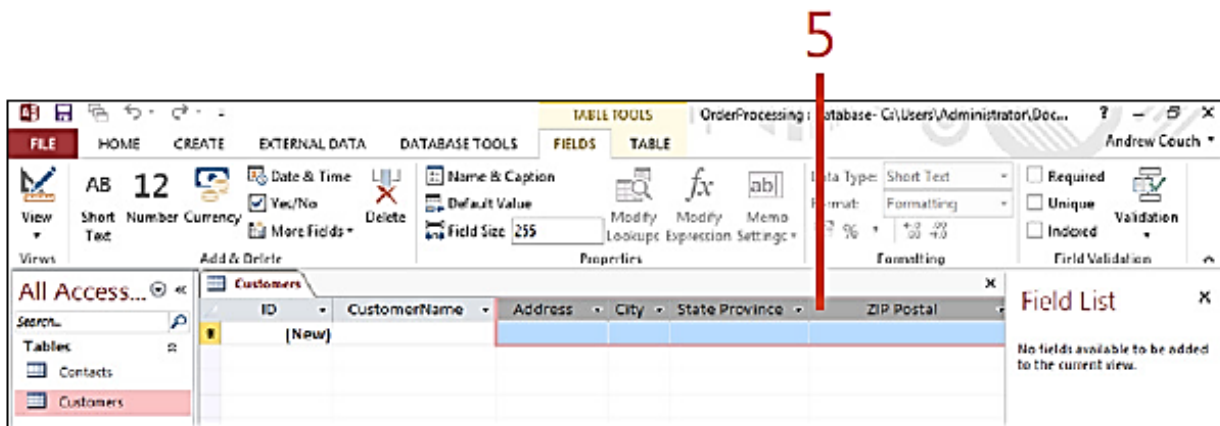
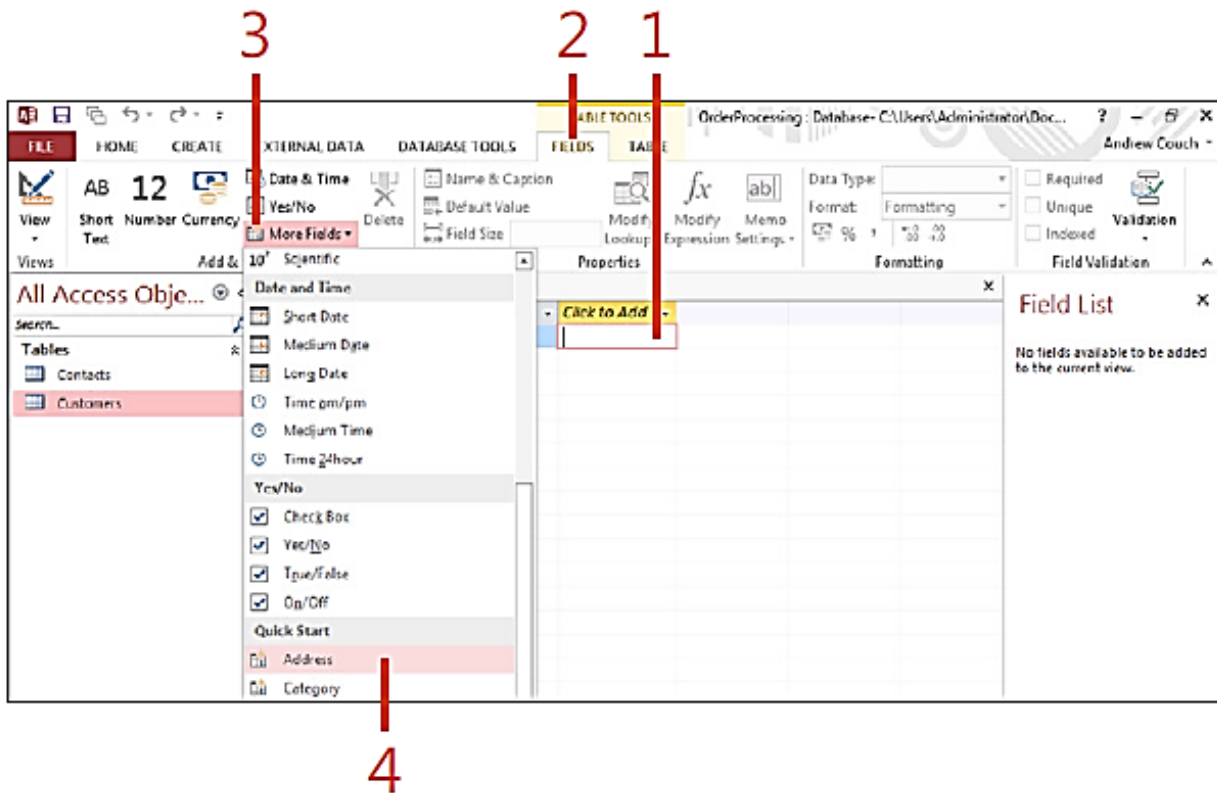
TIP:- One of the most common field data types to add is Short Text. The default field size is 255 characters (shown on the ribbon below Default Value). If you need only 20 characters, reducing the field size can help prevent you from accidentally storing more information than can be displayed—for example, when you have positioned a field on a form or report to be a specific size. Otherwise, do not worry about making it smaller just to save space.

Working with data parts in layout view

Data parts, which are shown in layout view in the More Fields drop-down list, allow you to quickly add one or more fields to a table from a list of prepared fields. For example, adding an Address will add the fields Address, City, StateProvince, ZipPost, and CountryRegion to your table.

You can also select any number of existing fields that you have added to a table, and add them to this list of data parts so that you can easily add those fields to another table.

Add a data part



1. With a table open in layout view (for the Customers table in our example), click the Click To Add box at the right of the datasheet.

The cursor will then be positioned to add the new fields at the end of the datasheet.

2. Click the Fields tab.

3. Click More Fields.

4. Scroll down the list of available fields, and click the Address field.

5. The new fields are automatically added to the design of the table.

Adding a primary key

It is recommended that every table has a primary key. This key enables you to create relationships between tables of data. If you can't easily decide on a key, when you first save a new table Access will

warn you that there is no primary key and will then add one if you agree to having an automatic number for the primary key.

The primary key needs to be unique for every row in the table, and it can consist of one or multiple fields. The primary key must be given a value before the record can be saved, which is another reason why AutoNumber data types (an automatic sequence of numbers) are a popular choice for the primary key.

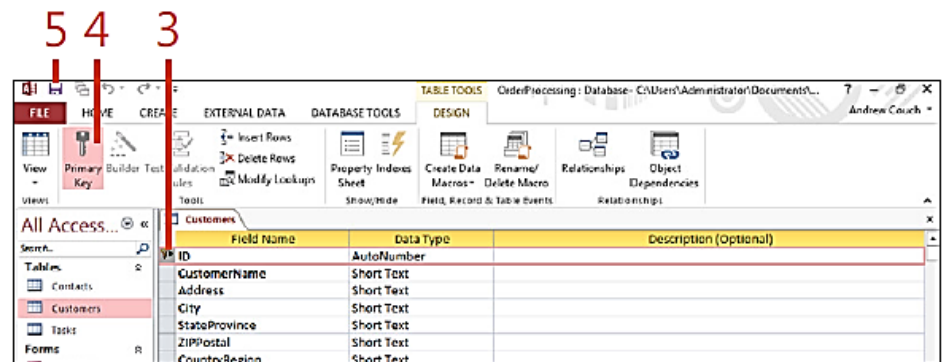
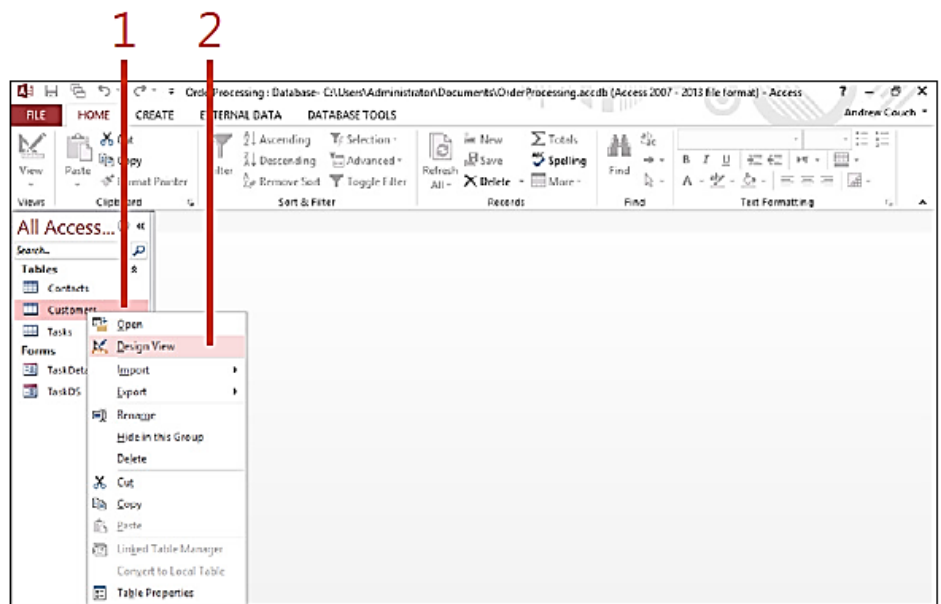
The primary key can be added or changed in both design and layout views.

Define a primary key in design view

1. Right-click the table in the navigation pane.
2. Select Design View.
3. Select one or more fields.
(Use the Ctrl key, and click the field selector to pick multiple fields.)
4. Click Primary Key.
5. Click Save.

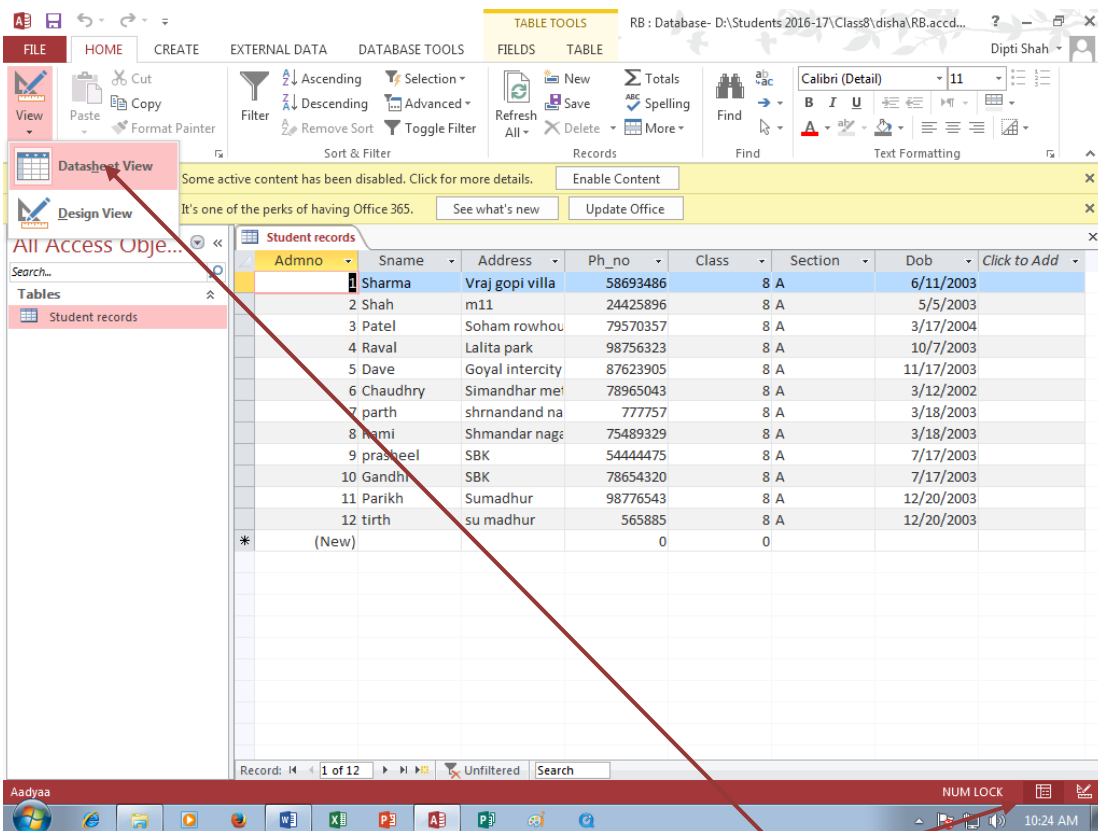
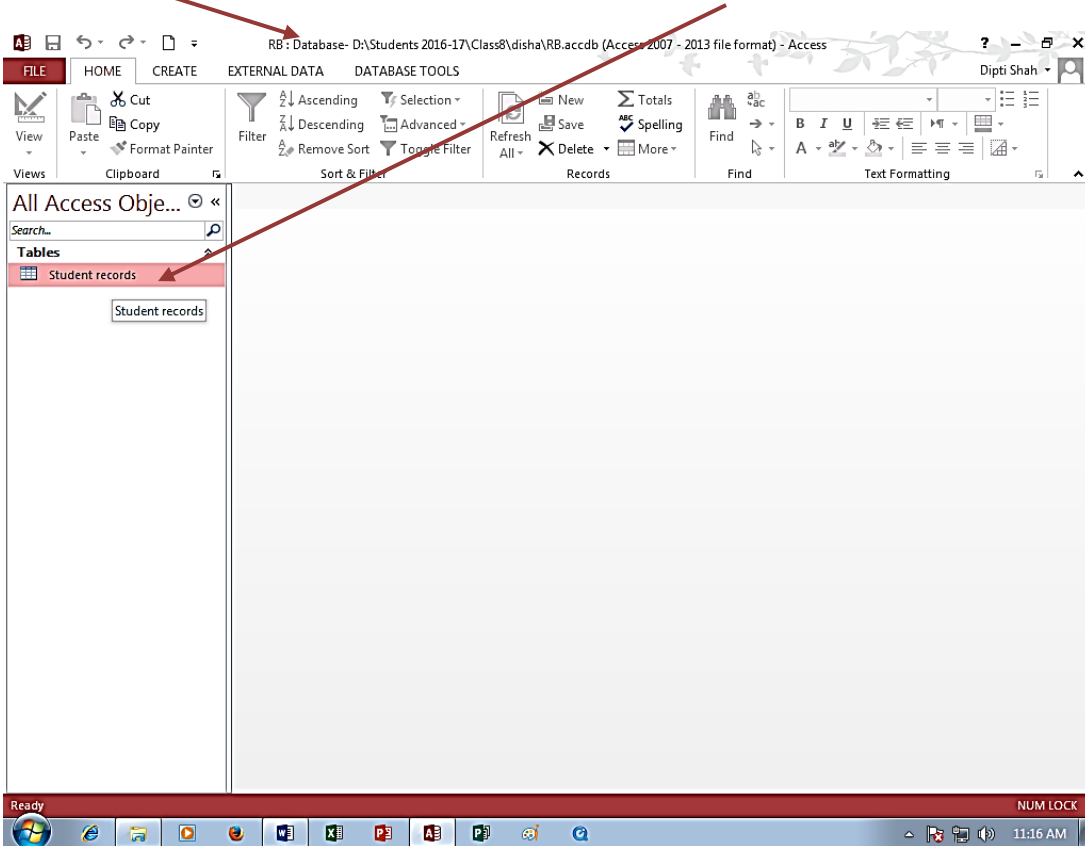
CAUTION To be part of a primary key, each field forming part of the key must be given a value and must not contain NULL (no values). The combination of these fields must also be unique.

TIP Web Apps support only numeric primary keys (normally AutoNumber data types), so this is a good choice if you later want to move your application to a Web App.



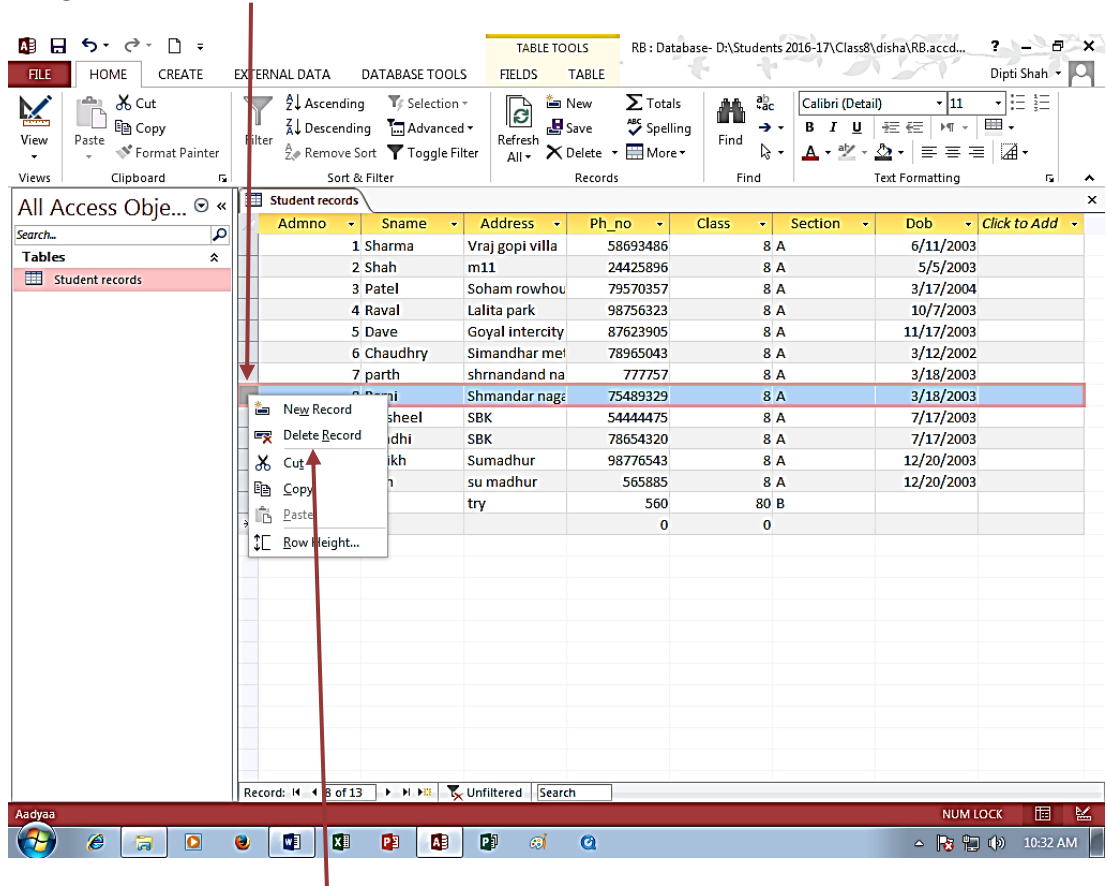
Adding, editing and deleting records

1. Open the Database that has a table to add and double click on table from the list of objects.



2. Switch to datasheet view by selecting View – DataSheet view in order to add, edit or delete records.

2. Right click on the row title of a record to create or delete a record.



3. Select New or delete as per requirement.