Access Lesson
Creating a Database

Objectives

- Create a database.
- Design, create, and save a table in Datasheet view.
- Set a field’s data type and name in Datasheet view.
- Add, delete, rename, and move fields in Design view.

Objectives (continued)

- Change field properties in Design view.
- Set field properties in Design view.

Vocabulary

- alphanumeric data
- AutoNumber
- Blank database template
- data type
- Default Value property
- Description property
- design grid
- Design view
- Field Properties pane
- field property
- Field Size property
- Format property
- primary key
- Required property
- template

Creating a Database

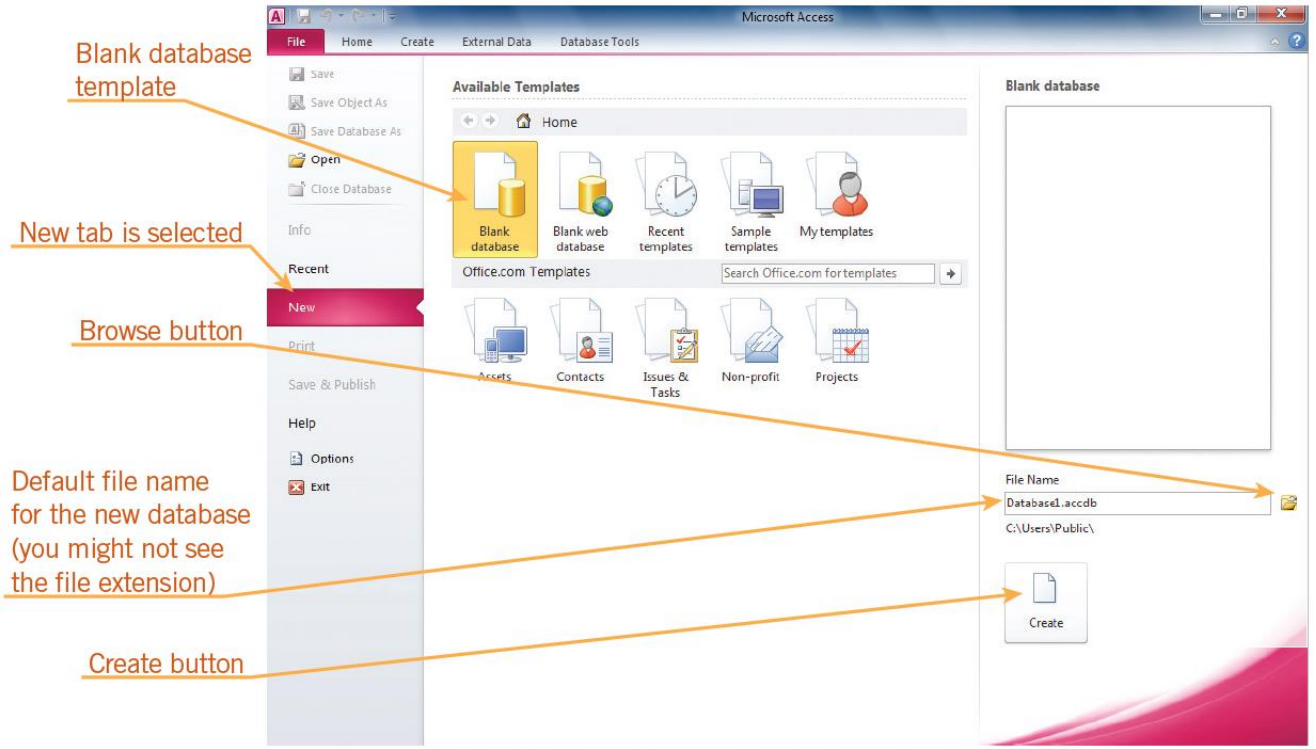
- The first step in creating a database is to create the file that will store the database objects.
- When you use a **template** to create a database, the template creates the database and the objects, which can be queries, reports, tables, or forms.

Creating a Database (continued)

- The **Blank database template** creates a database with an empty table in it.
- After specifying the file name and the location in which to store the database, click the Create button to create and open the new database.
- When you create a blank database, Access opens an empty table in Datasheet view so that you can start entering data.

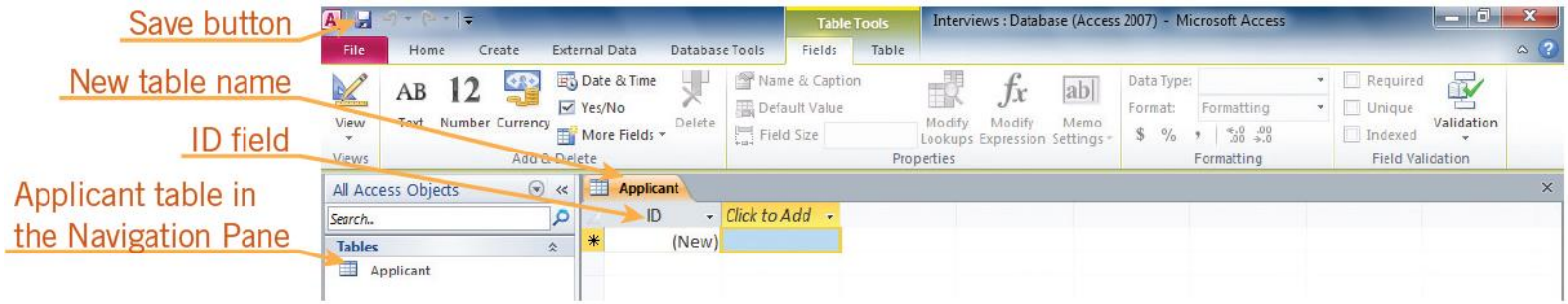
Creating a Database (continued)

- Creating a new, blank database



Creating and Saving a Table

- When you create a blank database, Access creates the first table in the database for you.
- To save a table, click the Save button on the Quick Access Toolbar.
- In many databases, data is stored in more than one table.



Designing a Table

- After creating a table in a database, you need to tell Access which fields to include in the table.
- When you create a blank database, the table that Access creates for you contains one field named ID.
- Access sets the ID field as the table's primary key.

Designing a Table (continued)

- In a table, the **primary key** is the field that contains a unique field value for each record.
- In some tables, this field is called an **AutoNumber** because it automatically adds a unique number to the primary key field for each record in the table.
- Your data might already have a field that stores unique numbers for each record.

Designing a Table (continued)

- A field's **data type** determines the kind of data that you can enter in the field, such as:
  - Numbers or text
  - A combination of numbers and text (also called **alphanumeric data**).

Designing a Table (continued)

- Common data types in Access

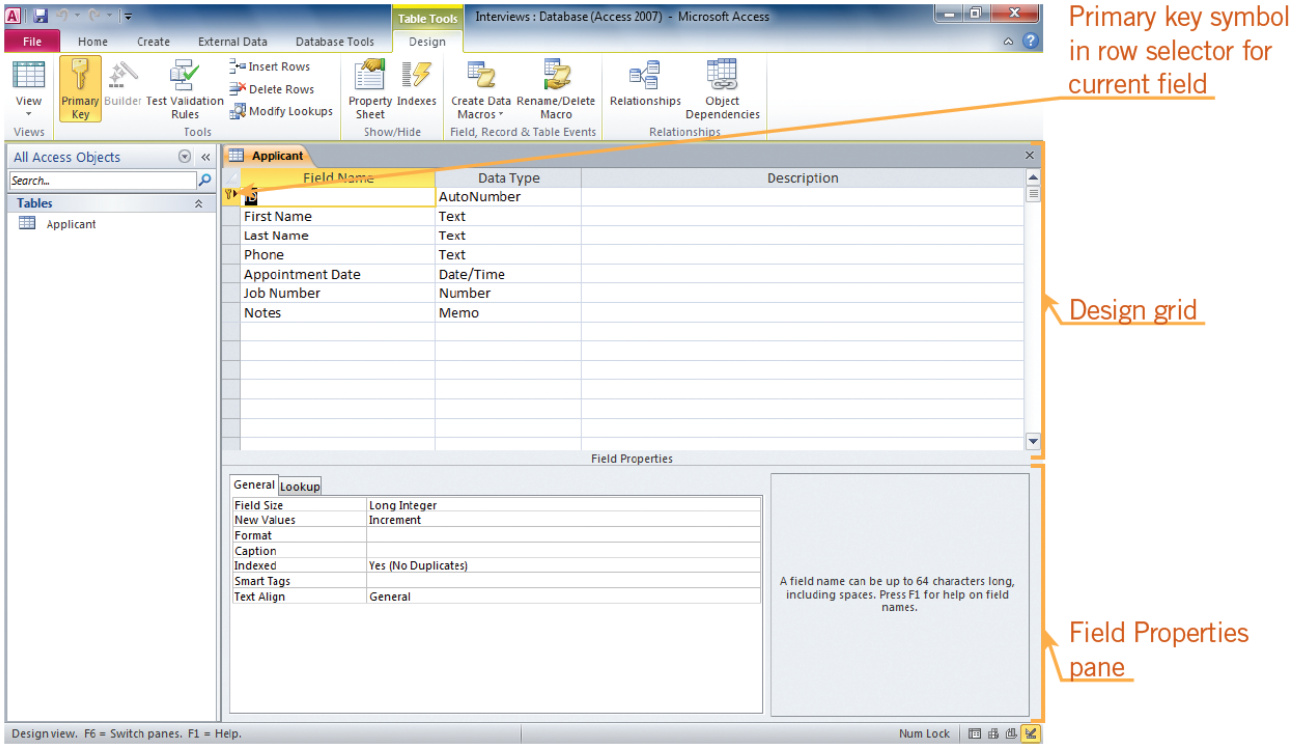
DATA TYPE	DESCRIPTION
Text	Accepts field values containing letters, numbers, spaces, and certain symbols such as an underscore (_). A Text field can store up to 255 characters and is used to store data such as names and addresses.
Number	Stores numbers. Number fields are usually values that will be used in calculations, such as multiplying the cost of an item by the number of items ordered to get a total. Number fields are sometimes used to restrict the entered field values to numbers.
Currency	Accepts monetary values and displays them with a dollar sign and decimal point.
Date/Time	Stores dates, times, or a combination of both.
Yes/No	Stores Yes/No, True/False, or On/Off values.
Lookup	Creates a field that lets you "look up" a value from another table or from a list of values entered by the user.
Memo	Accepts field values containing alphanumeric data, but can store field values containing up to 65,535 characters. Memo fields usually store long passages of text, such as detailed notes about a person or product.
Attachment	Stores graphics, sound, and other types of files as attachments.
Hyperlink	Stores a value that contains a hyperlink. Clicking the value activates the link and opens a Web page or other location, or addresses a message to an e-mail address.
Calculated	Opens the Expression Builder dialog box, which lets you specify fields and operators to use in calculations. The result of the calculation appears as the field's value, and determines the field's actual data type.
AutoNumber	Adds a unique numeric field value to each record in a table. AutoNumber fields are often used for primary key fields.

Working in Design View

- In **Design view**, you can add, delete, and make changes to the way that fields store data.
- The field names and data types appear in the **design grid** in the top half of the Table window. The bottom half of the Table window is called the **Field Properties pane**.
- The properties for a field depend on the field's data type.

Working in Design View (continued)

- Applicant table in Design view



Working in Design View (continued)

- In Design View, you can add and delete fields, and drag fields to new locations.
- Any changes that you make in Design view are automatically updated in Datasheet view when you save the table.
- The **Description property** is an optional field property used to describe what to enter in the field.

Changing Field Properties in Design View

- When you set a field's data type, the field is given certain properties.
- A **field property** describes a field's contents beyond the field's basic data type, such as the number of characters the field can store or the allowable values for a field.
- The **Field Size property** sets the number of characters you can store in a field.

Changing Field Properties in Design View (continued)

- Use the **Format property** to specify how you want Access to display numbers, dates, times, and text.
- The **Default Value property** enters the same field value in a field every time a new record is added to the table.
- The **Required property** specifies whether you must enter a field value in a record.

Summary

In this lesson, you learned:

- Creating a database creates a file that stores database objects. You can create a database using a template that creates one or more table, query, form, and report objects. You can also create a database using the Blank database template, which creates a database with an empty table.
- A field’s data type determines the kind of data that you can enter in the field, such as numbers or text, or a combination of numbers and text (also called alphanumeric data).

Summary (continued)

- You can create a table in Datasheet view by selecting the data type and typing the field name for each field you plan to use in your table. After entering the fields, you can enter the first record. Access also creates an ID field to serve as the table's primary key. The primary key is the field that contains unique field values for each record in the table.

Summary (continued)

- To save a table, click the Save button on the Quick Access Toolbar. Type the table name in the Table Name text box in the Save As dialog box, and then click OK. The table name appears on the tab for the table and also in the Navigation Pane.

Summary (continued)

- When you are working in Design view, you can add new fields to a table by clicking the Insert Rows button in the Tools group on the Design tab. After adding a field, type its name and set its data type. You can delete a field from a table by selecting it in the design grid, and then clicking the Delete Rows button in the Tools group. To rename a field, click its name in the Field Name box, and then type the new name. To move a field, click its row selector in the design grid, and then drag it to the new position.

Summary (continued)

- A field property describes a field's contents beyond the field's basic data type. The properties you can set for a field depend on the field's data type. You can add an optional Description property to identify the data to enter in a field. You can also change the Field Size property to set the number of characters in a Text field or to select the type of numbers to store in a Number field. The Format property lets you specify how to display numbers, dates, times, and text. When a field uses a commonly entered value, you can set the Default Value property to enter that value in new records automatically. Use the Required property when a field must contain a value.