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I. INTRODUCTION

Microsoft Access is a relational database management system for storing, manipulating and reporting information entered by the user. Microsoft Access stores the information contained in a database in rows and columns. Each row is called a record. Each column is representative of a field. Within a record there can be one or more field, e.g., the following information is contained in a single record.

<table>
<thead>
<tr>
<th>NAME</th>
<th>ADDRESS</th>
<th>CITY</th>
<th>STATE</th>
<th>ZIP</th>
<th>PHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Adams</td>
<td>White Plains</td>
<td>NY</td>
<td>10882</td>
<td>422-4578</td>
<td></td>
</tr>
</tbody>
</table>

The example above contains six fields: Name, Address, City, State, Zip and Phone.

II. GETTING STARTED

To get started:

- insert a formatted data disk
- click Start
- click Programs and select Microsoft Access

A. The Mouse Pointer

The mouse is used to perform many functions. The mouse pointer allows a user to move the cursor and select menu options. At times, the mouse pointer is displayed as an arrow or insertion bar.

<table>
<thead>
<tr>
<th>Mouse Activity</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>click</td>
<td>Press and release the left mouse button.</td>
</tr>
<tr>
<td>double-click</td>
<td>Click the left mouse button twice in rapid succession.</td>
</tr>
<tr>
<td>click and drag</td>
<td>Press and hold the left mouse button and move to a specified location, and then release it. Click and drag is one method to select (highlight) text, and then apply an attribute to that text.</td>
</tr>
<tr>
<td>point</td>
<td>Position the mouse pointer on a given item</td>
</tr>
</tbody>
</table>

B. Screen Menu’s and Options

1. Windows Control Buttons

To the right of the Title Bar are the Minimize, Restore, and Close buttons. The Minimize and Restore buttons are used for sizing the document window. Click the Minimize button and the document window "minimizes" in size and display as an icon bar. Click the Restore button on the icon bar and the window "restores" to original size. Minimize and Restore buttons are positioned in dialog boxes. The Close button is also in open dialog boxes. Double-click to close the dialog box.
2. Menu Bar

The Menu Bar is located beneath the Title Bar. Click any Menu Bar item to display a list of options. Options followed by three dots indicate there is a corresponding dialog box with additional options.

3. Toolbars

The Standard Toolbar is located beneath the Menu Bar and displays icons of frequently used editing features. The Formatting Toolbar is located beneath the Standard Toolbar and displays icons of frequently used formatting commands. When pointing to a Standard or Formatting Toolbar Button, the button name displays in a small box known as a Tool Tip.

4. Status Bar

The Status Bar is located at the bottom of the screen and displays the current page number, section number, total number of pages in the document, the vertical position (in inches) of the insertion point, line position, and column position.

5. Scroll Bars

The Vertical Scroll Bar is positioned to the right of the screen and the Horizontal Scroll Bar above the Status Bar. These bars allow vertical and horizontal movement throughout the document, which is done by clicking the arrows contained within the bars or click and drag the scroll boxes.

C. Using Help

The online help system provides information and instructions on Access features and commands.

1. Invoking Help:
   • click Help from Menu Bar

Available Help options are:

<table>
<thead>
<tr>
<th>Option</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Access Help</td>
<td>Displays an index of help topics.</td>
</tr>
<tr>
<td>Contents and Index</td>
<td>Displays help topic categories, and an alphabetical listing.</td>
</tr>
<tr>
<td>What's This</td>
<td>Allows a user to point anywhere on screen to get information.</td>
</tr>
<tr>
<td>Microsoft on the Web</td>
<td>Connects to listed websites.</td>
</tr>
<tr>
<td>About Microsoft Access</td>
<td>Contains information about the current version of Access.</td>
</tr>
</tbody>
</table>

2. Office Assistant

The Office Assistant is an animated character that appears on the screen to offer help. Type in a question and click the Search Button. The Office Assistant responds with a list of options. If a "lightbulb" displays beside the Office Assistant, click to view a tip about the current action.
To invoke Office Assistant:

- click Help
- click Show The Office Assistant
- click
- type topic and click Search

To exit:

- right-click
- click Hide

### III. WORKING IN ACCESS

#### A. To Open and Begin Access

- click Start
- click Programs and select Microsoft Access

#### 1. Explanation of Databases

<table>
<thead>
<tr>
<th>Database Types</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank Database</td>
<td>This function allows the user to create and design a new database without the step-by-step aid of the wizard function.</td>
</tr>
<tr>
<td>Database Wizard</td>
<td>Prompts the users via a series of dialog boxes to select and fill in specific information that allows the Wizard to design the structure of the database for the users.</td>
</tr>
<tr>
<td>Open Existing Database</td>
<td>Allows a user to open and make changes to an existing database, which already resides on either diskette or hard drive.</td>
</tr>
</tbody>
</table>
2. Creating a Database Using Database Wizard

To begin:

- select Access database wizards, pages, and projects
- click OK
- click General
- double-click Database

In the filename box:

- select Save In Location (e.g. 3½ Floppy (A:))
- type Database Name
- click Create

3. Database Objects

Microsoft Access contains six types of database objects:

<table>
<thead>
<tr>
<th>Object</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tables</td>
<td>Stores data.</td>
</tr>
<tr>
<td>Queries</td>
<td>Gathers data from one or more tables. It is viewed/edited in a form or report.</td>
</tr>
<tr>
<td>Forms</td>
<td>Displays data from tables or queries to view, edit or enter data.</td>
</tr>
<tr>
<td>Reports</td>
<td>Summarizes and presents data from tables and queries to print it or analyze it.</td>
</tr>
<tr>
<td>Macros</td>
<td>Automates database by performing actions that specify without programming.</td>
</tr>
<tr>
<td>Pages</td>
<td>A data access page is a special type of web page designed for viewing and working with data from an Internet or intranet.</td>
</tr>
<tr>
<td>Modules</td>
<td>Stores access basic code to customize, enhance and extend the database.</td>
</tr>
</tbody>
</table>
B. Creating and Using Tables

1. Creating Tables Using Table Wizard

To create a table:

- click Tables
- click New
- click Table Wizard
- click OK

![Table Wizard](image)

2. Modifying a Table Design

When using the Wizard to create a table, it is possible to select pre-set templates or samples for the table design. It is also possible to include in the table, sample fields suggested by the Wizard. Modifying a Table Design allows the adding, deleting, and renaming of fields. Modifying a Table Design also allows the setting of fields or table properties that limit the kinds of data that can be stored in the table. Indexes are created to speed up data searches.

a. Adding Sample Fields

To add a sample field:

- select Sample Table
- select Sample Field by clicking
- to select all Sample Fields click

![Sample Field Selection](image)
b. Renaming a Field

To rename a field:

- click **Field Name** to be changed in Fields in my new table box
- click **Rename Field**

The Rename Dialog Box prompts the user to enter in a new field name for the entry.

- type **new field name**
- click **OK**

c. Removing a Field Name

To remove a field name:

- select **field name**
- click **<**
- click **Next** when finished with making changes to table design

d. Naming the Table

- type **Tablename**
- click **Yes** option to select primary key
- click **Next**
- click **Finish** to allow Wizard to import and create table

Note: By selecting a primary key, Access creates an index that allows more expedient searches and links.
3. Inputing Records

a. Entering Data
   - Click once in a Field
   - Type text of choice

Example:

<table>
<thead>
<tr>
<th>Rolling ListID</th>
<th>Last Name</th>
<th>First Name</th>
<th>Address</th>
<th>City</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Moore</td>
<td>Deni</td>
<td>15 Oak St</td>
<td>Orange</td>
<td>FL</td>
</tr>
<tr>
<td>2</td>
<td>Wayne</td>
<td>John</td>
<td>36 West St</td>
<td>Range</td>
<td>TX</td>
</tr>
<tr>
<td>3</td>
<td>Simpson</td>
<td>Homer</td>
<td>5 Spring Field</td>
<td>Fac</td>
<td>CA</td>
</tr>
<tr>
<td>4</td>
<td>Pitt</td>
<td>Brad</td>
<td>25 Oak St</td>
<td>Orange</td>
<td>FL</td>
</tr>
<tr>
<td>5</td>
<td>Smith</td>
<td>Will</td>
<td>78 Hollywood</td>
<td>Bel-Air</td>
<td>CA</td>
</tr>
</tbody>
</table>

b. Saving Changes to the Table
   - Click

c. Closing a Table
   - Click inside the table

C. Creating Queries

A query is a question represented in a way that Access can understand.

In the database dialog box:

- Click Queries
- Click New

1. Creating a Query Using Query Wizard

There are five query types.

<table>
<thead>
<tr>
<th>Query Type</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design View</td>
<td>Creates a new query without using the wizard.</td>
</tr>
<tr>
<td>Simple Query Wizard</td>
<td>Creates a query from fields that are picked.</td>
</tr>
<tr>
<td>Crosstab Query Wizard</td>
<td>Creates a query to display in a spreadsheet-like format.</td>
</tr>
<tr>
<td>Find Duplicate Query Wizard</td>
<td>This Wizard creates a query that finds records with duplicate field values in a single table or query.</td>
</tr>
<tr>
<td>Find Unmatched Query Wizard</td>
<td>This Wizard creates a query that finds records (rows) in one table that have no related records in another table.</td>
</tr>
</tbody>
</table>
2. Adding Fields to a Query

To add a field:

- click Queries
- click New
- select Simple Query Wizard
- click OK

The Simple Query Wizard dialog box appears.

To create a New Query, select Table/Queries:

- select Table
- select Available Fields by clicking
- to select all Available Fields click
- click Next

3. Modifying the Query Design

The next dialog box appears.

- type Queryname in What title do you want for your query?
- select Modify the query design
- click Finish
The design view screen appears:

Under any of the fields:

- click **Sort** field
- click and select **Sort Type** (Ascending or Decending)

Under another field:

- click **Criteria**: field
- type **Criteria**
- click **Or**: field
- type **Criteria**

Note: A criteria is anything that narrows down data to help specify a search for particular information.

4. **Running a Query**

After modifying the query design, run the query in order to obtain a specified criteria result.

To run a query:

- click !

5. **Editing a Query**

In Microsoft Access, Expressions are frequently used. An Expression is any combination of operators, constants, literal values, functions, and names of fields (columns), controls, and properties that evaluates to a single value. Expressions can be used as settings for many properties and action arguments; to define calculated controls in forms, reports, and data access pages; to set criteria).

Two common Access wildcard expressions are:

<table>
<thead>
<tr>
<th>Expression</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asterisk (*)</td>
<td>Any collection of characters. The query results include fields that are added to the table or query after creation and exclude deleted fields.</td>
</tr>
<tr>
<td>Question Mark (?)</td>
<td>Represents any individual character.</td>
</tr>
</tbody>
</table>
To edit a Query the Design View must be selected.

To return to Query Design View:

- click
- select a Field and delete current criteria
- type *Letter* or *Word* followed by *

Note: Where Letter or Word is replaced with new criteria.

- click

a. Query Examples

When a table has fields entitled Lastname, Firstname, Birthday and State, a query to find the individuals whose lastname begins with the letter “S” is done using a wildcard (*).

To accomplished this:

- select **Criteria** in **Lastname** field
- type *Letter* followed by * ( e.g. S* )
- click

To find individuals whose Lastname begins with “S”, and are born between the birth years 1950-1970 and live in the state of California.

To accomplish this:

- select **Criteria** in **Lastname** field
- type *Letter* followed by * ( e.g., S* )
- click **Criteria** field under **Birthday**
- type >=1950<=1970
- click **Criteria** field under **State**
- type CA
- click

6. Closing and Saving Changes to a Query

- click to save
- click to Close

D. Creating Forms

To see a single record at a time, but not all the fields in that record, use Form View. The three main purposes of a Form in a database are to view data, edit data, and to enter new data.
1. Using the Form Wizard

To use Form view, a form must be created first.

From the Database dialog box:

- click \[\text{Forms}\]
- click \[\text{New}\]

The New Form dialog box appears.

Microsoft Access 2000 offers seven different ways to create a form:

<table>
<thead>
<tr>
<th>Form Type</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design View</td>
<td>Creates a new form without using the wizard.</td>
</tr>
<tr>
<td>Form Wizard</td>
<td>Uses the Wizard to create a form based on fields you selected.</td>
</tr>
<tr>
<td>AutoForm: Columnar</td>
<td>Uses the Wizard to automatically create a columnar form.</td>
</tr>
<tr>
<td>AutoForm: Tabular</td>
<td>Uses the Wizard to automatically create a tabular form.</td>
</tr>
<tr>
<td>AutoForm: Datasheet</td>
<td>Uses the Wizard to automatically create a datasheet form.</td>
</tr>
<tr>
<td>Chart Wizard</td>
<td>Uses the Wizard to automatically creates a form with a chart.</td>
</tr>
<tr>
<td>PivotTable Wizard</td>
<td>Uses the Wizard to automatically creates a form with a chart.</td>
</tr>
</tbody>
</table>

2. Adding Fields to Form

- select Form Wizard
- select Table / Query
- click \[\rightarrow\] to select available fields
- click Next

a. Selecting a Layout

Select a layout type.
b. Selecting a Style

From the Style Option list below:

- select Style
- click Next
- type formname

Note: Where formname is the name given to form.

There are two Radio buttons. The first gives the option to open the form to view or enter information. The second one allows the user to modify the form’s design.

- select Radio button
- click Finish

The information appears:

E. Creating Reports

Creating a report in Access, is like creating a view of tables and queries that allows a user to edit certain aspects that were not allowed to be edited in the database design mode.

From the database dialog box:

- select Reports
- click New
- select Report Wizard
- click OK

a. Selecting Fields for the Report

- choose a Table / Query
- click \( \rightarrow \) to select available fields
- click Next

b. Adding Grouping Levels to the Report

Grouping Levels allow a user to decide how to group the data. It gives the user the opportunity to display the fields in different orders. By grouping the data, the user is telling Access which fields to display, as well as how to summarize the data.

The Report Wizard dialog box appears.

![Report Wizard dialog box]

To add grouping levels:

- select Grouping Level
- click \( \rightarrow \)
- click Next

Note: Click Priority arrow pointing up, and the Firstname moves to the top of the page, and Lastname is moved to Firstname’s original position.
c. Creating a Sort Order for Records

Sorting allows a user to place data in a specific order in the report.

To sort records:

- select Sort Order
- click Next

d. Selecting a Layout for the Report

The next dialog box appears.

- select Layout
- click Next

e. Selecting a Style for the Report

The Select Style dialog box appears.

- select Style
- click Next

In the final dialog box, name the report.

There are Radio buttons with options to either Preview the report or Modify the report’s design.

- select a Radio button and click Finish
Microsoft Access 2000 generates the report.

f. Printing the Report

- click File and select **Print**
- click OK

IV. Closing and Exiting Microsoft Access

A. Closing a Microsoft Access

- click File
- click Close
- if prompted to save changes click Yes

B. Exiting Microsoft Access 2000

- click File
- click Exit