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## **Microsoft® Access®**

Microsoft Access is a powerful data management tool that gives the user the powerful solutions to handle the creation, manipulation and analysis of data. And the best part is, you need not be a database guru or programmer to take advantage of the many data management tools and solutions this program has to offer. At the heart of this system is the data query engine that helps users efficiently extract, manipulate data and analyze their data. You will find out how to design professional looking Access forms to simplify data entry and make data enquiries more powerful and with the use of Access reports you will be able to communicate information more effectively. You will also be introduced to the concept of database automation with the use of macros and command buttons. Learn how to build databases to store and retrieve your data more efficiently.

**The modules for Access are as follows:**

- [Module 1 – Database Creation and Management](#)
- [Module 2 – Queries and Formulas](#)
- [Module 3 – Forms, Reports and Navigation](#)

### **To Schedule / Need Additional Information**

To schedule sessions, receive more information or for questions/clarifications contact us at:

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**Phone:** (630) 495-0505 or (800) 869-7497.

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## Module 1 – Database Creation and Management

### Create Databases:

- Learn how to build databases to store and retrieve your data more efficiently.
- Overview of what goes in to creating a successful database application.
- Learn the roles that tables, queries, forms and reports play in a relational database.
- Learn where to find and how load a pre-made database template to save development time.
- Learn how to create a database from scratch starting with creating the database file by naming it and picking a location to store it at.
- Learn about database maintenance issues that need to be addressed on a regular basis including compacting and repairing.
- Splitting a database into back and front ends.
- Learn about making a backup copy of your database.

### Create Tables:

- Understand the elements that comprise a table including fields, data types and properties.
- Learn how to create new data tables by importing data from Excel workbooks, Outlook contact lists, ASCII data files and more.
- Link instead to these same outside data sources where data updates automatically when the outside data source changes.
- Learn to create a table from an existing Access database table as a link.
- Understand how fields relate to records.
- Create a table by defining the fields directly or by using the table design view.
- Use Table Design View to create fields with their correct field types.
- Understand the proper naming convention when naming your fields.
- Learn how to determine the data type (what type of data is being stored) in each of the table's fields including text, numeric, date, yes/no, graphical and many others.
- Add fields that can house multiple file attachments.
- Create fields that can contain calculations (calculated fields).

### Data Procurement:

- Learn how to add data records to a table using the direct and indirect method.
- Quickly edit and delete records.
- Duplicate a record to salvage most of the information for a new record.
- Create a quick form to enter, remove, duplicate and modify records.
- Know how to import records from other tables within your current database or from other Access database tables.
- Learn how to run the search and replace tool to quickly find and quickly replace existing data.
- Use the spell checker to find and fix obvious and not-so-obvious spelling errors and typos.
- See how to export data into a variety of data sources including Excel.
- Insert function formulas at the bottom of any column (field) including sum, average, count, maximum, minimum, standard deviation and variance.

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**Finding and Format:**

- Learn the different ways to view your data within a datasheet.
- Apply text formatting to the entire table.
- Add alternate row coloring (banding) to the table.
- Modify the horizontal and vertical bordering styles of the datasheet.
- Learn to quickly scroll from where records begin and where they end.
- Lock certain field columns in place while scrolling horizontally.
- Use the find feature to locate/jump to certain fields (columns) and records (rows).

**Sorting and Filtering:**

- Sort table data by one or more field separately and simultaneously.
- Sort by date, text, numeric and more.
- Filter your data to list only those records that fit one or more criteria.
- Filter by selection where what is selected becomes the criteria you're basing the filtering on.
- Use the advanced sort tool to filter using a fill-in form or table-like form.
- Learn how to export filtered/sorted tables data to an outside data source like Excel or ASCII.
- Export to Microsoft Outlook contact list.

**Table Relationships:**

- Understand the role that setting relationships between tables plays in the querying process.
- See which fields need to be set with the primary key.
- Learn how setting certain fields in your tables as primary keys helps in creating successful relationships.
- Understand that queries will not produce accurate results unless the relationships between all of your tables are properly set.
- See how to set up relationships between tables.
- Learn how to initially link one table with another or with many.
- Learn how to set relationship types as one-to-one, one-to-many and many-to-many.
- Know when to apply "enforce referential integrity", "cascade update related fields" and "cascade deleted fields" to relationships.
- Know when to change the join properties of certain relationships by using inner-joins and outer-joins.

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## Module 2 – Queries and Formulas

### Create Queries:

- Understand how to find and translate complex raw data into information you can use to make better decisions.
- Learn how queries allow you to focus on desired data by finding records in tables based on single and multiple criteria.
- Understand the language and syntax for defining query criteria.
- Learn how to use comparison and wildcards in your queries.
- Find records in tables based on single and multiple criteria.
- Create single-table queries using the query wizard or the query design tool.
- Understand which fields to bring in as fields in your query.
- Specify which field or fields to sort the query result by.
- Learn how to set criteria for fields involving text, numbers, dates and more.
- Learn how to swap out one field with another.
- Duplicate and modify queries to quickly create new queries from.
- Create multiple-tables queries from 2 or more tables using the equi-join concept.
- Learn how to insert or choose the multiple tables involved.
- Know how to modify the link or relationship between the multiple tables if necessary.
- Know how to swap out one field with another.
- Know how to swap out one table/field with another.
- Specify which field or fields to sort the query result by.
- Learn how to set criteria for fields involving text, numbers, dates and more.
- Learn how to swap out one field with another.
- Duplicate and modify queries to quickly create new queries from.
- Learn how to base a report off a query.
- Create multiple-field queries where criteria need to be met on each field that has a query.
- Create single-field, multiple-criteria queries where all criteria are considered.
- Use the SQL view to edit queries.

### Query Calculations:

- Create new fields in queries called calculated fields (calculated expressions).
- Use formulas and function formulas to create these useful fields.
- Create calculated fields using simple math operands including addition, subtraction, multiplication and division along with parenthesis and the like.
- Use function formulas including string, numeric, math, date/time, logical, information, aggregate, data conversion, group by and file/directory.
- Use the totals feature to summarize data and aggregate records with totals.
- Use the top-values return tool to make the query display only the top/bottom number or percentage of items from the original query results.

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**Other Queries:**

- Use the query wizard tool to create powerful action queries including crosstab queries, find duplicates query and find unmatched queries.
- Create a crosstab query to analyze totals/summaries.
- Create queries that update large and small amounts of records based on criteria of one or more fields.
- Delete records based on the criteria of one or more fields.
- Create a query that takes the resulting records and copies them (appends) into a different table.
- Create a query called union that combines multiple tables of data into a new table using SQL view.
- Create queries that create new tables from the query result.
- Create nested queries or queries based on other queries results.
- Create distinct lists using subqueries or “nested queries” to show how many records are associated (linked) with each list item.
- Create interactive query parameters.

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## Module 3 – Forms, Reports and Navigation

### Forms:

- Design forms to accurately show data from one or more tables or queries.
- Learn how to create forms that make it easier to add, edit and display data that is stored in your database tables and displayed in queries.
- Learn how to create forms from scratch or use the forms wizard to create one in a snap.
- Create split forms, multiple-record display forms and sub-form forms.
- Learn the advantages of editing your form in layout view versus design view.
- Add existing fields from the table that the form is based upon.
- Add additional controls like text boxes, labels, lines, rectangles, radio buttons, combo boxes (pull-down lists), list boxes, hyperlinks, tab controls, buttons (macro), check boxes, images and sub-forms.
- Use concatenation to bring together strings and expressions.
- Insert standard and custom expressions and calculations.
- Correctly design Sub forms to show the “many” side of a one-to-many relationship.
- Insert tab controls to have a layered, tabbed area to house any kind of item.
- Start Access and display your own form instead of the Database Window.
- Add logos and titles as well as date and time.
- Modify and re-arrange forms by moving items up and down, left and right.
- Insert additional rows and columns as well as split and merge.
- Position items by applying margins, padding and anchoring.
- Change the overall layout of the form by switching to either stacked or tabular.
- Use the gridlines tool to emphasize vertical, horizontal and other positions.
- Use the format tools to change the font, numbers, backgrounds and fills.
- Apply conditional formatting rules to highlight key points of your data.

### Charts:

- Learn how to create graphs based on data in your database tables and queries.
- Learn how adding graphs as a “picture” of your data makes it easier to analyze.
- Learn how to create graphs on a form that allows you to see the data better than from reading it from data.
- Create a wide range of graph types including column, bar, line, area and pie.
- Create advanced pivot charts as well.

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**Reports:**

- Design reports to print out and organize record data from tables or queries.
- Learn how to use reports to pull insights from data that you normally would not see.
- Learn how to create reports from scratch or use the report wizard to create one in a snap.
- Learn the advantages of editing your form in layout view versus design view.
- Add existing fields from the table or query that the report is based upon.
- Learn how to use reports to create efficient and readable layouts by grouping record data into categories.
- Change how the report groups and sorts the data.
- Use concatenation to bring together strings and expressions.
- Learn how to use forms and reports in generating form letters and optional envelopes and labels.
- Learn to troubleshoot the causes of printouts not being what you expected.
- Learn how to export your report data into worksheets and documents.
- Give your report a professional look using the tools contained in the layout tools including design, arrange, format and page setup.
- Add existing fields from the table that the report is based upon.
- Add additional controls like text boxes, labels, combo boxes (pull-down lists), list boxes, hyperlinks, page breaks, tab controls, buttons (macro), check boxes, images, lines, rectangles, radio buttons, and sub-reports.
- Add logos, titles, date and time and page numbers.
- Learn to rearrange fields and other items and objects.
- Add group totals in a variety of formats.
- Modify and re-arrange reports by moving items up and down, left and right.
- Insert additional rows and columns as well as split and merge.
- Position items by applying margins, padding and anchoring.
- Change the overall layout of the form by switching to either stacked or tabular.
- Use the gridlines tool to emphasize vertical, horizontal and other positions.
- Use the format tools to change the font, numbers, backgrounds and fills.
- Modify the page setup options including margins, paper size and orientation.
- Apply conditional formatting rules to highlight key points of your data.

**Switch Menu:**

- Learn how the switchboard menu/navigation system can help users locate tasks including reports, forms, queries and more.
- Understand how the switchboard allows users to navigate around the database.
- Learn how to design and create a switchboard.
- Add items and various menuing levels and edit what each choice reads and looks like.
- Learn how to have the switchboard automatically display upon database startup.
- Learn how to delete a switchboard or switchboard item.
- Format the switchboard with color and borders.
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