Department of Computer Science University of Cyprus



EPL342 – Databases

Lab 1 Introduction to MS Access

EPL342: Databases – (University of Cyprus)



- What is Microsoft Access?
 - Microsoft Access or "Access" is part of the Microsoft Office Suite since Office 95.
 - Beyond being a basic DBMS, Access is a way to develop application software in any Microsoft environment.
 - Its most common use is for creating an application without having to involve a developer.





- Some advantages:
 - Access has a powerful, easy-to-use interface.
 - It doesn't require a comprehensive understanding of SQL or other programming languages to get started.
 - Integration with the entire Microsoft ecosystem: Excel, Word, PowerPoint, Outlook, ActiveX Controls, .NET
 - Integration with other non-Microsoft sytems and languages: Oracle, Sybase, Java, etc.



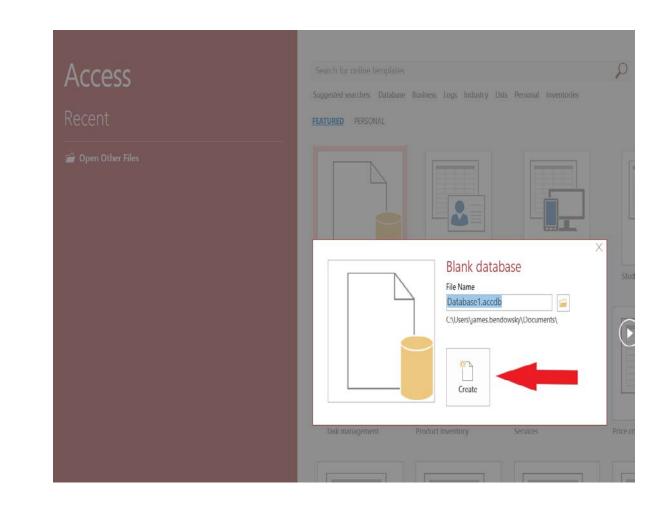
- Some limitations:
 - Access is not designed to support an enterprise application such as ERP/CRM system or web server.
 - If not designed and/or documented well, it can become obsolete and a silo of business data and logic.
 - Though it supports 2 GB of data and 255 concurrent users, it performs best with databases with 1 GB of data or less and max 100 concurrent users. 1 GB of data is about 250 books.



- **Start** Access. You will be presented with the choice to create a blank database or open a template created by Microsoft.
- Note: Templates are helpful when you need to create a new application but do not want to start from a completely blank database.
- Click "Blank database"

Click "Create"

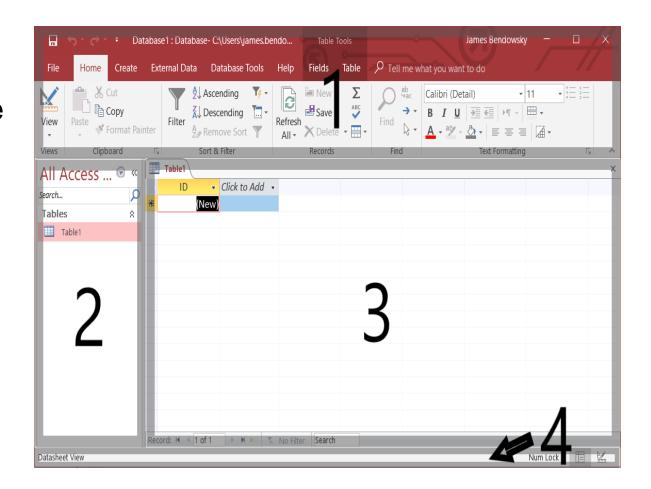




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- Next, we will discuss the 4 "frames" of the application and their functions:
 - 1. Menu (& Ribbon)
 - 2. Navigation Pane
 - 3. Workspace
 - 4. Status Bar (& Views)



The Menu

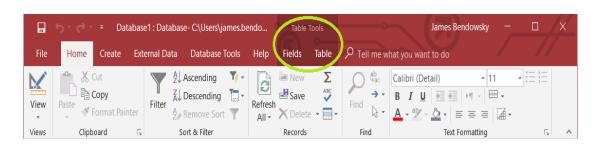


- The Main Tabs are a *customizable* set of menu options that you use most frequently.
- Image: Second secon
- The standard tabs are File, Home, Create, External Data, Database Tools, and Help.
- The main tabs are always displayed and are considered part of the ribbon.

The Menu



• The Tool Tabs are a *customizable* set of menu options that appear depending on what you have selected.



- The standard tabs are View, Form Layout, Form Design, Report Layout, Report Design, Relationship, Query, Macro, Table (2 depending on view), and Form
- The tool tabs are always changing and are considered part of the ribbon.



The Navigation Pane

- The second "frame" to familiarize yourself with is the Navigation Pane (#2 on the diagram)
- The Navigation Pane helps you find any Access Object in the Database/Project.
- Note: This feature can also be customized when you have more understanding of Access.

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Navigation Pane

- As an application is built, it will consists of various Access Objects: Tables, Queries, Forms, Reports, Macros, and Modules.
- With a blank database, you will only see one Table called "Table1".
- The circled region in the screenshot displays/controls what objects you can see for the entire project.

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Tables	\$
Table1	

Navigation Pane

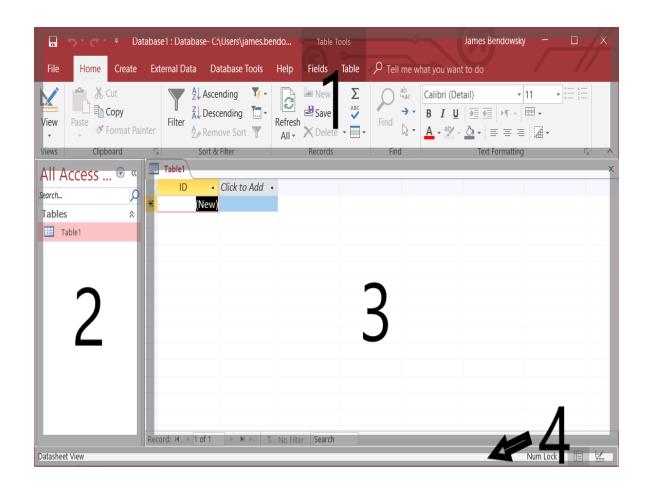
- The green-circled area is where you can select the category group you want to see in the Navigation Pane.
- The orange-circled area is where you can filter the group more.
- In this example,
 - the category group selected is "Object Type" and shows each object by its type, e.g. Tables, Queries, Forms, Reports, etc.
 - The filter selected is "All Access Objects" which is the same as "show all".





The Workspace

- The third "frame" to familiarize yourself with is the Workspace (#3 on the diagram).
- All objects that you open from the navigation pane are visible in the tabs area.
- The currently selected object's contents are displayed below.





The Workspace

- For "Table1", we can also "Save" and switch to the "Design View."
- Note: Datasheet View is greyed out because this is the view we are currently on.
- **Click** "Design View".

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The Workspace

- The content displayed in the workspace depends on the type of Access Object and the View that is currently selected.
- Note: the Property Sheet is a pane that shows up commonly on the right side for various Objects and Views.

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Datasheet View vs Design View

- Datasheet View displays the table as a grid. The fields are displayed as columns, and the records are displayed as rows. The field names are listed as the column headers.
- Datasheet View displays the data. If this table had data, it would be displayed in the cells.
- Each row represents a record. If the table had say, five records, there would be five rows of data.
- In Datasheet View, if you want to find out a field's data type, you need to select that field, then select the Fields tab on the Ribbon. The field's data type and other properties will be listed on the right side of the Ribbon.

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Datasheet View vs Design View

- Design View doesn't display any data. Therefore, there's more space available to display other settings.
- In Design View, the fields are listed vertically. They are listed above and below each other as opposed to side-by-side.
- In Design View, you can see the data type listed next to each field.
- The way Design View works is, when you click on a field (in the top frame), the bottom frame displays the properties for that field. You can then change these properties as required.

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Design view. F6 = Switch panes. F1 = Help.							==	



The Status Bar (& Views)

- The fourth "frame" to familiarize yourself with is the Status Bar (#4 on the diagram).
- This bar sometimes displays information about what you are working on but, for the most part, displays and allows you to control which view you need.

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The Status Bar

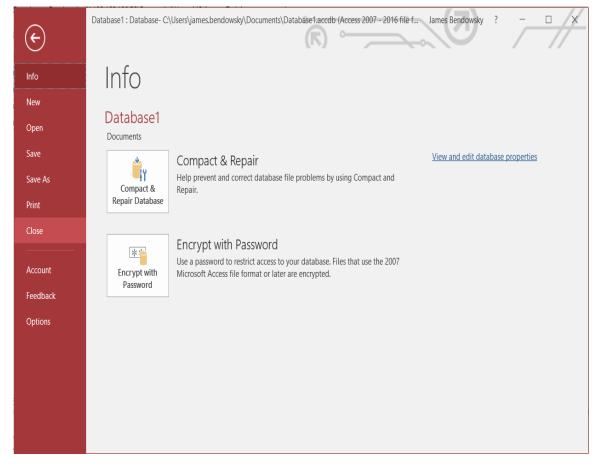


- In the bottom left, we can see the view we are currently looking at. So for "Table1", this is the "Design View".
- For this view, the status bar is showing us some shortcut keys, F6 & F1.
- In the bottom right, there are two buttons which we can click to switch the view.
- Click the left button.

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esign view. F6 = Switch panes. F1 = Help.					

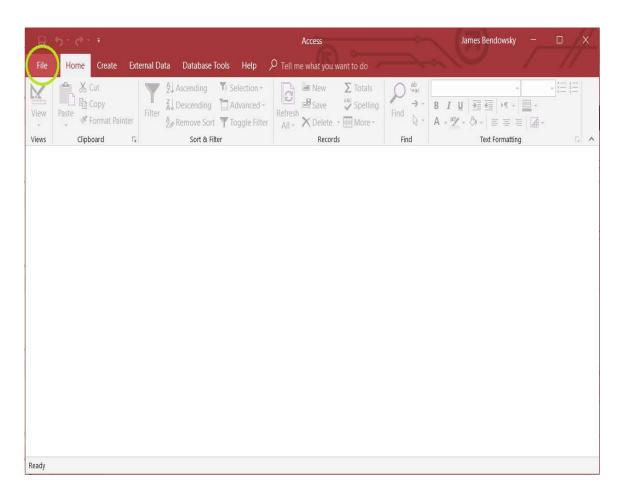


- To close the database, click File from the Main Tabs (top left). Select Close.
- There are a lot of good templates provided in Microsoft Access 2016.



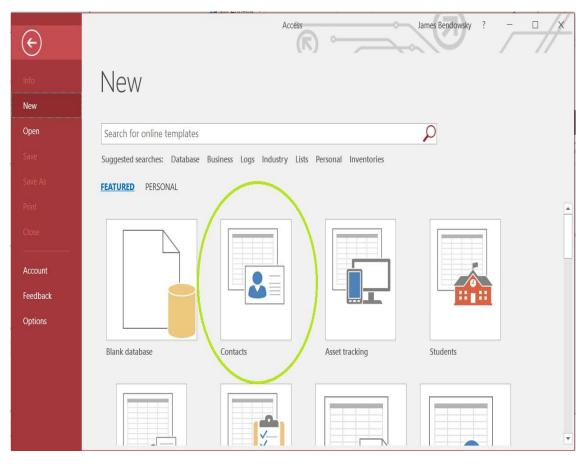


- Templates provide a more developed starting point than a blank database.
- You can create your own templates based on the type of work you do to save time.





- Click "File" from the Main Tabs in the top left.
- You will see this screen with the Blank database and a list of standard templates.
- Imagine that you work with a lot of clients helping them create applications for their Contacts.
- Click "Contacts". And create the relevant database (name it as you wish)





- Notice that the application already has a title, "Contact Management Database".
- Because the template contains VBA macros (automation), you may receive a security warning.
- Click "Enable Content".

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- You should see a pop up like the one in the right screenshot.
- Note: this automation is created using VBA macros.
- **Click** the "Get Started" button to close the pop-up.

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	Need help?	Like this or Want more?	
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 Observe that we have many pre-built Tables, Queries, Forms, Reports, Macros, and Modules from which to build our new application.

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