Microsoft Access 2007

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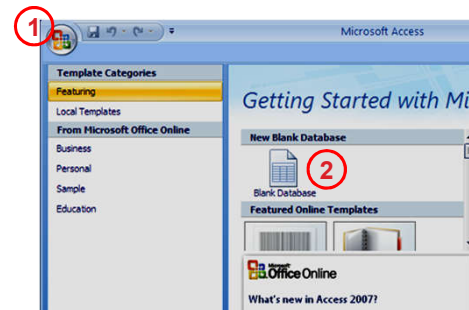204100 Information Technology and Modern Life

Outlines

▸ Creating Table
▸ Entering/Editing Data
▸ Importing Data from other source
▸ Creating Query

Before You Start

▸ Download the following files from the course webpage:
  ◦ 13_Students_en.accdb (@ https://goo.gl/YKyvQi)
  ◦ dataforaccesslab_01_en.xlsx
  ◦ dataforaccesslab_02_en.xlsx

Creating a New Database

1. Click the Office Button
2. Select *Blank Database*

Creating a New Database (2)

Blank Database

Create a Microsoft Office Access database that does not contain any existing data or objects.

File Name:
Database1

C:\Users\CSB307\Documents\

Create   Cancel

3. Name your database
4. Select a folder to save the database
5. Click *Create* to create the database.

Opening an Existing Database

1. Click the Office Button
2. Click *Open*

Opening an Existing Database (2)

3. Select folder, then select database file

4. Click *Open*.

Microsoft Access Interface

1. Office Button
2. Commands Tabs
3. The Ribbons
4. Work Area
5. Navigation Pane
6. Windows Buttons
7. Status Bar

Changing Font Size
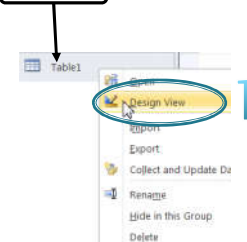
Datasheet   **Query Design**
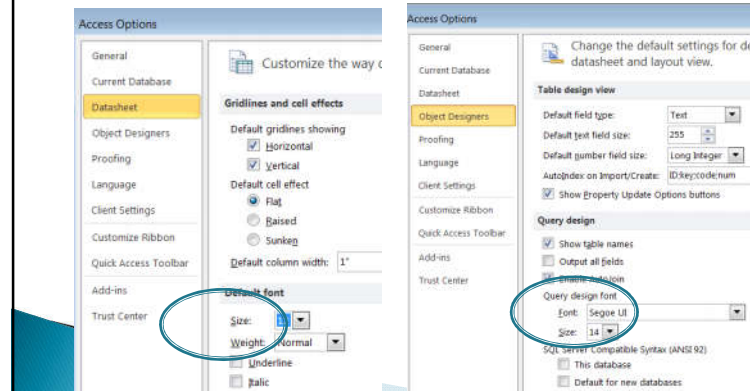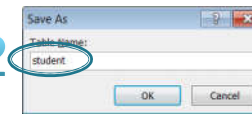

Your First Table

Right-click
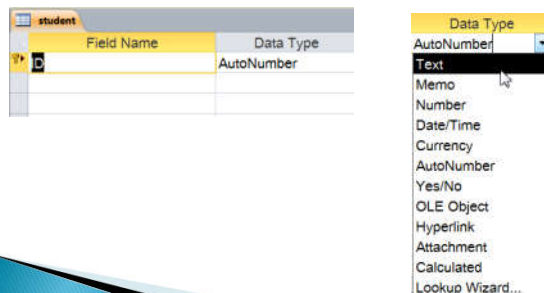

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▸ Right Click on
  Table1 →
  Design View

▸ Select Table Name

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Data Type [1]

▸ The default field is "ID" with AutoNumber
  "Data Type"

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Data Type [2]

DATA TYPE	PURPOSE
Text	Use to store up to 255 characters of text, such as a last name or a street address.
Memo	Long blocks of text. A typical use of a Memo field would be a detailed product description.
Number	Use to store a numeric value that isn't a monetary value, such as distances. If you might use the values in the field to perform a calculation, use the Number data type.
Date/Time	Use to store time-based data. Date and Time values for the years 100 through 9999.
Currency	Use to store monetary data.
AutoNumber	Provide a unique value that serves no other purpose than to make each record unique
YES/NO	Yes and No values and fields that contain only one of two values. (Boolean)

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Data Type [3]

DATA TYPE	PURPOSE
OLE Object	Use to attach an OLE Object, such as a Microsoft Office Excel spreadsheet, to a record. In most cases, you should use an Attachment field instead of an OLE Object field. (More file types and multiple files supported)
Hyperlink	Use to store a hyperlink, such as an e-mail address or a Web site URL.
Attachment	Use an attachment field to attach multiple files, such as images, spreadsheet files, documents, charts, and other types of supported files to the records in your database, similar to attaching files to e-mail messages. Multiple files per record supported.
Calculated	Results of a calculation. The calculation must refer to other fields in the same table. You would use the Expression Builder to create the calculation.
Lookup	Displays either a list of values that is retrieved from a table or query, or a set of values that you specified when you created the field. The Lookup Wizard starts and you can create a Lookup field. The data type of a Lookup field is either Text or Number, depending on the choices that you make in the wizard.

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Data Type [4]: Number

FIELD SIZE	PURPOSE
Byte	Use for integers that range from 0 to 255. Storage requirement is 1 byte.
Integer	Use for integers that range from –32,768 to 32,767. Storage requirement is 2 bytes.
Long Integer	Use for integers that range from –2,147,483,648 to 2,147,483,647. Storage requirement is 4 bytes.
Single	Use for numeric floating point values that range from –3.4 x 1038 to 3.4 x 1038 and up to seven significant digits. Storage requirement is 4 bytes.
Double	Use for numeric floating point values that range from –1.797 x 10308 to 1.797 x 10308 and up to fifteen significant digits. Storage requirement is 8 bytes.
Decimal	Use for numeric values that range from –9.999... x 1027 to 9.999... x 1027. Storage requirement is 12 bytes.

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Defining Data Types

- Look at the excel file "dataforaccesslab_01_en.xlsx" and the slide.
- What data type should be assigned to each field?

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Defining Data Types

Field Name	Data Type	Field Size
student_id	Text	9
title	Text	20
first_name	Text	20
last_name	Text	20
birth_date	Date/Time	
gpa	Number	Single
blood_type	Text	2
pet	Text	10
allowance	Number	Long Integer

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Field Properties

General | Lookup

Field Size
Format
Input Mask
Caption
Default Value
Validation Rule
Validation Text
Required
Allow Zero Length
Indexed
Unicode Compression
IME Mode
IME Sentence Mode
Smart Tags

- Field Size
- Format
- Default Value
- Required
- Allowed Zero Length
- Indexed

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student_id

- Primary Key
  - Indexed (Yes No Duplicates)
  - Allow Zero Length (NO)
  - Required (Yes)

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birth_date

- Format
  - Short Date
  - Make sure to check system date format before entering the data
  - Other date/number formats are also possible
    - dd-mm-yyyy
    - #.0000

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Inserting Field & Deleting

- Put in "Faculty"
  - The name of the faculty of the student
  - Text [20]
- Put in Age
  - Number [Integer]

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Entering Data

‣ Type in your own data for the 1st record
‣ Data can also be imported from the excel file.
‣ Field Name must match!!!

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Importing Data [1]

‣ Right Click on "Student"
  ◦ Import →
    Excel

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Importing Data [2]

Path to the Excel File
(C:\....\.....\dataforaccesslab_02_en.xlsx)

Importing Data [3]

‣ Check Data
‣ Click *Finish*
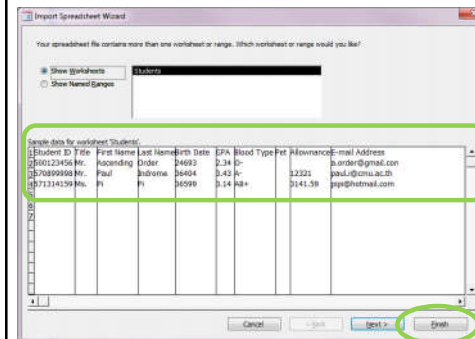
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Viewing Data

‣ Double Click on the table
  ◦ Datasheet View

Editing Table

‣ Click on the field, then type values
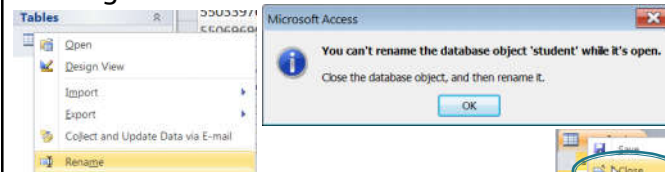‣ Put in Dog for Pi's *Pet*
‣ And Cat for Rahul's *Pet*

Data Sorting

‣ In Datasheet view, right–click on the field header, then select sort option.
‣ Try Sorting Each field
  ◦ Sort By Birth Date
  ◦ Sort By GPA
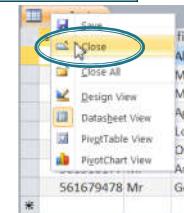

Changing the Table's Name

‣ Right Click on "Student" → Rename
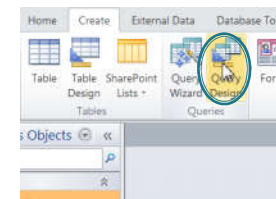

‣ Close the table
‣ Rename the table to "newStudent"
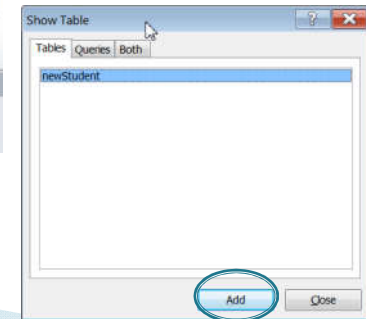
Creating a Query

- Query Wizard
- Query Design

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Creating Query

- Query Design

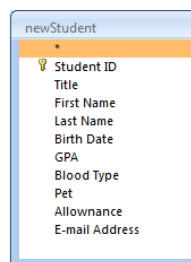 - **Add**
  - **Close**

- Dialog Box "Show Table" (Recordsource)

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Query Design

- From the table
- Select fields to use (display + conditions)
  - Student ID
  - First Name
  - Last Name
  - Blood Type
- Specify condition(s)
  - With the "AB+" Blood Type
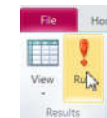

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Query Design [2]   Parameters

Field:	Student ID	First Name	Last Name	Blood Type
Table:	newStudent	newStudent	newStudent	newStudent
Sort:				
Show:	☑	☑	☑	☐
Criteria:				"AB+"
or:				

- All criteria on the same line are joined with AND (all have to be true)
- Different lines are with OR (either can be true)
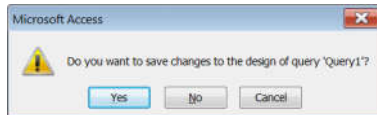- Process one line at a time
- The Result →

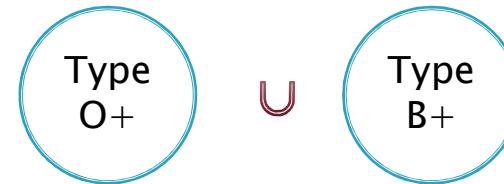| Student ID	First Name	Last Name
571634633	Michael	Robertson
571314159	Pi	Pi

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Query Design [3]

‣ Saving Query

‣ Name it "AB+ Blood Type"

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Query Practice I

‣ Create a query to find students with O+ blood type and students with B+ blood type (showing Name, Birth Date, and Blood Type)

Type O+ ∪ Type B+

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Query Practice II

‣ Create a Query to find Male students who own dogs and female students who own cats
  ◦ How many groups of results
    • Number of Lines for "Criteria"
      • 2 groups
  ◦ The properties of each group
    • The criteria condition in each line

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Query Practice II [2]

‣ How many group of data?
‣ What's the properties of each group?

Group 1 — Male, Own Dogs ∪ Group 2 — Female, Own Cats

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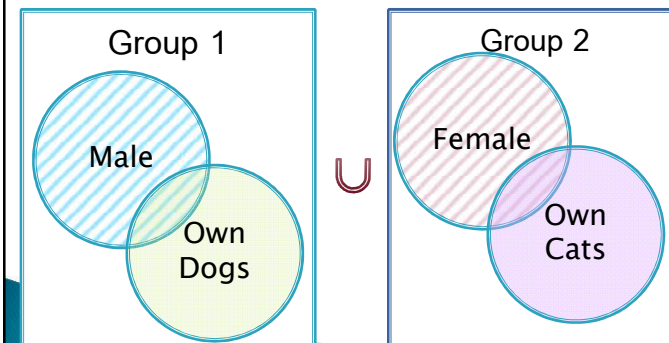
Query Practice III

▸ Create a Query for students with GPA b/w 2.50 and 3.00 (showing title, name, gpa)

gpa

newStudent

>=2.5 And <=3

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Query Practice IV

▸ Create a query to find the name and student id of students from the faculty of Economics (16)
  ◦ Wild card
    ・ 5516XXXXXX
    ・ 5616XXXXXX
    ・ 5416XXXXXX
  ◦ 5?16* or 5?16?????
  ◦ Notice the keyword "Like"

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Summary

▸ Creating Table
▸ Entering/Editing Data
▸ Importing Data from other source
▸ Creating Query

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