CSE 1530

Introduction to Computer Use II: Programming

Winter 2006 (Section M)

Topic F: External Files and Databases –
Using Classes and Objects

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Overview (1):

- **Before We Begin**
  - Some administrative details
  - Some questions to consider

- **Opening and Reading a File**
  - Recall the standard dialog window
  - Opening a file
  - Common dialog properties

Before We Begin

Administrative Details (1):

- **Test 2 And Various Exercises That Haven't Been Picked Up**
  - Available at the end of the lecture
- **Test Annulment Forms**
  - Will be available from March 27 – April 21 2006 from the Computer Science Engineering Undergrad Office located in CSEB 1003
    - Office hours $\rightarrow$ 10:00am – 12:00pm & 2:00-4:30pm
  - Must be completed if you wish to drop either of your test grades (Test 1 and/or Test 2)

Some Questions to Consider (1):

- What is a Message Box ?
- What is a Drop-down (Combo) Box ?
- What is a file ?
- In a Visual Basic program, how can we input/output data using files ?

Opening and Reading a File (cont.)

Recall – Standard Dialog Window (1):

- **Standard Dialog Window**
  - Name of file to be "opened" will be obtained using the MS standard file dialog window

Standard Windows file dialog window →
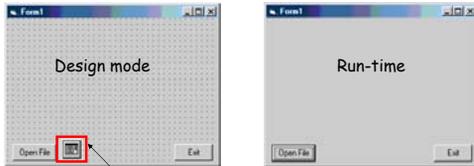

Recall – Standard Dialog Window (2):

- **Adding the Common Dialog Control**
  - By placing the Common Dialog Control on the Form, it ensures the CommonDialog object is available for use within your application

Design mode

Run-time

Common Dialog control → lets call it cdlTest

Recall – Object Browser Window (1):

- **Several Available "Built-in" Constants**
  - Various built-in constants available for your use in Visual Basic
    - Constant variables are typically enclosed within a specific class definition
  - To view the VB constants → View Menu -> Object Browser
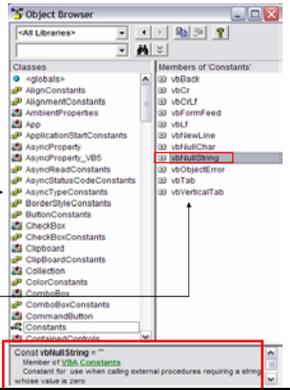   - Various "groups" (modules or classes) of constants

Recall – Object Browser Window (2):

- **Viewing the VB Constants**
  - Constants module

Various Visual Basic classes →

Constant variables of the class →

Clicking on the constant gives you information about it →

Opening a File (1):

- **Object Browser**
  - Just as we can view and navigate through the constant definitions, we can also view the CommonDialog class
    - Thus we can examine its properties and methods that are available for our use → View Menu -> Object Browser
    - After installing the Microsoft Common Dialog Control 6.0 → new library in the object viewer is now available → MSComDlg that has a class called CommonDialog with various associated properties (e.g., ShowOpen)
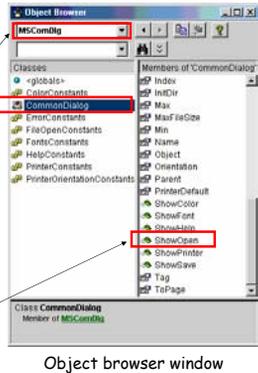
Opening a File (2):

- **Object Browser (cont.)**
  - Graphical illustration of the MSComDlg library

CommonDialog class

ShowOpen method of the CommonDialog class

Object browser window

Opening a File (3):

- **ShowOpen Method**
  - Using this method will cause the (familiar) open file dialog window to appear
    - User can choose a desired file to open
  - How do we use this method ?
    - Add a command button (control) to the form → lets call it cmdOpenFile and set its Caption property to "Open File" (for example)
    - Within the _Click event of cmdOpenFile, we will call the ShowOpen method as follows
      cdlTest.ShowOpen

Opening a File (4):

- **ShowOpen Method (cont.)**
  - Recall
    - ShowOpen method is part of the CommonDialog class
    - We have created an object (instance) of the CommonDialog class and called it cdlTest
    - The call we made to the ShowOpen object was more specifically made to the instance of the class definition (cdlTest)

Opening a File (5):

- **ShowOpen Method (cont.)**
  - Clicking on the "Open File" button while in run mode will cause the Common File Dialog box to appear

Design mode

Run-time

Common Dialog control

Clicking on the "Open File" button will cause the File Dialog to appear since we make the call to the ShowOpen method within the Click event handler

Opening a File (6):

- **ShowOpen Method (cont.)**
  - Of course, even though we have caused the file dialog to appear and even if the user chooses a file, nothing will happen!
    - The purpose of the file dialog is to present the user with a simple interface to choose a file through the computer's file system
    - We must "tell" Visual Basic what "to do next"
    - The name of the file (along with the entire file path) once obtained from the user will be stored in a property called FileName of the Common Dialog object

Opening a File (7):

- **ShowOpen Method (cont.)**
  - You can easily verify that the name has been properly assigned to the FileName property
    - Add a Label (called for example, lblFileName) to the Form and then add the following statement

      lblFileName.Caption = cdlTest.FileName

    - The name of the file should appear in the Label
  - The FileName property is actually one of the most important properties since we will need the name of the file to open any specified file!

Opening a File (8):

- **Some Other Common Dialog Properties**
  - Filter property
  - InitDir property
  - Cancel error property
  - Flags property
  - Lets take a closer look at these now…

Common Dialog Properties (1):

- **The Filter Property**
  - Determines which type of files are displayed (e.g., files of a particular extension) in the open file window by specifying a list of file types along with a brief description that will actually appear in the file open window
  - String argument that is composed of a set of description and file extension specifications separated by the pipe symbol (the vertical bar "|")
    - Included before the ShowOpen statement and it is called within the _Click event handler
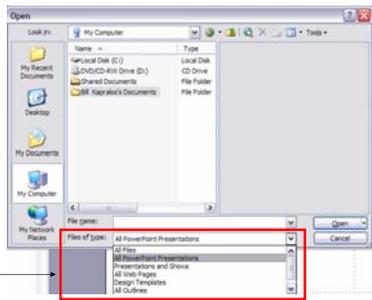
Common Dialog Properties (2):

- **The File Property (cont.)**
  - Graphical illustration → Powerpoint Open File

File types along with a brief description