

REVIEW LESSON

MTA Course: Windows Development Fundamentals

Lesson name: Windows Development Fundamentals 1.2

Topic: Implement user interface design (One 50-minute class period)

File name: WinDevFund_RL_1.2

Lesson Objective

1.2: Implement user interface design. *This objective may include but is not limited to:* core user interface design principles for creating graphical-based applications.

Preparation Details

Prerequisite student experiences and knowledge

This MTA Certification Exam Review lesson is written for students who have learned about Windows[®] application programming. Students who do not have the prerequisite knowledge and experiences cited in the objective will find additional learning opportunities using resources such as those listed in the Microsoft[®] resources and Web links at the end of this review lesson.

Instructor preparation activities

- Choose two applications that the students can access to complete the Anticipatory Set.

Resources, software, and additional files needed for this lesson:

- WinDevFund_PPT_1.2

Teaching Guide

Essential Vocabulary:

control—a component on a window used to display information or accept user input. Examples include Button, Label, TextBox, and CheckBox.

graphical user interface (GUI)—a user interface in which a user communicates with the application through graphical elements such as images, icons, and buttons, rather than just typing.

menu—a list of options from which a user can make a selection to perform a desired action.

toolbar—a set of controls designed to provide quick access to specific commands or options.

tooltip—a brief description of a control that pops up when the mouse pauses over the control.

user interface (UI)—the part of an application through which a user communicates with the application.

window—a visual surface that displays information for the user; the basic building block of a user interface. *Note:* During development, windows are often referred to as **forms**.

Lesson Sequence

Activating prior knowledge/lesson staging (Anticipatory Set—10 minutes)

1. As indicated in the Microsoft PowerPoint® slideshow, direct students to open Notepad and WordPad.
2. Students should use each application for a few minutes; then they should write a comparison of the two programs' user interfaces.
3. When students are finished, have them discuss their comparisons with a partner.
4. If time allows, the class may engage in brief discussion of their responses.

Lesson activity (35 minutes)

1. Use the included PowerPoint slideshow to review the definition of a user interface and the common components of a GUI.
2. Using the prompt in the slideshow, ask the students to generate a list of characteristics of a well-designed user interface.
 - Depending on your class size and other factors, this may be a full-class discussion or you may have students work in small groups and report back to the class with their thoughts.

3. Be sure to record the students' responses on a whiteboard or in a text document, so you can revisit their ideas later.
4. Use the slideshow to review the core principles of UI design.
5. As prompted in the slideshow, follow up on your students' initial list of good UI features.
 - It is OK (and expected) that student responses go beyond the principles listed here.
 - Class discussion is important—allow students to engage the topic by arguing for and against different UI elements.

Assessment/lesson reflection (15 minutes)

1. Show the “Closure” slide and instruct students to answer the questions about UI design.
2. For addition assessment/reflection ideas, see “Additional Activities” below.

Microsoft resources and Web links

- Absolute Beginner's Series – Lesson 2: Creating a Windows Application User Interface
(<http://msdn.microsoft.com/en-us/beginner/bb308740.aspx>)
- The Basics of Interface Design
([http://msdn.microsoft.com/en-us/library/aa733613\(VS.60\).aspx](http://msdn.microsoft.com/en-us/library/aa733613(VS.60).aspx))
- How to Create the Best User Experience for Your Application
(<http://msdn.microsoft.com/en-us/library/aa468595.aspx>)

Additional activities (homework or enrichment):

- As an additional assessment task, you can have the students evaluate the UI quality of an application. This can be either a homework assignment or a follow up assignment at the end of the lesson.

Additional notes to the teacher:

- For the “Anticipatory Set,” you can use different applications depending on what is installed on your student computers. It is helpful to pick two applications that have some similarities, such as two photo-editing applications, or two programming Integrated Development Environments (IDEs).