

REVIEW LESSON

MTA Course: 10754 Microsoft .NET Fundamentals

Lesson name: Microsoft .NET Fundamentals 5.1-5.2

Topic: Understand the System Security namespace, authentication, and authorization (One 50-minute class period)

File name: 10754_Msft.NET_RL_5.1-5.2

Lesson Objectives:

5.1: Understand the System Security namespace. This objective may include but is not limited to: understanding permissions and what cryptography is.

5.2: Understand authentication and authorization. This objective may include but is not limited to: understanding code access security, access control, and policies.

Preparation Details

Prerequisite student experiences and knowledge:

This MTA Certification Exam Review lesson is written for students who have learned about application programming with the Microsoft® .NET Framework. 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 “Resources” section at the end of this review lesson.

Instructor preparation activities:

- None

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

- 10754_Msft.NET_PPT_5.1-5.2

Teaching Guide

Essential Vocabulary

Authentication—the process of verifying the identity of the person or user; in many applications, the user is authenticated by using a password.

authorization—the process of determining whether a person or user is allowed to perform a task.

code access security—a model that prevents untrusted code from performing a privileged task.

principal—represents the identity and role of a user and acts on the user's behalf.

role-based security—a model in which a user has a particular identity or is a member of a specified role, and that role determines the user's permissions.

security policy—the configurable set of rules that the Common Language Runtime (CLR) follows when it decides what it will allow code to do.

Lesson Sequence

Activating prior knowledge/lesson staging (10 minutes):

1. As indicated in the Microsoft PowerPoint® presentation, direct students to work in pairs to describe a simple security policy for an office building.

Lesson activity (30 minutes):

1. Use the presentation to review the security concepts implemented in the .NET Framework.

Assessment/lesson reflection (10 minutes):

1. Give the students about 5 minutes to complete the “Ticket Out the Door” activity. A “Ticket Out the Door” activity is one in which students must each respond to the questions and turn in their responses before leaving. After class, you can look over their responses to see if the concept needs further review or if individual students need help with the lesson.
2. As time allows, call on students to share their responses.

Resources:

- **MSDN®: Key Security Concepts**
<http://msdn.microsoft.com/en-us/library/z164t8hs.aspx>
- **MSDN: System.Security Namespace**
<http://msdn.microsoft.com/en-us/library/system.security.aspx>
- **MSDN: Security Permissions**
<http://msdn.microsoft.com/en-us/library/5ba4k1c5.aspx>
- **MSDN: Authentication**
<http://msdn.microsoft.com/en-us/library/syf5yeat.aspx>
<http://msdn.microsoft.com/en-us/library/25zf0ze8.aspx>
- **MSDN: Code Access Security**
<http://msdn.microsoft.com/en-us/library/c5tk9z76.aspx>
- **MSDN: Role-Based Security**
<http://msdn.microsoft.com/en-us/library/shz8h065.aspx>