About This Exam Review Kit

Microsoft Technology Associate Certification Exam Review Kit: 98-363 Web Development Fundamentals

Exam Review Kit Description

- This Microsoft® Technology Associate (MTA) Certification Exam Review Kit contains a series of 20 review lessons intended to reinforce concepts in preparation for the MTA Certification Exam: 98-363 Web Development Fundamentals and/or serve as a resource and guide for teachers and faculty to create their own additional student learning experiences.
- It is assumed that students taking an MTA certification exam have completed and/or are currently taking academic courses, have job experience that addresses the exam objective domain, or both.
- The MTA Certification Exam Review Kits:
    - Are intended to supplement (not supplant) existing academic courses
    - Are not intended to serve as foundational content for academic courses
    - Are directly and closely tied to the objective domain of each individual MTA certification exam
    - Are platform-specific or -agnostic in accord with the objective domain of each MTA certification exam.
- Because each certification exam has approximately twenty objectives, this Exam Review Kit includes 20 review lessons of 50 minutes apiece.
- The materials for each review lesson include a lesson plan, lesson delivery materials, and student activity documents.
- MTA certification exams test breadth of technical knowledge and help students explore career options before choosing a specialized career path with minimal investment of time and money. MTA certifications measure and validate the fundamental technology skills that are in demand today and provide an essential foundation to build a career in technology. Earning MTA certification provides students with a credential that validates fundamental technology industry knowledge and motivates them to succeed in continued studies, compete on admissions, and prepare for a career in technology. The MTA certifications enable students to prove their commitment to technology and connect with a community of more than 5 million Microsoft Certified Professionals (MCPs).
- Teachers and faculty can integrate the new MTA certification exams easily into existing schedules and curricula and deliver exams right in the classroom, on their own schedules.

Audience

- This Exam Review it is intended for students attending high schools and two-year colleges who are preparing for the *MTA Certification Exam 98-363: Web Development Fundamentals* and seek to prove introductory knowledge of and skills in creating Web-based applications by using Microsoft Visual Studio®, the Microsoft .NET Framework, and managed code.

- It is recommended that exam candidates be familiar with the concepts of and have hands-on experience with the technologies described here, either by taking relevant training courses or by working with tutorials and samples available on MSDN® and in Visual Studio. Although minimal hands-on experience with the technologies is recommended, job experience is not assumed for these exams.
- Candidates for this exam are in the process of expanding their knowledge and skills in the following areas:
    - Web-based application development fundamentals
    - Creating Microsoft ASP.NET applications by using server- and client-side coding techniques and tools
    - Web application event model
    - Web services and communications with services
    - Accessing and displaying data in a Web application
    - Deploying and hosting Web applications by using Internet Information Services (IIS)
    - Configuration options for ASP.NET applications

Student Prerequisites

This course requires that you meet the following prerequisites:

- It is assumed that students taking an MTA certification exam have completed and/or are currently taking academic courses, have job experience that addresses the exam objective domain, or both.
- It is expected that students have had experience using Visual Studio and a .NET language such as C# or Visual Basic®.

Exam Review Kit Objective Domain

This Exam Review provides lessons that reinforce previous learning in the following objectives:

1. Programming Web Applications

1.1. Customize the layout and appearance of a Web page.
This objective may include but is not limited to: HTML, CSS, tables, embedding images, page layout for navigation.

1.2. Understand ASP.NET intrinsic objects.
This objective may include but is not limited to: Request, Server, Application, Session, Response, HttpContext.

1.3. Understand state information in Web applications.
This objective may include but is not limited to: how state is stored based on application design and hardware; different types such as session state, view state, control state, and application state.

1.4. Understand events and control page flow.
This objective may include but is not limited to: application and page life cycle events; page events; control events; application events; session events; cross-page posting; Response.Redirect; Server.Transfer; IsPostBack; setting AutoEventWireup

1.5. Understand controls.
This objective may include but is not limited to: various types of controls, including user, server, Web, and validation; know which is the appropriate type of control for a scenario.

1.6. Understand configuration files.
This objective may include but is not limited to: use of web.config and machine.config and the settings that can be made.

2. Working with Data and Services

2.1. Read and write XML data.
This objective may include but is not limited to: XML, XML validation.
This objective does not include: Web Services, XPath syntax, XmlDocument, XPathNavigator, XPathNodeIterator, XPathDocument, XmlReader, XmlWriter, XmlDataDocument, XmlNamespaceManager.

2.2. Distinguish between DataSet objects and DataReader objects.
This objective may include but is not limited to: choose which data object to use based on application requirements/design.

2.3. Call a service from a Web page.
This objective may include but is not limited to: creating a basic Windows Communication Foundation (WCF) Service or Web Service so that it can be consumed; App_WebReferences; <system.serviceModel> configuration.

2.4. Understand DataSource controls.
This objective may include but is not limited to: LinqDataSource, ObjectDataSource, XmlDataSource, SqlDataSource.

2.5. Bind controls to data by using data-binding syntax.
This objective may include but is not limited to: ensure that data is updated and displayed in data-aware controls.

2.6. Manage data connections and databases.
This objective may include but is not limited to: database connections; connection objects; connection pools; transaction objects.

3. Troubleshooting and Debugging Web Applications

3.1. Debug a Web application.
This objective may include but is not limited to: use in conjunction with custom error pages to display appropriate error information to the appropriate user; implementing tracing of a Web application, Trace.axd, Trace=True on @Page directive, <trace enabled="true"/>.

3.2. Handle Web application errors.
This objective may include but is not limited to: HTTP error codes.

4. Working with Client-Side Scripting

4.1. Understand client-side scripting.
This objective may include but is not limited to: purpose of client-side scripting, various client-side scripting languages.

4.2. Understand AJAX concepts.
This objective may include but is not limited to: ASP.NET AJAX implementation, working with client-side libraries, EnablePartialRendering, Triggers, ChildrenAsTriggers, Scripts, Services, UpdateProgress, Timer, ScriptManagerProxy, extender controls.

5. Configuring and Deploying Web Applications

5.1. Configure authentication and authorization.
This objective may include but is not limited to: Forms Authentication, Windows® Authentication; authorization; file authorization; impersonation.
This objective does not include: Windows CardSpace® authentication, Passport (Windows Live® ID) authentication, Custom authentication.

5.2. Configure projects and solutions and reference assemblies.
This objective may include but is not limited to: local assemblies, shared assemblies (GAC), Web application projects and solutions; configuration files; AppSettings.

5.3. Publish Web applications.
This objective may include but is not limited to: choosing the method to deploy an application based on the existing or intended environment; updatable vs. not updatable; MSI deployment; IIS installation and configuration.

5.4. Understand application pools.
This objective may include but is not limited to: purpose of application pools; effect of application pools on Web applications.
This objective does not include: configuring or assigning application pools.

Exam Review Kit Timing

Each of the 20 Review Lessons in this collection is intended to be used in a single 50–minute class period.

Exam Review Kit Materials

The following materials are included in this Exam Review Kit:

- Review Lessons: A plan for teacher and student activities in reviewing the learning objectives and providing the key points that are critical to the success of the in-class review experience
- Microsoft PowerPoint® presentations: A structure for classroom lectures and discussions.
- Student Activities: A hands-on platform for applying the knowledge and skills reviewed in the lesson
- Student Activity Answer Keys: Solutions to Student Activities.
- Additional resources: Various resources to expand reviewing and learning opportunities.

Software Requirements

The following software is suggested for this series of review lessons:

- A Windows-based PC with installed Web development software.
  Examples include:
  - Microsoft Visual Studio 2008, or
    - Microsoft Visual Basic 2008, Express Edition (*http://www.microsoft.com/express/downloads/#2008-Visual-Basic*)
    - Microsoft Visual C#® 2008 Express Edition (*http://www.microsoft.com/express/downloads/#2008-Visual-BasicCS*)
    - Microsoft Visual C#, 2008 Express Edition (*http://www.microsoft.com/express/downloads/#2008-Visual-CS*)
    - Microsoft Visual Web Developer 2008, Express Edition (*http://www.microsoft.com/express/downloads/#2008-Visual-Web-Developer*)

Instructional Preparation Activities

It is highly recommended that you complete the following instructional preparation activities:

- Familiarize yourself with the objectives of each lesson.
- Walk through each Review Lesson presentation slide deck and read the corresponding Instructor Notes (located in the Notes view of the presentation slide deck) for the lesson. *Note that additional hidden slides are used in each slide deck to accommodate the amount of Instructor Notes information for a given topic.*
- Familiarize yourself with the student activities.
- Practice presenting each module.
- Identify the key points and must-know information for each topic.
- Perform each demonstration and hands-on lab.
- Anticipate the questions that students might have.

- Identify examples, analogies, impromptu demonstrations, and additional delivery tips that will help to clarify module content and provide a more meaningful learning experience for your specific audience.
- Customize and enhance your instructor notes.
- Review the updated information about the Microsoft Certification Program on the Microsoft Learning Certifications website (*http://www.microsoft.com/learning/en/us/certification/cert-default.aspx*).