# MTA Exam 98-375: HTML5 Application Development Fundamentals

### About This Exam

The Microsoft Technology Associate (MTA) is a new Microsoft Certification program that validates the *foundational knowledge* needed to begin building a career using Microsoft technologies.

Successful candidates earn MTA certificates as well as access to benefits on the Microsoft Certification member site.

This program:

- is targeted primarily at students who attend high schools and two-year colleges.
- provides an appropriate entry point to a future career in technology.
- assumes some hands-on experience or training but does not assume on-the-job experience.

This exam is designed to provide candidates with an assessment of their knowledge of *fundamental* HTML5 application development concepts. It can also serve as a stepping stone to the Microsoft Certified Technology Specialist exams.

## Audience Profile

Candidates for this exam are seeking to prove core HTML5 client application development skills that will run on today's touch-enabled devices (PCs, tablets, and phones). Although HTML is often thought of as a web technology that is rendered in a browser to produce a UI, this exam focuses on using HTML5, CSS3, and JavaScript to develop client applications. Before taking this exam, candidates should have solid *foundational knowledge* of the topics outlined in the preparation guide, including CSS and JavaScript. It is recommended that candidates be familiar with the concepts of and have some hands-on experience with the related technologies either by taking relevant training courses or by working with tutorials and samples available on MSDN and in Microsoft Visual Studio.

# **Objective Domain**

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#### 1. Manage the Application Life Cycle

1.1. Understand the platform fundamentals.

This objective may include but is not limited to: packaging and the runtime environment: app package, app container, credentials/permission sets, host process, leveraging existing HTML5 skills and content for slate/tablet applications

1.2. Manage the state of an application.

This objective may include but is not limited to: manage session state, app state, and persist state information; understand states of an application

- 1.3. Debug and test an HTML5-based touch-enabled application.
- 1.4. Publish an application to a store.

This objective may include but is not limited to: Windows Store; third-party stores

#### 2. Build the User Interface by Using HTML5

- 2.1. Choose and configure HTML5 tags to display text content.
- 2.2. Choose and configure HTML5 tags to display graphics.

This objective may include but is not limited to: when, why, and how to use Canvas; when, why, and how to use SVG

2.3. Choose and configure HTML5 tags to play media.

This objective may include but is not limited to: video and audio tags

2.4. Choose and configure HTML5 tags to organize content and forms.

This objective may include but is not limited to: tables, lists, sections; semantic HTML

2.5. Choose and configure HTML5 tags for input and validation.

#### 3. Format the User Interface by Using CSS

3.1. Understand the core CSS concepts.

This objective may include but is not limited to: separating presentation from content – create content with HTML and style content with CSS; managing content flow - inline vs.

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block flow; managing positioning of individual elements – float vs. absolute positioning; managing content overflow – scrolling, visible, and hidden; basic CSS styling

3.2. Arrange user interface (UI) content by using CSS.

This objective may include but is not limited to: using flexible box and grid layouts to establish content alignment, direction, and orientation; proportional scaling and use of "free scape" for elements within a flexible box or grid; ordering and arranging content; concepts for using flex box for simple layouts and grid for complex layouts; grid content properties for rows and columns; using application templates

3.3. Manage the flow of text content by using CSS.

This objective may include but is not limited to: regions and using regions to flow text content between multiple <div> sections – content source, content container, dynamic flow, flow-into, flow-from, msRegionUpdate, msRegionOverflow, msGetRegionContent(); columns and hyphenation and using these CSS settings to optimize the readability of text; using "positioned floats" to create text flow around a floating object

3.4. Manage the graphical interface by using CSS.

This objective may include but is not limited to: graphics effects - rounded corners, shadows, transparency, background gradients, typography, and Web Open Font Format; 2D and 3D transformations – translate, scale, rotate, skew, and 3D perspective transitions and animations; SVG filter effects; Canvas)

#### 4. Code by Using JavaScript

4.1. Manage and maintain JavaScript.

This objective may include but is not limited to: creating and using functions; using Windows Library for JavaScript, jQuery, and other third-party libraries

4.2. Update the UI by using JavaScript.

This objective may include but is not limited to: locating/accessing elements; listening and responding to events; showing and hiding elements; updating the content of elements; adding elements

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4.3. Code animations by using JavaScript.

This objective may include but is not limited to: using the animation library

4.4. Access data access by using JavaScript.

This objective may include but is not limited to: sending and receiving data; transmitting complex objects and parsing; accessing databases and indexed DB; loading and saving files; App Cache

4.5. Respond to the touch interface.

This objective may include but is not limited to: gestures, how to capture and respond to gestures

4.6. Code additional HTML5 APIs.

This objective may include but is not limited to: GeoLocation, Web Workers, Web Sockets

4.7. Access device and operating system resources.

This objective may include but is not limited to: Windows Runtime (WinRT); in memory resources such as contact lists and calendar; hardware capabilities such as GPS, accelerometer and camera

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