Tosa

Your skills. Your advantage.

Tosa Skills Framework

Web developer (HTML/CSS/JavaScript)

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Overview

Introduction to Tosa Skills Framework

For Tosa Assessment and Certification

Tosa® (Test on Software Applications)

Tosa assessments and certifications will determine and validate a candidate's proficiency and skill level in software development used in a professional environment. Tosa Assessments are designed to validate the professional HTML/CSS/JavaScript skills of individuals (students, trainees, employees, or jobseekers) in supporting their employment, professional, or academic objectives.

Tosa assessments employ the Adaptive Testing Methodology, which creates a personalized testing experience adapted to a candidate's skill level for a selected software application. The score is based on the Item Response Theory using a 3-parameter logistic model, similar to the GMAT scoring method. Adaptive-based testing selects questions that challenge candidates to the limit of their knowledge and abilities.

Tosa Skills Framework Objective

This Tosa framework provides an overview of the subject areas being assessed during the Tosa Assessment and Certification exams. Tosa Web Developer (HTML/CSS/JavaScript) validates candidate proficiency in HTML/CSS/JavaScript programming using a score on a scale from 1-1000 for the Certification Assessment, and a score divided into five levels from "Beginner" to "Expert," for the Diagnostic Assessment.

The objective of this document is to present an overview of the technical skills associated with each of the four main HTML/CSS/JavaScript domains within each proficiency level. This information will also support educators and trainers in tailoring their training program to achieve desired proficiency levels.

Unique Tosa Scoring

The Tosa assessments and certifications are based on a unique score, divided into five levels.

- ranging from 1 to 1000 for the certification.
- divided into five levels, from Beginner to Expert, for assessment.

Tosa® levels	Corresponding Tosa® score	Certification status & documents issued
Expert	876 - 1000	Certification earned - diploma & Credly digital badge issued
Advanced	726 – 875	Certification earned - diploma & Credly digital badge issued
Productive	551 – 725	Certification earned - diploma & Credly digital badge issued
Basic	351 – 550	Certification failed - certificate of completion issued
Beginner	1 – 350	Certification failed - certificate of completion issued

Domains and subdomains

HTML	▪ Knowing the basic principles of the language ▪ Using different HTML elements with attributes ▪ Choosing the relevant HTML elements to meet a need ▪ Using advanced HTML elements (tables, forms...)
JavaScript	▪ Knowing the main characteristics and specificities of the language ▪ Knowing the basic functionalities and syntax ▪ Creating and manipulate primitive objects, built-in objects or more complex custom objects ▪ Understanding and manipulating the properties of an object ▪ Listening, reading, and modifying the DOM (Document Object Model)
CSS	▪ Knowing the basic principles and rules of the language ▪ Applying a style rule on an element with different methods ▪ Importing CSS style from another style sheet ▪ Positioning elements in a page, manage spaces, element size, and text ▪ Reading a CSS file written by another developer and use CSS rules inside an HTML file
Integration	▪ Integrating HTML, CSS, and JavaScript codes together ▪ Writing CSS code for display customization ▪ Writing dynamic JavaScript code for a web page ▪ Solving a bug inside a complex code written by another developer ▪ Understanding the technical documentation of an external library

About the Web Developer Certification

The Tosa Web Developer certification relies on a database of around 140 questions. It is composed of 35 questions and lasts one hour and a half. The algorithm adapts to each answer of the candidates to adjust the difficulty level of the questions until they reach the exact definition of the candidates' level by calculating the limit of their skills.

Since the test is adaptive, the series of questions that each candidate gets is unique for each test. This uniqueness allows for a more accurate evaluation of the candidate's level. It also limits cheating and the memorization of questions on different passages.

Our platform allows individuals to take the certification in class, in an approved testing center, or remotely via our integrated asynchronous online proctoring solutions.

Our remote proctoring solutions provide added flexibility for both the administrator and the candidate, allowing the certification exam to be taken anywhere, at any time. The candidate only needs an internet connection and a computer equipped with a working webcam and microphone.

Candidates receive a numeric score out of 1000 points associated to a proficiency level on a five-level scale. Candidates who score between 1 and 550 points don't earn the certification. They will not receive a diploma but a certificate of completion. Candidates who score 551 points or above earn the certification. They will receive a diploma by email within five (5) business days and are eligible to a Credly digital badge.

There is no requirement to be eligible to take the exam, but our recommendations to be well prepared on exam day are:

- Take at least one Tosa Web Developer adaptive assessment to estimate your level and get familiar with the test format
- Use free practice tests on our website for training
- Follow e-learning or training courses (average duration per level is between 10 and 15 hours per certification so around 150 hours total)

Tosa certification diplomas are valid for three years from the date of issue as skill levels evolve or decline over time, depending on the use of the software. New software and software versions are released every year, and skills must be updated. We cannot legitimately certify a digital skills level for more than three years. Limiting the certification validity reinforces the need for life-long learning and professional development.

Tosa certifications can be retaken when it is expired. Earners willing to improve their score and level can also retake the exam at any time.

Level 1 - Beginner User

Between 1 and 350 points

The Beginner Proficiency is set for a score from 1 to 350, which is the lowest Tosa score category. Achievement of Beginner score defines little or limited knowledge of HTML/CSS/JavaScript, including the languages' basic functions and features, highlighting the candidate's inability to perform web development in a professional environment.

Overview

Domain	Skills Assessed
HTML	Explaining the main usage of HTML Using simple HTML elements Adding an attribute to a html element Creating document structure Adding heading to a page Displaying a list of elements Creating a simple table Adding an image to a page Using the <a> element Adding a break line in a text Creating a general page structure Creating a block container element Using the <form> element
JavaScript	Explaining the main usage of JavaScript Creating and using variables Writing a single-line comment Using basic arithmetic operators Recognizing, creating, assigning, reading an array Recognizing, creating, assigning, reading an object Printing a variable in the console Finding an element in the DOM
CSS	Explaining the main usage of CSS Knowing the structure of a basic CSS rule Changing text font Setting an element background color Selecting an element by its tag name
Integration	Adding CSS code on an element Adding JavaScript and CSS code in a HTML document Reading a value from the DOM, processing it, and printing the result in the console

Level 2 - Basic User

Between 351 and 550 points

Prior to the acquisition of the skills of the Basic level, the candidate will have mastered the skills of the Beginner level.

HTML

Candidates can write HTML comments and build advanced text box with headings, paragraphs, and HTML attributes. They know how to apply style to HTML elements and how to create and submit a form with several fields.

Business application: For example, for a webmaster profile, these skills enable commenting on complex code portions to make them easier to understand, creating a news site with multiple articles on the same page or creating a contact form for a company.

JavaScript

At this level, candidates can create simple and reusable functions and they know how to use simple functions associated with strings and arrays. They are able to react to DOM events.

Business application: For example, for a webmaster profile, these skills enable creating a website with which a user can interact in a customized way.

CSS

Candidates can use simple CSS properties and layout properties (margins, spacing...).

Business application: For example, for a webmaster profile, these skills enable creating a web page where important information is highlighted by text size, color or underlining or an article with headings and paragraphs arranged according to good formatting practices.

Integration

The Basic-Users candidates are familiar with integrating JavaScript and CSS code into an HTML page. They can also modify the content of an HTML element without reloading the page and understand a program written by another developer.

Business application: For example, for a webmaster profile, these skills enable creating a dynamic website (JavaScript contribution) with a customized style (CSS contribution), updating the total amount of the cart after selecting a new item on an e-commerce website and maintaining a website as well as resolving production errors.

Overview

Domain	Skills Assessed
HTML	Using nested elements Adding basic attributes to html elements Adding a title to a page (document structure) Knowing the <headings> element Adding a paragraph to a page Adding a title to an image Knowing an element's <href> attribute Creating an inline container element Using an element to change content design Adding a form with fields in a page Submitting a form
JavaScript	Using Boolean arithmetic operators Creating a conditional workflow Creating simple loops Creating your own function Using simple operations on Strings Using simple operations on Arrays Reacting to basic DOM events Recognizing and writing JSON document
CSS	Changing font size and color Setting an element background image/gradient/etc. Adding border to an element Setting the margin and padding area of an element
Integration	Importing a JavaScript and CSS file in a HTML document Modifying a DOM element dynamically Finding a simple bug in a given piece of code

Level 3 - Productive User

Between 551 and 725 points

Prior to the acquisition of the skills of the Productive level, the candidate will have mastered the skills of the Basic level.

HTML

Productive-Users can easily recognize errors in the structuring of an HTML file and integrate advanced HTML elements (empty elements, videos, texts...) in forms. They also know how to use advanced attributes in HTML tables.

Business application: For example, for a web integrator profile, these skills enable creating a functional web page and structured tables, conforming to HTML standards.

JavaScript

The candidates use flow control features to automate conditional and/or repetitive data processing. They can easily assign values to variables, compare them and use functions from APIs such as JSON.

Business application: For example, for a business analyst profile, these skills enable recognizing typical JavaScript use cases and setting up data extraction processes from a known and stable source or creating a program performing advanced mathematical operations and producing structured output files.

CSS

Productive-Users master all CSS units of distance and color and relative and absolute positioning. They use special selectors such as ":hover" to adapt the style of a page to user interactions.

Business application: For example, for a web integrator profile, these skills enable respecting the graphic specifications recommended by a designer and understanding CSS code generated by a team member.

Integration

The Productive-User candidates can use CSS rules within an HTML file. They can easily identify CSS properties and HTML elements within a documentation that meet a need.

Business application: For example, for a web integrator profile, these skills enable reducing code duplication and maintaining an existing graphic charter.

Overview

Domain	Skills Assessed
HTML	- Differentiating block elements from inline elements - Using Boolean attributes - Using an element <target> attribute - Grouping cells in a table - Choosing the right element according to its content - Choosing the right input type - Choosing the right <form> element
JavaScript	- Using advanced loops - Using special variables - Creating and assigning objects - Manipulating object properties - Replacing DOM elements
CSS	- Transforming text display - Changing selectors - Knowing the cascading priority rule - Knowing the priority rules according to selector type - Importing style rules from other style sheets - Using the pseudo elements :before and :after - Aligning and distributing space among items in a container
Integration	- Creating a form in HTML, styling it with CSS it and validating it using JavaScript - Finding the origin of a bug using a browser and knowing only about the error stack trace - Finding information in third-party library and accessibility documentation

Level 4 - Advanced User

Between 726 and 875 points

Prior to the acquisition of the skills of the Advanced level, the candidate will have mastered the skills of the Productive level.

HTML

The Advanced-User candidates master the advanced attributes of HTML elements, and they can easily use different HTML elements and field types in a form.

Business application: For example, for a web developer profile, these skills enable adding advanced behaviors to a web page (e.g., disabling buttons, redirecting to a new page...). Improving user experience.

JavaScript

The candidates can create a program for complete data processing, using the advanced features of flow controls and arithmetic operations. They master DOM manipulation (adding, removing, replacing elements...).

Business application: For example, for a web developer profile, these skills enable aggregating available data from an existing extraction as well as implementing metrics relevant to the specific business need.

CSS

The Advanced-User candidates master the nesting of CSS selectors and their prioritization order. They can import CSS style from an external style sheet and use Flex layout.

Business application: For example, for a web developer profile, these skills enable creating enterprise tools with graphic style from an external style sheet and thus reducing the number of updates or creating a menu bar with elements adjusted to the width of the webpage.

Integration

At this level, the candidates can create custom styled forms that include a check on submission of user-entered content. They can easily resolve an error generated by a developer's code from the message returned by the browser in the console. Candidates have also the capacity to understand the technical documentation of an external library.

Business application: For example, for a web developer profile, these skills enable creating a registration form verifying the required format associated to the input field and enable understanding and resolving an error that occurs after a given user scenario.

Overview

Domain	Skills Assessed
HTML	- Knowing HTML elements structures - Using empty elements - Defining a document doctype - Knowing the level of headings and their usages - Using advanced table attributes - Adding a video to a page - Adding labels to each form input
JavaScript	- Using operator assignments - Managing strict equality comparison - Creating an advanced conditional workflow - Managing undefined properties - Adding an element to the DOM - Serializing and deserializing JSON
CSS	- Knowing units for distance - Knowing units for colors - Changing font style and weight - Changing the style of an element on mouse hover - Setting an element position: absolute, relative…
Integration	- Styling playing cards displayed in HTML with CSS - Finding the right CSS property and HTML tag

Level 5 - Expert User

Between 876 and 1000 points

HTML

The Expert-User candidates possess complete mastery of the HTML tag attributes storing information about standard semantic elements. They can create vector images and integrating them into a web document.

Business application: For example, for a technical adviser profile, these skills enable creating an article containing SVG graphics as well as generating content on the fly from previously collected data.

JavaScript

The Expert-User candidates display expert competency in managing data of any type. They can create, listen and react to custom events from the DOM.

Business application: For example, for a technical adviser profile, these skills enable listening to form fields and returning an error when field validation conditions are not met.

CSS

The candidates master the import and customization of font families, and they can easily use media-queries to adapt the design of a web site to the display dimensions.

Business application: For example, for a technical adviser profile, these skills enable creating a document with a unique font and a website for which the display adapts to the medium (mobile, computer...).

Integration

The Expert-User candidates associate several languages (HTML, JS, CSS) to implement a program respecting given specifications and they can resolve an important error within a complex code written by another developer.

Business application: For example, for a technical adviser profile, these skills enable creating a web page whose content is dynamically updated according to user actions and resolving a complex error generated by a code written by another developer.

Overview

Domain	Skills Assessed
HTML	Adding advanced attributes to html elements - <data> attribute Displaying an ordered list of elements Adding vector-based graphics in a page Adding advanced <input> attribute to forms
JavaScript	Mastering arithmetic operations within different types Manipulating objects references Reacting to advanced DOM events
CSS	Customizing a font Changing an element style according to media Manipulating multiple columns layout
Integration	Creating a DOM element dynamically and adding custom events Finding multiple bugs that exist in a complex piece of code Reading third-party library code and finding information

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