

JavaScript

1. JavaScript Operators, Methods, and Keywords

- 1.1 Complete and debug code that uses assignment and arithmetic operators
 - Assignment, increment, decrement, addition, subtraction, division, multiplication, modulus, compound assignment operators (+=, -=, *=, /=, %=)
- 1.2 Apply JavaScript best practices
 - Comments, indentation, naming conventions, noscript, constants, reserved keywords, debugger keyword, setting breakpoints, console.log
- 1.3 Evaluate the use of internal and external scripts
 - When to use, how to use, and what happens when scripts are used at multiple levels
- 1.4 Implement exception handling
 - try, catch, finally
- 1.5 Complete and debug code that interacts with the Browser Object Model (BOM)
 - Displaying dialogs, determining screen size

2. Variables, Data Types, and Functions

- 2.1 Declare and use variables of primitive data types
 - Number, Boolean, String, null, undefined, type of operator, type-checking functions, use strict, converting between data types (parseInt, parseFloat), formatting numbers, string operations, eval(), toFixed(), toLocaleString(), toPrecision(), single quote vs. double quote (nesting), initialization
- 2.2 Declare and use arrays
 - Single-dimensional arrays; multi-dimensional arrays; iteration; initialization; defining, sorting, and searching an array; push, pop, shift, and unshift methods; length property; accessing an array element
- 2.3 Complete and debug code that uses objects
 - Properties, methods, instantiation, Date object, retrieving date and time parts, localizing date format (MM/DD vs DD/MM), adding and subtracting dates
- 2.4 Complete and debug code that uses built-in Math functions
 - random, round, abs, floor, ceil, min, max, pow, sqrt
- 2.5 Complete and debug functions that accept parameters and return values
 - Reusable code, local vs. global scope, redefining variables, passing parameters, value vs. reference, return values

IT SPECIALIST EXAM OBJECTIVES

3. Decisions and Loops

3.1 Evaluate expressions that use logical and comparison operators

- !=, <, >, <=, >=, !, ==, &&, ||

3.2 Complete and debug decision statements

- Single alternative (if), dual alternative (if else), multiple alternative (switch), nested if

3.3 Complete and debug loops

- for, for in, while, do while, break, continue

4. Document Object Model

4.1 Identify and construct the Document Object Model (DOM) tree

- window, document, body, other HTML elements

4.2 Identify and handle document, form, keyboard, and mouse events

- onload, onfocus, onblur, onchange, onkeydown, onkeyup, onkeypress, onclick, onmouseover, onmouseout

4.3 Complete and debug code that outputs to an HTML document

- document.write, innerHTML, textContent

4.4 Complete and debug code that locates, modifies, and adds HTML elements and attributes to documents

- getElementById, getElementsByTagName, getElementsByClassName, setAttribute, createElement

4.5 Create events using event handlers and listeners

- DOM events, HTML attribute event, addEventListener

5. HTML Forms

5.1 Complete and debug code that retrieves form input and sets form field values

- Retrieving form values; identifying the DOM path; getting values from different types of elements; prepopulating, masking, and updating values

5.2 Complete and debug code that performs input validation

- Case, string comparisons, Not-A-Number (NaN), not blank

5.3 Describe the form submission process

- onsubmit, POST vs. GET, potential targets for submission

