

MTA: Introduction to Programming Using JavaScript – Skills Measured

NOTE: The bullets that appear below each of the skills measured are intended to illustrate how we are assessing that skill. This list is not definitive or exhaustive.

NOTE: In most cases, exams do NOT cover preview features, and some features will only be added to an exam when they are GA (General Availability).

Exam 98-382: Introduction to Programming Using JavaScript

Program with JavaScript Operators, Methods, and Keywords (20-25%)

Complete or debug code that uses assignment and arithmetic operators

- assignment; increment; decrement; addition; subtraction; division; multiplication; modulus; compound assignment operators

Apply JavaScript best practices

- comments; indentations; naming conventions; noscript; constants; reserved keywords; debugger keyword; setting breakpoints; console.log

Evaluate the use of inline and external scripts

- when to use, how to use, and what happens when both are used

Implement exception handling

- try; catch; finally

Complete and debug code that interacts with the Browser Object Model (BOM)

- manage state; display dialogs; determine screen size

Program with Variables, Data Types, and Functions (25-30%)

Declare and use variables of primitive data types

- number; boolean; string; null; undefined; typeof operator; type checking functions; use strict; converting between data types; formatting numbers; string operations; single quote vs double quote (nesting); initialization

Declare and use arrays

- single-dimensional arrays; multi-dimensional arrays; iteration; initialization; define an array; sort and search an array; use push, pop, shift, and unshift methods; use the length property; access an array element

Complete and debug code that uses objects

- properties; methods; instantiation; date object; retrieve date and time parts; localize date format (MM/DD vs DD/MM); add and subtract dates

Complete and debug code that uses built-in Math functions

- random; round; abs; floor; ceiling; min; max; pow; sqrt

Complete and debug a function that accepts parameters and returns a value

- reusable code; local versus global scope, redefine variables, pass parameters, value versus reference, return values

Implement and Analyze Decisions and Loops (20-25%)

Evaluate expressions that use logical and comparison operators

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

Complete and debug decision statements

- if; else if; switch; nested if

Complete and debug loops

- for; while; do; break; continue

Interact with the Document Object Model (15-20%)

Identify and construct the Document Object Model (DOM) tree

- window; document; body; other HTML elements

Identify and handle HTML events

- onchange; onmouseover; onload; onclick; onmouseout; onkeydown

Complete and debug code that outputs to an HTML document

- innerHTML; document.write

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

- getElementById; getElementsByTagName; getElementsByClassName; setAttribute; createElement

Interact with HTML Forms (5-10%)

Complete and debug code that retrieves input from forms and sets form field values

- retrieve form values; identify the DOM path; get values from different types of elements; prepopulate values; mask values

Complete and debug code that performs input validation

- case; string comparisons; Not-A-Number (NaN)

Describe the form submission process

- onsubmit; post versus get; potential targets for submission