

Chapter 7: JavaScript: Control Statements I

7.1 Introduction

(No questions)

7.2 Algorithms

7.1 A procedure for solving a problem in terms of the actions to be executed and the order in which these actions are to be executed is called _____.

- a) program control
- b) a program structure
- c) a control structure
- d) an algorithm

Ans: d

7.2 Specifying the order in which programming statements are to be executed is called _____.

- a) program control
- b) a program structure
- c) a control structure
- d) an algorithm

Ans: a

7.3 Pseudocode

7.3 _____ is an informal language that helps programmers develop algorithms.

- a) JavaScript
- b) ECMAScript
- c) Pseudocode
- d) AlgorithmCode

Ans: c

7.4 Control Statements

7.4 A program in which all statements are executed one after the other in the order in which they are written exhibits _____.

- a) transfer of control
- b) algorithms
- c) sequential execution
- d) direct execution

Ans: c

7.5 The word *sequence* in the term *sequence structure* refers to the sequence of _____.

- a) bits in a JavaScript instruction
- b) JavaScript instructions in a script
- c) scripts in an HTML file
- d) HTML files in a Web site

Ans: b

7.6 Research determined that all programs could be written in terms of only three control structures. Which of the following is *not* one of the three control structures?

- a) goto-less structure
- b) sequence structure

- c) selection structure
 - d) repetition structure
- Ans: a

7.7 Which of the following flowchart symbols indicates that a decision is to be made?

- a) diamond
- b) oval/circle
- c) rectangle
- d) flowline

Ans: a

7.8 Which of the following is *not* a JavaScript selection statement?

- a) if...else
- b) for...in
- c) switch
- d) if

Ans: b

7.9 Which of the following is a JavaScript repetition statement?

- a) while...repeat
- b) do...while
- c) do...repeat
- d) for...do

Ans: b

7.10 Which of the following is *not* a JavaScript keyword?

- a) break
- b) delete
- c) sub
- d) for

Ans: c

7.5 if Selection Statement

7.11 Which of the following statements is correct?

- a) `If (studentGrade >= 60)`
 `document.writeln("Passed");`
- b) `if (studentGrade >= 60);`
 `document.writeln("Passed");`
- c) `if (studentGrade >= 60)`
 `document.write("Passed");`
- d) `If (studentGrade >= 60);`
 `document.write("Passed");`

Ans: c

7.12 Which of the following flowchart symbols can represent an if statement?

- a) diamond
- b) oval/circle
- c) rectangle
- d) flowline

Ans: a

7.6 if...else Selection Statement

7.13 What would the browser display if the following code were executed in a script?

```

var x = 11;
var y = 14;

if ( x > 13 )
    if ( y > 13 )
        document.writeln( "x and y are > 13" );
    else
        document.writeln( "x is <= 13" );

```

- a) nothing
- b) 11
- c) x and y are > 13
- d) x is <= 13

Ans: a

7.14 What would the browser display if the following code were executed in a script?

```

var grade = 59;

if ( grade >= 60 )
    document.writeln( "Passed." );
else
    document.write( "Failed. " );
    document.writeln( "You must take this course again." );

```

- a) Passed.
- b) Failed.
- c) You must take this course again.
- d) Failed. You must take this course again.

Ans: d

7.7 while Repetition Statement

7.15 What would the browser display if the following code were executed in a script?

```

var product = 0;

while ( product <= 25 );
    product = 2 + product;

```

- a) nothing, the script would result in an infinite-loop error
- b) 0
- c) 25
- d) 26

Ans: a

7.16 What would the browser display if the following code were executed in a script?

```

var product = 0;

while (product >= 25)
    product = 2 + product;
    document.writeln( product );

```

- a) nothing, the script would result in an error
- b) 0

- c) 24
 - d) 26
- Ans: b

7.8 Formulating Algorithms: Counter-Controlled Repetition

7.17 What would the browser display if the following script were executed?

```
<script type = "text/javascript">
  var count = 0;
  var total = 0;
  while ( count <= 5 )
  {
    total = total + 10;
    count = count + 1;
  }
  document.write( total );
</script>
```

- a) Nothing; the browser would generate an error.
 - b) 0
 - c) 50
 - d) 60
- Ans: d

7.18 What would the browser display if the following script were executed?

```
<script type = "text/javascript">
  var count = 5;
  var total = 0;
  while ( count > -1 )
  {
    total = total - 10;
    count = count - 1;
  }
  document.write( total );
</script>
```

- a) Nothing; the browser would generate an error.
 - b) 0
 - c) -50
 - d) -60
- Ans: d

7.19 If the string passed to parseInt contains a floating-point numeric value, parseInt will _____.

- a) return NaN
 - b) return 0
 - c) round the value to the nearest tenth
 - d) truncate the floating-point part to be left with an integer value
- Ans: d

7.20 If the string passed to parseInt contains text characters, parseInt will _____.

- a) return NaN
- b) return 0
- c) return the sum of the characters' ASCII values
- d) truncate the text entries

Ans: a

7.9 Formulating Algorithms: Sentinel-Controlled Repetition

7.21 What type of loop is shown in the script below?

```
<script type = "text/javascript">
  var gradeValue = 0,
  total = 0,
  grade = 0;

  while ( gradeValue != - 1 )
  {
    total = total + gradeValue;
    grade = window.prompt( "Enter Integer Grade, -1 to Quit:" , "0" );
    gradeValue = parseInt( grade );
  }
</script>
```

- a) counter controlled
- b) sentinel controlled
- c) algorithm controlled
- d) stepwise controlled

Ans: b

7.22 The word *top* in the term *top-down stepwise refinement* refers to which of the following?

- a) the first statement that appears in the script
- b) the first statement that appears in the algorithm
- c) the single statement that completely represents the script
- d) the entire algorithm

Ans: c

7.10 Formulating Algorithms: Nested Control Statements

7.23 What output will the following script produce?

```
var i = 0;
var j = 3;
var counter = 0;

while ( i < 5 )
{
  if ( i != j )
    counter = counter + i;
  i = i + 1
}
document.write( counter );
```

- a) 9
- b) 14
- c) 3
- d) 7

Ans: d

7.24 What type of loop should be used in a script that processes test results for 150 students?

- a) counter controlled
 - b) sentinel controlled
 - c) algorithm controlled
 - d) stepwise controlled
- Ans: a

7.11 Assignment Operators

7.25 Which of the following is the correct abbreviation for the statement `a = a * 7;` ?

- a) `a *= 7;`
- b) `a *= 7;`
- c) `7 *= a;`
- d) `7 *= a;`

Ans: b

7.26 If the initial value of `a` is 15, what new value is assigned to `a` in the expression `a %= 4;`?

- a) 2
- b) 3
- c) 4
- d) 5

Ans: b

7.12 Increment and Decrement Operators

7.27 What is the value of `i` after the following statements?

```
i = 2;  
i++;
```

- a) 0
- b) 2
- c) 3
- d) 4

Ans: c

7.28 What is the value of `i` after the following statements?

```
i = 2;  
i--;  
i--;
```

- a) 0
- b) 1
- c) -2
- d) -4

Ans: a

7.29 What is the output of the following script?

```
i = 16;  
document.write( ++i );
```

- a) 16
- b) 17

c) 15

d) Nothing; the browser would generate an error.

Ans: b