

# Programming in HTML5 with JavaScript and CSS3

## Chapter 02: Getting started with HTML5

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Q1. HTML uses \_\_\_\_\_ to provide **formatting features** to content.

- A. **tag**
- B. attributes
- C. statements **formatting- Tag**
- D. semantics

Answer: A

Q2. HTML is **descendants** of

- A. XML
- B. XHTML
- C. **SGML** **descendants- SGML**
- D. RTF

Answer: C

Q3. \_\_\_\_\_ **doesn't** have a defined set of tag names.

- A. XHTML
- B. HTML5
- C. **XML** **XML- not defined tag name**
- D. XAML

Answer: C

Q4. Which one is an XML-based HTML specification that adhere to the **XML** rules of describing a **well-formed document**?

- A. HTML 4
- B. HTML5
- C. **XHTML** **well-formed document- XHTML**
- D. CSS

Answer: C

Q5. HTML5 originates from

- A. **HTML 4.01**
- B. XHTML
- C. SGML
- D. CSS

Answer: A

Q6. Which one is not true about HTML5?

- A. HTML5 can play audio and video and support animations from within the browser without the need for plug-ins.
- B. HTML5 contains most of the tags from HTML 4.01
- C. HTML5 redefines some existing tags to be semantic tags
- D. **HTML5 does not introduce any new tag or attribute** **not option**

Answer: D

Q7. How **browsers** are made forward **compatible**?

- A. Browsers always have built-in feature to updates themselves with new standards.
- B. Browsers always look for meaning from central repository if encounter new tags

C. Browsers always ignore tags that they don't recognize

D. Browsers asks user to provide meanings for tags that they don't recognize

Answer: C

Q8. Which one is XML-based specification of HTML and uses tighter rules to write well-formed document?

A. HTML5

B. XHTML

Question 4

C. XAML

D. JavaScript

Answer: B

Q9. What does Semantic means in the context of HTML?

A. tags provide look and feel to the content in the HTML document

B. tags provide meaning to the content in the HTML document

semantic- provide meaning

C. tags provide behavior to the content in the HTML document

D. All of the above

Answer: B

Q10. HTML tags provide a meaningful structure, but do not provide presentation.

E. True

meaningful structure not presentation

F. False

Answer: A [Page 31]

Q11. What is the purpose of HTML in a web page?

A. providing a meaningful structure

B. providing presentation to the document

C. adding behavior to the document

meaningful structure

D. making the document universal to the browser's

Answer: A

Q12. Where do you maintain the presentation of a HTML5 document?

A. In HTML file

B. In CSS3 stylesheet

presentation- CSS

C. In your JavaScript file

D. In style attribute of HTML elements

Answer: B

Q13. Where do you maintain the behavior of a HTML5 document?

A. In HTML file

B. In CSS3 stylesheet

behavior- JavaScript

C. In JavaScript file

D. In <script> elements

Answer: C

Q14. For what is the <area> element used?

A. To define a region in geolocation map

B. To define a region an article

C. To define an image map region

<area> = image map

D. To create a hotspot in a page

Answer: C

Q15. For auxiliary sections you use

A. <div> tag

B. <section> tag

C. <aside> tag

auxiliary section= <aside>

D. <cite> tag

---

Answer: C

Q16. To create predefined **control values**, you use

- A. <optgroup> tag
  - B. <option> tag
  - C. **<datalist> tag**
  - D. <datagrid> tag
- Control= <datalist>

Answer: C

Q17. To show an **image with caption** which **HTML5 element** do you use?

- A. <img> and <span>
  - B. <img> and <caption>
  - C. <img> with title attribute
  - D. **<figure>**
- image caption= <figure>

Answer: D

Q18. Which tag should you use for **providing alternative** content for **no script** support?

- A. <script>
  - B. **<noscript>**
  - C. <alt>
  - D. <content>
- script not support= <noscript>

Answer: B

Q19. Which one is **not** a **boolean attribute**?

- A. check
  - B. selected
  - C. readonly
  - D. **src**
- not boolean= src  
boolean= check, selected, readonly

Answer: D

Q20. Which of the following is **not a valid way** of adding checked attribute in an **input box**?

- A. <input type="checkbox" name="fruit" value="Apple" checked />
  - B. <input type="checkbox" name="fruit" value="Apple" checked="" />
  - C. <input type="checkbox" name="fruit" value="Apple" checked='checked' />
  - D. **<input type="checkbox" name="fruit" value="Apple">checked</input>**
- input not closing tag

Answer: D

Q21. Which of the following is the **preferred way** of adding **checked attribute** in an input box?

- A. <input type="checkbox" name="fruit" value="Apple" checked />
  - B. <input type="checkbox" name="fruit" value="Apple" checked="" />
  - C. **<input type="checkbox" name="fruit" value="Apple" checked='checked' />**
  - D. <input type="checkbox" name="fruit" value="Apple">checked</input>
- checked='checked'

Answer: C

Q22. Which **attributes** can be used in any **HTML5 elements**?

- A. **Global attributes**
  - B. Expando attributes
  - C. Boolean attributes
  - D. style attribute
- HTML5 elements= Global attributes

Answer: A

Q23. **Author defined** custom attributes are also known as \_\_\_\_\_ attributes.

- A. **expando**
  - B. extended
  - C. added
  - D. free
- Author defined= expando

---

Answer: A

Q24. Which one is the best way to add custom attributes?

- A. Prefix the attribute with "data-"
- B. Prefix the attribute with "custom-"
- C. Prefix the attribute with "-"
- D. HTML4 or HTML5 does not allow custom attributes

Answer: A

Q25. You have a webpage with a `<span>` element that contains the customer's name. Along with the name, you want to include the customer number on the `<span>` element, but you don't want to display the customer number. Which one accomplish it correctly?

- A. `<span hidden-customerNumber='123'>Contoso Ltd</span>`
- B. `<span data-customerNumber='123'>Contoso Ltd</span>`
- C. `<span title='123'>Contoso Ltd</span>`
- D. `<div><span id='customerNumber' style='display:none;'>123</span><span>Contoso Ltd</span></div>`

Answer: B

Q25. Which browsers support conditional comments?

- A. Internet explorer
  - B. Google chrome
  - C. Firefox
  - D. Safari
  - E. Opera
- conditional comments= Internet explorer

Answer: A [Only Internet Explorer recognizes conditional comments]

Q26. How do you ensure browsers are in no-quirks mode and operate in an HTML5-compliant manner?

- A. By adding a `<!doctype>` declaration at the top of the page
  - B. By eliminating browser implemented tags
  - C. By writing well-formed document
  - D. All of the above
- html5 main requirement- `<!DOCTYPE>` tag otherwise no-quirks mode

Answer: A

Q27. What one the `<title>` element serve in web pages do not support?

- A. Displays in the browser toolbar
  - B. Provides the default name for the page when it is added to favorites
  - C. Displays the title when a search engine displays the page in the search results
  - D. Contains short displayable contents
- don't support- short displayable content

Answer: D

Q28. Which of the following is or are the valid way to display html entities?

- E. `&entity_name;`
  - F. `&#entity_number;`
  - G. `#entity_name;`
  - H. `#entity_number;`
- & must be this sign

Answer: A, B

Q29. Which attribute is used to uniquely identify an element in a page?

- A. name
  - B. id
  - C. class
  - D. Ref
- uniquely identify- id

Answer: B

Q30. Which attribute is used to provide inline style into an element?

- inline style= Style

Answer: C

Q31. Which one is not a void element?

- Not Void= div

Answer: D

Q32. To insert a non-breaking space, you can use\_\_\_\_\_

- 

Answer: C

Q33. How should you start each HTML5 document?

- D. `<!DOCTYPE html>`

Answer: D

Q34. Browsers ignore tags that are not recognized.

- ignore tag not recognized- True

Answer: A

Q35. Which element do you use to show a separate HTML document within a HTML document?

- separate HTML- `<iframe>`

Answer: C

Q36. You are showing a different HTML pages within the current page and you want that embedded page allow form, scripts but still disabling plug-ins and pop-ups. Which one accomplishes this?

- ```
src="http://otherContent.com/content.html"></iframe>
```

Answer: B

Q37. Which one create an email link?

- D. `<a href="mailto:someone@shomwhere.com"> someone@shomwhere.com</a>`

Answer: D

mail-to: = Ans(but here write ans c)

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Q39. You click a **hyperlink to an external resource**, the external resource opens in the current browser window. How do you control this behavior?

- A. By using the target attribute external= target attribute
- B. By using the href attribute
- C. By attaching a javascript click event handler
- D. You cannot change this default behavior

Answer: A

Q40., Which one opens the **target resource** in a new browser window?

- A. <a href='target-url'>Target link</a>
- B. <a href='target-url' target='\_self'>Target link</a>
- C. <a href='target-url' target='\_blank'>Target link</a> target= \_blank
- D. <a href='target-url' target='\_parent'>Target link</a>

Answer: C

Q41. Which target attribute value should you use to open hyperlinked document in **parent frame** or window?

- A. \_parent
- B. \_top
- C. \_blank parent frame= \_parent
- D. \_self

Answer: A

Q42. Which one is **vector image** format?

- A. PNG
- B. JPG
- C. GIF
- D. SVG vector= SVG

Answer: D

Q42. Which one **supports animations**?

- A. PNG
- B. JPG
- C. GIF Animation= GIF
- D. SVG

Answer: C

Q43. How do you create a **clickable image map** in your HTML document?

- A. Within the <img> element create a <map> with clickable region defined by <area> elements
- B. Create a <map> with clickable region defined by <area> elements in it and set the usemap attribute of the <img> element to the <map> element's name
- C. Create a <map> element and inside the <map> add clickable region defined by <area> elements and add a <img> element
- D. Create an image hyperlink and add JavaScript function to capture the coordinates of clicked spot and identify region

Answer: B

# Programming in HTML5 with JavaScript and CSS3

## Chapter 03: Getting started with JavaScript

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Q1. JavaScript is untyped. What does it mean?

- A. JavaScript is case-insensitive
- B. JavaScript has no data type create variable, specify type
- C. JavaScript is interested language
- D. When you create a variable, you don't need to specify its type

Answer: D

Q2. What are the types in JavaScript a value can be?

- A. object
- B. primitive JavaScript value- object, primitive, function
- C. function
- D. undefined

Answer: A, B, C

Q3. What are the types of primitive value in JavaScript?

- A. undefined
- B. null primitive- underfined, null, number, string, Boolean
- C. number
- D. string
- E. Boolean
- F. Function

Answer: A, B, C, D, E

Q4. In JavaScript, you can create a string by enclosing in single or double quotes.

- A. True
- B. False string, quotes= True

Answer: A

Q5. Which are the valid strings in JavaScript?

- A. "I'm going to be happy when you give me the news!"
- B. 'I'm going to be happy when you give me the news!' / hlash not answer
- C. 'I\'m going to be happy when you give me the news!'
- D. 'I/m going to be happy when you give me the news!'

Answer: A, B, C

Q6. Which function do you use to query the user for input by displaying a modal message prompt?

- A. alert
- B. prompt prompt
- C. confirm
- D. input

Answer: B

Q7. Which function do you use to query whether he agree to take certain action?

- A. alert
- B. prompt
- C. confirm agree, action= confirm
- D. input

---

Answer: C

Q8. Consider the code

```
var age = "21";
```

```
alert (age + 1);
```

What will be displayed?

A. 21

B. 22

C. 211

D. Code will produce error

(age+1)= 211

Answer: C

Q9. Consider the code

```
var age = "21";
```

```
alert (Number(age) + 1);
```

What will be displayed?

A. 21

B. 22

C. 211

D. Code will produce error

Number(age)+1= 22

Answer: B

Q10. Consider the code

```
var x = 10;
```

```
var y = 20;
```

```
alert(String(x) + String(y));
```

What will be displayed?

A. 20

B. 30

C. 1020

D. Code will produce error

10+20= 1020

Answer: C

Q10. Consider the code below

```
if(myVar){
```

```
  alert('myVar has a value');
```

```
}
```

For what values in myVar no message will be displayed?

A. 0

B. NaN

C. Empty string

D. null

E. undefined

Answer: A, B, C, D, E

Q11. Which one is the null coalescing operator?

A. ??

B. &

C. |

D. ||

coalescing- ||

Answer: D

Q12. '123' == 123 evaluates to \_\_\_\_\_.

A. true

B. false

double Equal= True



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Answer: A

Q13. '123' === 123 evaluates to \_\_\_\_\_.

- A. true
  - B. false
- Thriple Equal= False

Answer: B

Q14. Which one of the following is not a valid array initialization?

- A. var pizzaParts = new Array();  
pizzaParts[0] = 'pepperoni';  
pizzaParts[1] = 'onion';  
pizzaParts[2] = 'bacon';
- B. var pizzaParts = new Array('pepperoni', 'onion', 'bacon');
- C. var pizzaParts = ['pepperoni', 'onion', 'bacon'];
- D. var pizzaParts = new Array({'pepperoni', 'onion', 'bacon'});

[] this braket not avilable

Answer: D

Q15. Consider the code below

```
var pizzaMeatParts = ['pepperoni', 'ham', 'bacon'];
```

```
var meatParts = pizzaMeatParts.join();
```

```
alert (meatParts);
```

What will be displayed?

- A. pepperoni ham bacon
- B. pepperoni, ham, bacon
- C. pepperonihambacon
- D. pepperoni-ham-bacon

Answer: B

Q16. What will be result of the following JavaScript Expression?

Number.NaN + 1

- A. Null
- B. 1
- C. 0
- D. NaN

Answer: D

Q17. In JavaScript, typeof is \_\_\_\_\_.

- A. a function
  - B. an object
  - C. a unary operator
  - D. a value of for an unassigned variable
- Javascript- unary operator

Answer: C

Q18. typeof NaN returns

- A. NaN
  - B. null
  - C. undefined
  - D. number
- NaN return- Number

Answer: D

Q19. 3 == "3" evaluates to

- A. true
  - B. false
- Double Equal= True

Answer: A

Q20. 3 === "3" evaluates to

- A. true

B. false

Triple Equal= False

Answer: B

Q21. Which one is not a valid variable name?

A. gift4you

B. \$price

C. total\$

# should be start first

D. id#

Answer: D

Q22. Consider the code block

```
if(myVar){  
  alert('myVar has a value');  
}
```

For which value in myVar, a message will be displayed, stating that myVar has a value?

A. null

B. undefined

C. string containing at least one character

D. 0

Answer: C

Q23. typeof null returns

A. null

B. object

Null= object

C. undefined

D. number

Answer: B

[Interestingly null is an object type]

Q24. typeof undefined returns

A. null

B. object

C. undefined

undefined= Undefined

D. number

Answer: C

Q25. null === undefined returns

A. true

B. false

Triple Equal= False

Answer: B

Q26. Which one is not valid assignment?

A. var n = null

B. var n = undefined

C. var n = ""

D. var n = n || ""

Answer: B

[Unassigned variable is always undefined, you can assign null but not undefined] .

Q27. You have the following JavaScript code to capture user

```
var age = prompt('Enter your age', "");
```

How can you make sure that user input is valid number?

A. Use isNaN function, pass the age variable as argument. If the function call returns true, user input is not valid number

B. Use parseInt function, pass the age variable as argument. If no error is raised user input is valid number

- C. Use Number function, pass the age variable as argument, If the function call returns true, user input is valid number
- D. Any one of the above can do

Answer: A

Q28. Which one is used as a **coalescing operator**?

- A. ==
  - B. ===
  - C. &&
  - D. ||
- coalescing operator= ||

Answer: D

Q29. Which **function** do you use to query whether he **agree** to take certain **action**?

- A. alert
  - B. prompt
  - C. confirm
  - D. input
- agree, action= confirm

Answer: C

Q30. Which **array method** removes and returns the last item in the **array**?

- A. push
  - B. pop
  - C. shift
  - D. slice
- array method-shift

Answer: B

Q31. Which **array method** removes and returns the **first item** in the array?

- A. push
  - B. pop
  - C. shift
  - D. slice
- first item= Push

Answer: A

Q31. Which array method **removes** items from an array and returns the **removed items**?

- A. push
  - B. shift
  - C. slice
  - D. splice
- removed items= splice

Answer: D

Q32. You want to **retrieve a new array** that is part of an existing array. Which array method should you use?

- A. Use the unshift method.
  - B. Use the shift method
  - C. Use the slice method
  - D. Use the splice method
- retrieve = slice

Answer: C

Q33. You have a button defined like below

<button id='save'>Save</button>

You want to attach a click event handler to the button and handler will execute on event bubbling phase. Which code should you use?

- A. document.getElementById('save').onclick = () =>{...}
- B. document.getElementById('save').addEventListener('click', () =>{...}, true)
- C. document.getElementById('save').addEventListener('click', () =>{...}, false)
- D. <button id='save onclick='() =>{...}'">Save</button>

---

Answer: C

Q34. You are writing a function that will handle the click event of a hyperlink. You want to stop the default behavior of the hyperlink. How would you write the function?

- A. `function f() { //.... ; return false; }`
- B. `function f() { //.... ; return true; }`
- C. `function f(e) { //.... ; e.stopPropagation(); }`
- D. `function f(e) { //.... ; e.preventDefault(); }`

Answer: D

# Programming in HTML5 with JavaScript and CSS3

## Chapter 04: Getting started with CSS3

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Q1. Which attribute do you use in `<link>` element to specify target device?

- A. device
  - B. media
  - C. user-agent
  - D. type
- link, target- media

Answer: B

Q2. Which one enables you to import a CSS file to the current style sheet?

- A. @include
  - B. @insert
  - C. @import
  - D. @use
- import a CSS- @import

Answer: C

Q3. Which of the following should work properly?

- A. @charset 'UTF-8';  
@import url('/Content/header.css');  
body { background-color: white; color: gray; }
  - B. /\* add header style \*/  
@charset 'UTF-8';  
@import url('/Content/header.css');  
body { background-color: white; color: gray; }
  - C. @import url('/Content/header.css');  
/\* add header style \*/  
body { background-color: white; color: gray; }
  - D. body { background-color: white; color: gray; }  
@import url('/Content/header.css');
- @char,imp

Answer: A, C

[the @import rules must be at the top of your stylesheet, before any other content except the @charset rule. If you even have a comment above the @import rules, they will not work properly]

Q6. How do you define custom font that will be downloaded to user machine if it is not available?

- A. Using @font-family rule
  - B. Using @face rule
  - C. Using @font-face rule
  - D. Using @font-url rule
- download mechine- using@font-face rule

Answer: C

Q7. Which one the selector of hyperlinks that are direct children of list item

- A. li a
  - B. li + a
  - C. li ~ a
  - D. li > a
- selector of hyperlinks- li>a

Answer: D

Q8. Which one locates the `<p>` element is preceded by a `<h1>` element as the previous sibling p?

- A. h1 + p
  - B. h1 > p
  - C. h1 p
- <p>,<h1>- h1+p

---

D. h1 ~ p

Answer: A

Q9. Which one locates all **hyperlinks** whose **href** attribute value starts with http?

A. **a[href^='http']**

B. a[href\*='http']

C. a[href\$='http']

D. a[href~='http']

**hyperlinks, href= a[href^='http']**

Answer: A

Q10. Which sign denotes **direct child**?

A. **>**

B. +

C. #

D. ~

**direct child= >**

Answer: A

Q11. Which sign denotes **adjacent child**?

A. >

B. +

C. #

D. ~

**adjacent- +**

Answer: B

Q13. Which is **not** a valid **color** in **CSS**?

A. #FF0000

B. **#GG00000**

C. rgb(100, 100, 100)

D. rgba(100, 100, 100, .5)

Answer: B

Q14. How can **set color** in CSS?

A. Using color names

B. RGB color values

C. ARGB color values

D. **All of the above**

Answer: D

Q15. How will the following will be **interpreted**?

rgb(-100,500,0)

A. Red=255, Green =255, Blue=0

B. Red=0, Green =0, Blue=0

C. **Red=0, Green =255, Blue=0**

D. Red=255, Green =255, Blue=255

Answer: C

Q16. Which of the following are **valid font-size**?

A. h1 { font-size: 200%; }

B. h1 { font-size: 1.2em; }

C. h1 { font-size: 1in; }

D. **All of the above**

Answer: D

Q17. What will be the padding in following rule?

padding: **5px 15px;**

A. top 5px, right 15px, bottom 15px and left 15px

B. top 5px, right 15px, bottom 5px and left 5px

---

C. top 5px, right 15px, bottom 5px and left 15px

D. top 15px, right 15px, bottom 15px and left 15px

Answer: C

Q18. What will be the padding in following rule?

padding: 5px 15px 10px;

A. top 5px, right 15px, bottom 10px and left 10px

B. top 5px, right 15px, bottom 5px and left 10px

C. top 5px, right 15px, bottom 10px and left 15px

D. top 15px, right 15px, bottom 10px and left 15px

top-right , bottom-left

Answer: D

Q13. You want to add a comment to your stylesheet that says "temporary." Which is the proper line to add to the CSS file?

A. //temporary

B. --temporary

C. /\* temporary \*/

D. rem temporary

Answer: C

Q14. You want to maintain separation between structure and presentation. How do you create your style rules?

A. Use inline styles.

B. Use embedded styles.

C. Use external style sheets.

D. In the HTML document, specify @import to load style sheets.

presentation-external style sheets

Answer: C

Q15. Which one is not a layout container?

A. <header>

B. <footer>

C. <article>

D. <span>

layout- header, footer, article

not a layout- <span>

Answer: D

Q16. You want to locate all the elements on your webpage that are assigned the CSS class name Hidden. Which jQuery statement can you use?

A. var hidden = \$('#Hidden');

B. var hidden = \$('.Hidden');

C. var hidden = \$('Hidden');

D. var hidden = \$('class=Hidden');

Answer: B

Q17. Which CSS3 module allows to adapt the rendering of HTML documents based on conditions such as screen resolution and orientation to accommodate different devices such as smartphones and tablets?

A. Media queries

B. Namespaces

C. Level 3 selectors

D. All of the above

Answer: A

Q18. Which one of the following is not a void element?

A. meta

B. link

C. hr

not a valid- tr

---

D. tr

Answer: D

Q19. Which CSS selector of the following selects all checkboxes that are in checked state?

- A. input[type='checkbox']:checked
- B. input[checked]
- C. checkbox:checked
- D. all of the above

Answer: A

Q20. Which one changes font color of the contents of all p element except those have class primary?

- A. p[class not 'primary'] {color: red;}
- B. p[class != 'primary'] { color: red; }
- C. p: not(.primary) { color: red; }
- D. p[not(primary)] { color: red; }

Answer: C

Q21. You have the following HTML

```
<div>
  <span>This span is the only child of its parent</span>
</div>

<div>
  <span>This span is the first one of the two children of its parent</span>
  <span>This span is the second one of the two children of its parent</span>
</div>
```

What one styles only the span content of first div to red?

- A. div > span { color: red; }
- B. span:only-child {color:red;}
- C. div span: first-of-type {color: red;}
- D. all of the above

Answer: B

Q22. \_\_\_\_\_rule enables you to import a CSS file to the current style sheet.

- A. @link
  - B. @import
  - C. @embed
  - D. @url
- CSS- @import

Answer: B

Q23. Class selectors are

- A. prefixed with the period (.) symbol
- B. prefixed with the hash (#) symbol
- C. written in square brackets ([])
- D. written in curly braces ({})

Answer: A

Q24. Which one uses a child selector?

- A. div span
  - B. div + span
  - C. div > span
  - D. div ~ span
- child selector- div>span

Answer: C



---

Q25. How can you increase priority of a style rule **User-defined stylesheet** so that it is not overridden by the document's style rules?

- A. By moving the style rule in inline style
- B. By moving the style rules in the document's head
- C. By adding the "important" modifier after the CSS value
- D. All of the above

Answer: C

Q26. Which one is not a **CSS3 pseudo element**?

- A. ::first-line
  - B. ::after
  - C. ::before
  - D. :hover
- pseudo element- :hover

Answer: D

[:hover is pseudo class. ::after, ::before, ::first-line and ::first-letter are four pseudo elements]

Q27. Which CSS property to control the amount of **transparency** an element will have?

- A. transparency
  - B. alpha
  - C. opacity
  - D. visible
- Transparency- opacity

Answer: C

Q28. How can you change the way the **browser calculates the width** of an element box?

- A. By setting padding and margin value to 0
  - B. By using display property
  - C. By setting the box-sizing property
  - D. By setting the float property
- browser calculates- box sizing

Answer: C

Q29. Which is **not valid value** of the **box-sizing** property?

- A. content-box
  - B. border-box
  - C. padding-box
  - D. margin-box
- margin totally difference

Answer: D

# Programming in HTML5 with JavaScript and CSS3

## Chapter 05: More HTML5

---

Q1. Which of the following is **not true advantages** of using **semantic tags** in web pages?

- A. They define content in meaningful way
- B. They help crawlers produce better matches to search queries
- C. They help NVDA devices that read your web pages so that they can provide a more meaningful experience to visually impaired people users.
- D. They help load web pages faster on browsers **not true semantic- web faster**

Answer: D

Q2. Which one of the following HTML5 tags is **not a layout container**?

- A. <section>
- B. <article>
- C. <aside> **<abbr> = full of meaning**
- D. <abbr>

Answer: D

Q3. Which one should you use for a **block of content** that is loosely related to **main theme** the elements around it?

- A. <section>
- B. <article> **main theme- aside**
- C. <aside>
- D. <blockquote>

Answer: C

Q4. Which element should you use to **group multiple heading** element?

- A. <headergroup>
- B. <hgroup>
- C. <group> **group heading- <hgroup>**
- D. <heading>

Answer: B

Q5. The \_\_\_\_\_ element wraps **secondary content** when used for **sidebars**.

- A. <section>
- B. <article>
- C. <aside> **block, secondary- <aside>**
- D. <abbr>

Answer: C

Q6. In an article, the \_\_\_\_\_ should **contain content tangentially** related to the content within the article.

- A. <section>
- B. <article>
- C. <aside> **block, secondary, contain= <aside>**
- D. <abbr>

Answer: C

Q7. Which one is an **ARIA attribute**, used in elements, define by WAI?

- A. title
- B. role **ARIA- role**
- C. id
- D. class

---

Answer: B

Q8. Which **ARIA** attribute is used to **provide specific meaning** to screen readers for accessibility purposes?

A. title

**B. role**

ARIA- role

C. id

D. class

Answer: B

Q9. Which one should you use an **inline quotation**?

A. <blockquote>

**B. <q>**

C. <cite>

inline quotation- <q>

D. <p>

Answer: B

[<blockquote> is for long running quotation and is block-level element]

Q10. Which of the following is **not** a valid attribute of **<ol> element**?

A. reversed

B. type

C. start

<ol> element- type, start, reversed

**D. order**

Answer: D

Q11. What element should you use instead of **<b>**?

**A. <strong>**

B. Any of <h1> to <h6>

C. <bold>

<b>= <strong>

D. <em>

Answer: A

Q12. What element should you use instead of **<i>**?

A. <strong>

B. Any of <h1> to <h6>

C. <bold>

<i>= <em>

**D. <em>**

Answer: D

Q13. HTML \_\_\_\_\_ are the way to lay out data in your HTML document in **rows and columns**.

A. divs

B. grids

**C. tables**

D. datatables

Answer: C

Q14. Which of the following are the disadvantages of using <table> element to create a page layout?

A. The table will not render until the </table> tag has been read.

B. Using a table forces you into a deeply nested HTML structure that is difficult to maintain.

C. Using a table confuses accessibility devices.

D. Tables are supported in most modern browsers.

Answer: A, B, C

Q15. Consider the statements

Statement 1: you can have a maximum of one <thead> element and one **<tfoot>** element within a **<table>** element

Statement 2: you can have only one **<tbody>** elements within a **<table>** element

- A. Statement 1 is true
- B. Statement 2 is true
- C. Statement 1 is false
- D. Statement 2 is false

Answer: A, D

[you can have many <tbody> elements within a <table> element]

Q16. If you use the <caption> element, it must be the first element within the <table> element.

- A. True
- B. False

Answer: A

Q17. What purpose <aside> element is used?

- A. To define a section that houses a block of major navigational links
- B. To define a section of content that is separate from the content
- C. To create a menu that will be placed on left or right main contents
- D. To create sidebars in multi-column page

Answer: B

Q18. Which one should you use to group one or more heading elements (h1-h6)?

- A. <group>
- B. <header>
- C. <hgroup>
- D. <hn>

Answer: C

Q19. To add a thematic break, you use \_\_\_\_\_.

- A. <br />
- B. <p />
- C. <hr />      thematic break- <hr/>
- D. &nbsp;

Answer: C

Q20. To highlight text, you use\_\_\_\_\_.

- A. <b>
- B. <em>
- C. <mark>      highlight- <mark>
- D. <strike>

Answer: C

Q21. You want to indicate an important item in your content text. Which element do you use?

- A. <b>
- B. <em>
- C. <strong>      important item= <strong>
- D. <i>

Answer: C

Q22. Which element can you add to the <table> element to provide a table caption?

- A. <thead>
- B. <colgroup>
- C. <caption>      table= <caption>
- D. <th>

Answer: C

Q23. Which one is not a semantic element?

- A. <section>
- B. <article>

- 
- C. <header>                      not a semantic- <div>  
D. <div>

Answer: D

Q24. To create navigation bar you should use\_\_\_\_\_.

- A. <nav>  
B. <div>  
C. <section>                      navigationbar- <nav>  
D. <ol>

Answer: A

Q25. In lieu of the <b> element, use the \_\_\_\_\_ element.

- A. <strong>  
B. <span>  
C. <em>                      <b> = <strong>  
D. <i>

Answer: A

Q26. To provide an indication to the browser that it may insert a line break at this location?

- A. <br />  
B. <wbr />  
C. <hr />                      line break at this location- <wbr/>  
D. <p />

Answer: B

Q27. To define the caption of a figure you use

- A. <caption>  
B. <figcaption>  
C. <title>  
D. <footer>                      caption- <caption>

Answer: A

# Programming in HTML5 with JavaScript and CSS3

## Chapter 06: Essential JavaScript and jQuery

---

Q1. Which one of the following creates an object using **literal pattern**?

- A. `var trainee1 = { id: '1234567', name='anwar'}`
- B. `function getTrainee (id, name) { var trainee = new Object(); trainee.id = id; trainee.name = name; return trainee;}`      **literal pattern= var trainee**  
`var trainee1 = getTrainee( '1234567', 'anwar')`
- C. `function getTrainee (id, name) this.id = id; this.name = name;`  
`var trainee1 = getTrainee( '1234567', 'anwar')`
- D. None of the above.

Answer: A

Q2. Which one of the following creates an object using **factory pattern**?

- A. `var trainee1 = { id: '1234567', name='anwar'}`
- B. `function getTrainee (id, name) { var trainee = new Object(); trainee.id = id; trainee.name = name; return trainee;}`  
`var trainee1 = getTrainee( '1234567', 'anwar')`      **factory pattern= function**
- C. `function getTrainee (id, name) this.id = id; this.name = name;`  
`var trainee1 = getTrainee( '1234567', 'anwar')`
- D. None of the above.

Answer: B

Q3. Which method of the Object's **prototype property** is used to determine if the current object is in the specified object's **prototype object chain**?

- A. Constructor
- B. `hasOwnProperty`
- C. `isPrototypeOf`      **prototype property= isPrototypeOf**
- D. `valueOf`

Answer: C

Q4. All the variables are defined without the are **automatically** defined in the **global scope**.

- A. True
- B. False      **all variable global scope automatically**

Answer: A

Q5. There is **no** class keyword in JavaScript.

- A. True
- B. False      **Javascript= only object**

Answer: B

Q6. Consider the statement in JavaScript  
`name ='Anwar Hossain';`

Which of the following will show message?

- A. `alert(name);`
- B. `alert(window.name)`
- C. `alert(window['name'])`      **alter, alter(window)**
- D. `alert(global.name)`

Answer: A, B, C

[Variables without var are global, can be accessed using window.variable notation]

Q7. What is a **privileged method**?

- A. A private method that accesses public data

---

B. A public method that accesses private data

privileged method- public to private

C. A static method

D. A method that is attached to the object's prototype chain

Answer: B

Q8. JavaScript has a namespace keyword.

A. True

B. False

javascript keyword not available but namespace available

Answer: B

Q9. What are the three pillars of object-oriented programming?

A. Encapsulation

B. Inheritance

3 pillars- Encapsulation, Inheritance, polymorphism

C. Polymorphism

D. Reusability

Answer: A, B, C

Q10. What is AJAX used for?

A. To dynamically manipulate DOM

B. To perform asynchronous calls to the server

AJAX- asynchronous

C. To set css properties to elements

D. All of the above.

Answer: B

Q11. Which one correctly activates jQuery IntelliSense?

A. `/// <reference path="jquery-1.8.2.js" />`

B. `// <reference path="jquery-1.8.2.js" />`

jQuery IntelliSense- `///`

C. `/* <reference path="jquery-1.8.2.js" /> */`

D. `<reference path="jquery-1.8.2.js" />`

Answer: A

Q12. Which syntax jQuery uses to locate document object model (DOM) elements?

A. `$(selector)`

B. `$get(selector)`

DOM= `$(selector)`

C. `$(.selector)`

D. `$querySelector(selector)`

Answer: A

Q13. Which method of jQuery object is used to get or set the value of a DOM element that has a value property?

A. value

B. val

jquery Value means- Val

C. get, set

D. eval

Answer: B

Q14. Which one is not a method of the prototype object that is associated every new Object instance you create using new keyword?

A. constructor

B. property

C. hasOwnProperty

new object, new keyword- property

D. isPrototypeOf

Answer: B

Q15. Object has a \_\_\_\_\_ object that is cloned when you use the new keyword to create a new Object instance.

A. prototype

create new object- prototype

- B. constructor
- C. base
- D. this reference

Answer: A

Q16. Consider the JavaScript code block

```
var o = new Object();  
console.log(Object.prototype.isPrototypeOf(o));
```

What will be the output in debug console?

- A. true
  - B. false
  - C. undefined
  - D. null
- 4 option javascript = True

Answer: A

Q17. What will be the output of the following JavaScript statement?

```
Array.prototype.isPrototypeOf([1,2,3]);
```

- A. true
  - B. false
  - C. undefined
  - D. null
- 4 option javascript = True

Answer: A

Q18. Consider the JavaScript code block

```
var o = new Object();  
console.log(o.constructor == Object);
```

What will be the output in debug console?

- A. true
  - B. false
  - C. undefined
  - D. null
- 4 option javascript = True

Answer: A

Q19. Which of the following code block creates Car object instance in factory pattern?

- A. 

```
function Car(model){ this.model=model;};  
var car = new Car('BMW Z4');
```
- B. 

```
var car = { model: 'BMW Z4' };
```
- C. 

```
function createCar(model){  
    var car = new Object();  
    car.model = model;  
    return car;  
}  
var car = createCar('BMW Z4');
```
- D. 

```
var car = {};  
car.model = 'BMW Z4';
```

Answer: C

Q20. Which code block appropriately uses namespace in JavaScript?

- A. 

```
var bazl = bazl || {};  
var bazl.Trainee = function (){};
```
  - B. 

```
var bazl.Trainee = function (){};
```
  - C. 

```
var namespace = bazl;  
var bazl.Trainee = function (){};
```
  - D. All of the above
- block appropriately= || {}



---

Answer: A

Q21. Which one do you use to simulate a class constructor in JavaScript?

- A. Array
  - B. function
  - C. object literals
  - D. IIFE
- simulate class javascript= function

Answer: B

Q22. What one is not a valid way to create a javascript object?

- A. var object = {};
- B. var object = { prop1: "value1", prop2 : "value2"};
- C. var object = Object.create({});
- D. var object = new Object('value1', 'value2');

Answer: D

Q23. How to create a constructor function?

Select one of the following:

- A. Name of the function should be "constructor"
- B. You have to assign a property named "constructor" and assign a function to it
- C. Constructor function cannot be created in javascript
- D. Constructor can be any function, when the function prefixed with "new" keyword at the time of invocation acts like a constructor function.

Answer: D

Q24. How does Javascript achieve Inheritance?

Select one of the following:

- A. Inheritance achieved programmatically
  - B. Inheritance using extends keyword
  - C. Inheritance through Prototype chaining
  - D. Inheritance through Constructor chaining
- Inheritance- prototype chaining

Answer: C

Q25. It is possible to create namespaces in Javascript.

Select one of the following:

- A. True
  - B. False
- javascript keyword not available but namespace available

Answer: A

Q26. Every Javascript function is an object with the constructor as "Function".

- A. True
- B. False

Answer: A

Q6. From the block of code below which of the following can be described as a class.

```
function Person(name,age) {  
    this.name = name;  
    this.age = age;  
}  
var bob = new Person("Bob Smith", 30);  
var susan = new Person("Susan Jordan", 35);
```

- A. Person
- B. bob
- C. susan
- D. none of the above

---

Answer: A

Q27. Look at the class below

```
function Person(name,age) {  
  this.name = name;  
  this.age = age;  
}
```

How can you add function to the **Person objects** that are **already created** or will be created in future?

A. **Person.prototype.info = function(){};**

B. `prototype.Person.info = function(){};`

C. `Person.info = function(){};`

`.prototype.= middle site`

D. `Peroson.proto.info = function(){};`

Answer: A

Q28. Which of the following correctly creates an empty object?

A. **var emptyobject = {};**

B. **var emptyobject = new Object;**

C. **var emptyobject = Object();**

D. `var emptyobject = {};`

Answer: A, B, C

Q29. Which of the following is **private to** the class?

```
function Person(first,last,age) {  
  this.firstname = first;  
  this.lastname = last;  
  this.age = age;  
  var address= '10 Downing St.';  
}
```

A. age

B. firstname

C. lastname

`private- var option`

D. **address**

Answer: D

Q30. Which of the following methods in the class below is **public?**

```
function Person(first,last,age) {  
  this.firstname = first;  
  this.lastname = last;  
  this.age = age;  
  var address= '10 Downing St.';  
  this.info = function () { return this.firstname + ' ' + this.lastname; }  
  var street = function () { return this.address; }  
}
```

A. **info**

B. street

`public= function`

C. Person

D. prototype

Answer: A

Q31. Which sign does jQuery use as a **shortcut for jQuery?**

A. the % sign

B. the ? Sign

C. **the \$ sign**

`shortcut for jquery= $ sign`

D. the # sign

---

Answer: C

Q32. What is the correct jQuery code to set the background color of all p elements to red?

- A. `$("#p").manipulate("background-color","red");`
- B. `$("#p").css("background-color","red");` css= style any thing
- C. `$("#p").style("background-color","red");`
- D. `$("#p").layout("background-color","red");`

Answer: B

Q33. With jQuery, what does the selector: `$("#div.intro")` select?

- A. The first div element with class="intro"
- B. All div elements with id="intro"
- C. All div elements with class="intro" div element with class
- D. The first div element with id="intro"

Answer: A

Q34. Which jQuery method is used to hide selected elements?

- A. `display(none)`
- B. `visible(false)`
- C. `hidden()` hide elements= hide()
- D. `hide()`

Answer: D

Q35. Which jQuery method is used to perform an asynchronous HTTP request?

- A. `jQuery.ajax()`
- B. `jQuery.ajaxSetup()`
- C. `jQuery.ajaxAsync()` HTTP request= JQuery.ajax()
- D. `jQuery.server()`

Answer: A

Q36. What is the correct jQuery code for making all div elements 100 pixels high?

- A. `$("#div").height(100)`
- B. `$("#div").height="100"`
- C. `$("#div").yPos(100)`
- D. `$("#div").setHeight(100)`

Answer: A

Q18. Which jQuery function is used to prevent code from running, before the document is finished loading?

- A. `$(document).ready()`
- B. `$(document).load()` \$(document).ready()
- C. `$(body).onload()`
- D. `$(body).html()`

Answer: A

Q37. Look at the following selector: `$("#div p")`. What does it select?

- A. The first p element inside a div element
- B. The last p element inside a div element
- C. All p elements inside a div element
- D. All div elements with a p element

Answer: C

Q38. What does the selector `$(":disabled")` select?

- A. All hidden elements
- B. All elements that does not contain the text "disabled"
- C. All elements containing the text "disabled"
- D. All disabled input elements

---

Answer: D

# Programming in HTML5 with JavaScript and CSS3

## Chapter 07: Working with forms

---

Q1. What is the **purpose** of a **HTML Form**?

- A. A form captures, validates user input, processes the input and shows the result of processing. **HTML form- collecting data, sent**
- B. A form allows users to signing in and access personalized information.
- C. A form is responsible for collecting data and sending that data is sent back to the server for processing
- D. All of the above

Answer: C

Q2. Which of the following is or **true** for a web server?

- A. Web servers originally were responsible for only receiving and handling requests from the browsers through HTTP.
- B. A Web server hosts web pages and resources of a web application
- C. By born, communication between a web server and a browser is stateless
- D. With the growth of technology, now web servers also handle requests for pages that contain code that will execute at the server and respond with the results of code execution

Answer: A, B, C, D

Q3. Although **HTTP is stateless by born**, Web servers now hold state (data) between webpage requests, so the developer can connect many pages to form a web application.

- A. **True**
- B. False **hold data, request, connect**

Answer: A

Q4. What is the role of a **web browser**?

- A. The web browser provides a **platform-independent** means of displaying webpages that were **written with HTML**.
- B. The web browser responsible for only receiving and handling requests from the browsers through HTTP.
- C. The web browser sends user commands to the web servers
- D. All of the above

Answer: A

Q5. \_\_\_\_\_ enable the **web browsers** to talk to the web servers without clearing the **existing webpages** from the browser window.

- A. Silverlight
- B. CSS
- C. XHTML **Talk web browser= AJAX**
- D. **AJAX**

Answer: D

Q6. Which of the following is or are true about **HTTP**?

- A. A web browser and a web server communicate using HTTP protocol.
- B. HTTP provides a standard for Web browsers and servers to communicate.
- C. HTTP protocol is a text-based protocol, so text commands are sent to the server.
- D. None of the above

Answer: A, B, C

Q7. Which category of status codes indicate **server error**?

- A. 1xx

- 
- B. 2xx
  - C. 3xx
  - D. 4xx
  - E. 5xx

client error- 5XX

server error- 4XX

Answer: D

Q8. Which category of status codes indicate client error?

- A. 2xx
- B. 3xxx
- C. 4xx
- D. 5xx

client error- 5XX

Answer: D

Q9. Which http verb is used to retrieve information is identified by the Request-UI?

- A. GET
- B. POST
- C. PUT
- D. HEAD

retrieve- GET

Answer: A

Q9. Which http verb is used to Request for the server to accept the data being sent from the client to modify existing server data.

- A. GET
- B. POST
- C. PUT
- D. HEAD

request- POST

Answer: B

Q11. All form elements can send data when the Submit button is clicked.

- A. True
- B. False

Answer: B [Page 316, Not all elements can send data when the Submit button is clicked. For example reset button data is never sent]

Q12. How can to locate all selected <option> elements by using the jQuery selector?

- A. \$('option:selected')
- B. \$('option').is('selected')
- C. \$('option').has(':selected')
- D. \$('option selected')

:selected

Answer: A

Q12. How can to locate all selected checkboxes by using the jQuery selector?

- A. \$('input:checked')
- B. \$('input[type=checkbox]:checked')
- C. \$('checkbox:checked')
- D. \$('input[type=checkbox] checked')

:checked

Answer: B

Q13. Which of the following will not trigger the submission of a form?

- A. <button type='submit' name='submitButton' >Submit</button>
- B. <input type='submit' name='submitButton' value='Submit' />
- C. <input type='image' src='/images/submit.gif' alt='Submit' />
- D. <input type='button' name='submitButton' value='Submit' />

submit, image this is true

Answer: D

Q14. Which method do you use to decode a URI-encoded querystring?

- A. decode

- 
- B. decodeURI
  - C. decodeURIComponent
  - D. deseialize

Answer: C

Q15. How do we **pre-populate** a form input field with some text?

- A. You can't
- B. By giving the input tag a value attribute with whatever text you want pre-populated.
- C. By typing it in.
- D. By giving a placeholder attribute

Answer: B

Q16. How do you create a **drop-down box** on a form?

- A. With option tags.
- B. With CSS
- C. With the select tag.
- D. Don't know

Answer: C

Q17. A form has **two required** attributes. They are:

- A. Method and Action
- B. Get and Post
- C. Start and Stop two require- Method and Action
- D. Begin and End

Answer: A

Q19. The **<input>** tag has several kinds of controls which are dictated by the \_\_\_\_\_ attribute.

- A. src
- B. value
- C. name <input> ==type
- D. type

Answer: D

Q20. You can mask the **input typed** into a text field by specifying an **<input>** tag as \_\_\_\_\_.

- A. password
- B. secure
- C. invisible
- D. hidden

Answer: A

Q21. If you wanted to display a list of **two hundred countries** which control should you use:

- A. radio button
- B. checkbox
- C. select list 200= select list
- D. slide widget

Answer: C

Q22. Which of the following is true?

- A. The <option> tag does not have a value attribute. If selected, it passes its displayed value.
- B. The <option> tag only passes values through its value attributes. The display value is never passed.
- C. The <option> tag passes values through the value tag if it is present, and passes the value displayed if the value attribute is not given.
- D. The purpose of the <option> tag is to specify the type of control to use, not to pass values.

---

Answer: C

Q23. The developer can choose to **allow more** than one option to be selected by **choosing** the \_\_\_\_\_ attribute.

- A. **multiple**
- B. many
- C. numerous
- D. HTML does not provide an attribute that allows the developer to enable more than one option to be selectable on a list

Answer: A

Q24. In order to clear the values in a form, the developer specifies an **<input>** tag with:

- A. the type attribute set to empty
- B. the type attribute set to clear
- C. the type attribute set to refresh
- D. **the type attribute set to reset**

Answer: D

Q25. \_\_\_\_\_ Defines the **caption** to the **fieldset** tag.

- A. <legend>
- B. <h1>
- C. **<caption>** caption field tag= <caption>
- D. <header>

Answer: C

Q26. A label's for attribute should **match the input's** \_\_\_\_\_ attribute.

- A. Typ
- B. **Id** match input attributes
- C. Name
- D. Class

Answer: B

Q27. The **action attribute** tells the form?

- A. How to send the form's data
- B. **Where to send the form's data**
- C. When to send the form's data
- D. What data in forms to send

Answer: B

Q28. The viewer never sees the **transfer** of data when the form uses **<form method="get">**.

- A. True
- B. **False**

Answer: B

Q29. **Checkbox buttons** let users select one or more of a particular set of choices.

- A. **True**
- B. False

Answer: A



# Programming in HTML5 with JavaScript and CSS3

## Chapter 08: Websites and services

---

### node.js- network applications

Q1. What is **node.js**?

- A. Node.js is a JavaScript framework that fills gaps in HTML5 features in browsers
- B. Node.js is a JavaScript framework that allows to manipulate HTML DOM in browser-independent way
- C. Node.js is a platform built on Chrome's JavaScript runtime for easily building fast and scalable network applications
- D. Node.js is a platform for easily building application based on google app

Answer: C

Q2. Which platform **Node.js** is built on?

- A. Microsoft JScript engine
- B. Edge Trident engine
- C. Google Chrome V8 engine
- D. ECMAScript engine

node.js built= chrome V8

Answer: C

Q3. How do you **import** a module in code with **node.js**?

- A. Using **require** function
- B. Using import function
- C. Using load function
- D. Using open function

import node.js=require function

Answer: A

Q4. Using **Node.js**, you can write JavaScript that executes on the **back-end server**.

- A. True
- B. False

Answer: A

Q5. Which of the following is **not true** for the **Node.js platform**?

- A. The Node.js platform is used for easily building fast, scalable network applications.
- B. The Node.js platform implements an event-driven, non-blocking I/O model and is lightweight and efficient.
- C. The Node.js platform is perfect for data-intensive, real-time applications that run across distributed devices.
- D. Node.js can be plugged to any modern browsers so that it can take advantage of the platform

Answer: D

[Every modern browser has JavaScript runtime built-in. Node.js can replace or do any to those. Node.js is back-end JavaScript platform]

Q6. Which one do you use to **install node modules**?

- A. Node executable
- B. npm

- 
- C. nuget
  - D. bower

Answer: B

[Node package manager]

Q7. Which Node command do you use to load a module?

- A. load
  - B. exports
  - C. use
  - D. require
- node modules- require

Answer: D

Q8. Which low-level built-in module do you use to create a http server object?

- A. express
  - B. server
  - C. http
  - D. socket.io
- http server object http

Answer: C

[Your use expressjs to create a server that is built around http and express is not built-in]

Q9. How do create basic HTTP server?

- A. using the http module's create() method
  - B. using the http module's createServer() method
  - C. using the http module's server() method
  - D. using the http module's listen() method
- HTTP server= createServer

Answer: B

Q10. Which method of http module do you to create a server object?

- A. create
- B. server
- C. createServer
- D. request

Answer: C

Q11. What is the correct signature of the createServer method of http module?

- A. The createServer method accepts a function that has request object parameter
- B. The createServer method accepts a function that has response object parameter
- C. The createServer method accepts a function that has request object and response object parameters
- D. The createServer method accepts a function that has server object parameter

Answer: C

Q12. What does the createServer method of http module return?

- A. A request object
- B. A response object
- C. A server object
- D. A stream that exposes methods to send response to client

Answer: D

---

Q13. Which method of the server object starts the server and makes it listen for **incoming request** at a specific port?

- A. start
- B. run
- C. listen**
- D. execute

Answer: C

Q14. Which **method** of the response object do you use to set **http header** explicitly?

- A. header
- B. set
- C. write
- D. writeHead**

Answer: D

[You can use `setHeader` method to set header implicitly. Example  
`responseObject.setHeader('Content-Type', 'text/html')`]

Q15. Which one sets http header to response stream correctly?

- A. `response.writeHead({  
 'Content-Type': 'application/json',  
 'X-Powered-By': 'bacon'  
});`
- B. `response.writeHead(200, {  
 'Content-Type': 'application/json',  
 'X-Powered-By': 'bacon'  
});`**
- C. `response.writeHead(200, {  
 {'Content-Type': 'application/json'},  
 {'X-Powered-By': 'bacon'}  
});`
- D. `response.writeHead(200, [  
 {'Content-Type': 'application/json'},  
 {'X-Powered-By': 'bacon'}  
]);`

Answer: B

[Correct `writeHeader` (statuscode, headers)

statuscode- 3-digit number

headers -passed as json like `{header1: header string,header2:header string... }`]

Q16. You are creating a server object using the http module. To test you have written the following code.

Line 01: `const http = require('http');`

Line 02: `var server =http.createServer((r,s)=>{`

Line 03:

Line 04:

Line 05: `//more code`

Line 06: `});`

Line 07: `server.listen (8080);`

Which code should you use to send test response to the browser from the server at line 03 and 04?

- 
- A. `r.writeHead(200, {'Content-Type': 'text/plain'});`  
`r.end('Hello World from Node.js!\n');`
  - B. `s.writeHead(200, {'Content-Type': 'text/plain'});`  
`s.end('Hello World from Node.js!\n');`
  - C. `server.writeHead(200, {'Content-Type': 'text/plain'});`  
`server.end('Hello World from Node.js!\n');`
  - D. `http.writeHead(200, {'Content-Type': 'text/plain'});`  
`http.end('Hello World from Node.js!\n');`

Answer: B

[createServer accepts a function

The first parameter of the function wraps request object, the second parameter wraps response object.

To send response you must use the response object methods.

★★

Here arrow function notation is used. Every browser now accepts these notation.

function f () {statement} is equivalent to () => statement;

function f (x,y) {} is equivalent to (x,y) => {}

For more see lecture notes]

Q17. What happens when you call the listen method on server object by passing a port number?

- A. The IP address is set to 0.0.0.0 and the server start listening to the port specified for incoming request
- B. Answer random is set to the server and the server start listening to the port specified for incoming request to the set IP
- C. The IP address is set to localhost and the server start listening to the port specified for incoming request to the localhost
- D. The listen method will produce error if a valid IP is not passed along with the port number

Answer: C

[server object.listen (port) results to the server address http://localhost:port

The IP for local machine is 127.0.0.1

http://127.0.0.1:port also works]

Q18. Which method of url module should you use `parse query QueryString` from a url?

- A. resolve
- B. format
- C. toString
- D. parse

parse- parse

Answer: D

Q19. Which on correctly calls the parse method in order to extract `QueryString` from a `request` object?

- A. `url.parse (requestObject.url)`
- B. `url.parse (requestObject.url,true)`
- C. `url.parse (requestObject.url,false)`
- D. `url.parse (requestObject, false)`

parse method- url, true

Answer: B

[The first parameter is url, the second one boolean to indicate whether the query string is to be parsed. If true query string will be parsed. Default is false.]

---

Q20. Which node module helps you to **parse QueryString from a URL**?

- A. http
- B. url**
- C. formidable parse- URL
- D. utilities

Answer: B

Q21. You want to extract QueryString values from a URL. You are using url module and you want QueryString values are passed as an object. You have the code (line numbers are only reference):

```
1: var url = require('url');
2: var adr = 'http://localhost:8080/default.htm?year=2017&month=february';
3:
4: console.log(q.year);
```

Which code should you write at line 2?

- A. var q = url.parse(adr);
- B. var q = url.parse(adr, true);** true
- C. var q = url.parse(adr, false);
- D. var q = url.parse(adr.query);

Answer: B

Q22. You have created a Node.js module in Math.js file and the module exported a function add that accepts two numbers returns sum of the two numbers passed as arguments. How can you use the module?

- A. var math = require ('./Math.js');**  
**var result = math.add(5, 4);**
- B. var math = require ('Math.js');
- C. var math = require ('Math');
- D. var math = load ('./Math.js');

Answer: A

[Your own local module must have relative address in require function]

Q23. What is the role of a Node.js package?

- A. A Node.js package is a set of code wrapped inside in function and exported so that it can be called from other code.
- B. A Node.js package is a collection of modules with a manifest that describes the package and its dependencies and can be publicly and privately published for you and others to use.**
- C. A Node.js package is a web application created using ExpressJS framework.
- D. None of the above

Answer: B

Q24. A \_\_\_\_\_ is a **shareable file** that promotes reuse.

- A. Application
- B. Module**
- C. Package manifest
- D. npm command shareable file- Module

Answer: B

---

Q25. You are creating a Node.js module using the code (line numbers are for reference only)

Line 1: function Add(a, b) {

Line 2:   return a+b;

Line 3: }

Line 4:

What should be included at line 3?

A. export ( add )

B. exports.add = add;

C. Function.prototype.add = add;

D. Exports = add;

Answer: B [To expose things we use exports or module.exports.

For example,

var x = 10;

exports.x = x;

exports.y = function () { return 'Hello';}

same effect will be if written below

module.exports.x = x;

module.exports.y = function () { return 'Hello';}

]

Q26. Which tool do you use to install node modules?

A. node

B. gulp

C. npm

install node modules= npm

D. nuget

Answer: C

Q27. You are creating a node module. The code is like below: (Line numbers are only for illustrative purpose)

var fs = require('fs');

function getContent(filename, cb){

  //code

}

Which code should you add at line 5?

A. exports = getContent;

B. exports.getContent = getContent;

getContent=getContent

C. exports ( getContent );

D. module.exports ( getContent )

Answer: B

Q28. Which file contains metadata that describes your node.js package or application?

A. readme.md

B. package.json

C. package.manifest

D. app.js

Answer: C

Q29. To create package.json for your application, which command do you use?

- 
- A. node start
  - B. npm start
  - C. node init package.json- npm init
  - D. npm init**

Answer: D

Q30. Which one is the manifest file in **Node.js package**?

- A. package.json**
- B. README.md
- C. lib\main.js. Node.js package= package.json
- D. bin\app.js

Answer: A

Q31. What is the purpose of the manifest file in **Node.js package**?

- A. It loads the required dependency modules
- B. It describes the package and its dependencies** Node.js package= dependencies
- C. It contains help to get the user started
- D. All of the above

Answer: B

Q32. What can you publish by using **npm**?

- A. A JavaScript file
- B. A module
- C. A JavaScript class npm= A package
- D. A package**

Answer: D

Q33. Which command of the **Node Package Manager** creates the package manifest file package.json?

- A. npm start package Manager- npm init
- B. npm create
- C. npm init**
- D. npm -g install

Answer: C

Q34. How do you **install a package named contoso** for local use?

- A. npm install contoso**
- B. npm -i contoso
- C. npm -g contoso
- D. npm contoso Install package- contoso

Answer: A

Q35. You are creating a web server using Node.js with Expressjs. You want to serve static files in public folder under root. You have written code like below (line numbers are for reference only)

Line 1: var express = require('express');

Line 2: var app = express();

Line 3:

Line 4: var port = 8080;

Line 3: app.listen(port);

---

What should you write at line 3?

- A. `app.use(__dirname + '/public');`
- B. `express.static(__dirname + '/public');`
- C. `app.use(express.static(__dirname + '/public'));`
- D. `app.use(express.get('/public/*'));`

Answer: C

Q36. What does the Node.js global object `__dirname` returns?

- A. The name of the Node installation directory
- B. The name of the directory that the currently executing script resides in
- C. The name of the root directory of the web application
- D. The name of the user local directory where user packages are installed

Answer: B

Q37. Using \_\_\_\_\_, you can write JavaScript that makes **asynchronous** calls the server and processes the result.

- A. HTML5
- B. AJAX
- C. Browser Plug-in
- D. Browser Extension

asynchronous= AJAX

Answer: B

Q38. To send requests to a **web service** from your webpage, you use \_\_\_\_\_.

- A. JavaScript
- B. AJAX
- C. ExpressJS
- D. Socket.io

Web service- AJAX

Answer: B

Q39. **REST** stands for \_\_\_\_\_.

- A. Request State Transfer
- B. Response State Transfer
- C. Real State Transfer
- D. Representational State Transfer

REST- Representational State Transfer

Answer: D

Q40. \_\_\_\_\_ attempts to use the standard operations of HTTP (or similar protocols) by mapping create, retrieve, update, and delete (CRUD) operations to HTTP methods.

- A. AJAX
- B. Node JS
- C. jQuery
- D. REST

CRUD- REST

Answer: D

Q41. Which one provides the ability to **send data** to the server and receive data back from the server without requiring a repaint of the browser screen

- A. Websocket
- B. Node.js
- C. Web services



---

D. ASP.Net

Answer: C

[Ref: Page 364]

Q42. Which is one is an implementation of REST Web service?

- A. Socket.io
- B. Node.js
- C. Web API
- D. WCF

REST web service= Web API

Answer: C

[Ref: Page 364]

Q43. Which one is an example of Web service that exposes an arbitrary set of operations?

- A. Socket.io
- B. Node.js
- C. Web API
- D. WCF

arbitrary operations= WCF

Answer: D

[Ref: Page 364]

There are two major classes of web services. The first is called Representational State Transfer (REST), in which the primary purpose of the service is to manipulate web resources by using a uniform set of stateless operations. The second is arbitrary web services, in which the service might expose an arbitrary set of operations.

Web API is REST based service

WCF is can be used for services that exposes operations as you need]

Q44. Which one is true for a REST service?

- A. REST uses the standard operations of HTTP by mapping create, retrieve, update, and delete (CRUD) operations to HTTP methods
- B. REST uses an arbitrary set of operations for create, retrieve, update, and delete (CRUD) operations
- C. REST uses SOAP request for create, retrieve, update, and delete (CRUD) operations
- D. All of the above

Answer: A

[Ref.: Page 365]

Q45. Which HTTP method is used in REST to retrieve data or perform an operation that does not change server-side data?

- A. GET
- B. POST
- C. PUT
- D. DELETE

HTTP, REST, does not= GET

Answer: A

[Ref.: Page 365]

Q46. Which HTTP method is used in REST to update data or retrieve data when complex parameter values need to be sent to the server?

- A. GET
- B. POST

complex parameter

- C. PUT
- D. DELETE

Answer: B

[Ref.: Page 365]

Q47. Which HTTP method is used in REST to insert new data?

- A. GET
- B. POST
- C. PUT
- D. DELETE

insert new data= PUT

Answer: C

[Ref.: Page 365]

Q48. Which one retrieves the customer number five from a REST service?

- A. HTTP Method: GET, URL: http://localhost:8080/Customer
- B. HTTP Method: GET, URL: http://localhost:8080/Customer/5
- C. HTTP Method: PUT, URL: http://localhost:8080/Customer/5
- D. HTTP Method: POST, URL: http://localhost:8080/Customer/5

five= Get, 5

Answer: B

Q49. Which one retrieve all orders from a REST service?

- A. HTTP Method: GET, URL: http://localhost:8080/Orders
- B. HTTP Method: GET, URL: http://localhost:8080/Orders/5
- C. HTTP Method: PUT, URL: http://localhost:8080/Orders
- D. HTTP Method: POST, URL: http://localhost:8080/Orders

Get not mention number

Answer: A

Q50. Which middleware method on expressjs app object do you use to mount a folder as the root of the website?

- A. use
- B. static
- C. get
- D. Post

Answer: A

[Ref.: Page 367]

Q51. Which middleware method on expressjs do you use to static files?

- A. express.use
- B. express.static
- C. express.get
- D. express.post

Answer: A

[Ref.: Page 367]

Q52. The primary object that makes an AJAX call is \_\_\_\_\_?

- A. \$.ajax
- B. XML
- C. XMLHttpRequest.
- D. Http

AJAX call= XMLHttpRequest

---

Answer: C

Q53. What readyState code of the XMLHttpRequest object indicates all operations are finished upon an AJAX call to the server?

- A. 1
  - B. 2
  - C. 3
  - D. 4
- AJAX call, XMLHttpRequest= 4

Answer: D

[Ref: Page 370]

0 Uninitialized The open method has not been called yet.

1 Loading The send method has not been called yet.

2 Loaded The send method has been called; headers and status are available.

3 Interactive Downloading; the response properties hold the partial data.

4 Completed All operations are finished.]

Q54. Which event of the XMLHttpRequest object you must subscribe to handle the asynchronous call, you must subscribe to?

- A. the onreadystatechange event
- B. the onprogress event
- C. the onsuccess event
- D. the onabort event

Answer: A

Q55. Which shorthand jQuery method do you use to load data from the server by using an HTTP GET request?

- A. \$.ajax();
- B. \$.get()
- C. \$.getScript()
- D. \$.load()

Answer: B

Q56. Which shorthand jQuery method do you use to load SON-encoded data from the server by using an HTTP GET request?

- A. \$.get();
- B. \$.getJSON()
- C. \$.getScript()
- D. \$.load()

Answer: B

Q57. When you use jQuery to execute an AJAX call, \_\_\_\_\_ is returned.

- A. an XMLHttpRequest object
- B. a promise object
- C. a JSON object
- D. a SOAP response

Answer: B

[Ref: Page 378]

Q58. Which method of the promise object returned by a jQuery AJAX call to add handlers to be called when the AJAX call has completed, regardless of whether it was successful?

- 
- A. `always()`
  - B. `done()`
  - C. `progress()`
  - D. `success()`

Answer: A

[Ref. Page 378

`always()`: Add handlers to be called when the AJAX call has completed, regardless of whether it was successful

`done()`: Add handlers to be called when the AJAX call is successful

`fail()`: Add handlers to be called when the AJAX call has failed

`progress()`: Add handlers to be called when the AJAX call generates progress notifications]

Q59. **CORS** stands for \_\_\_\_\_.

- A. cross-origin result sharing
  - B. common-origin result sharing
  - C. common-origin resource sharing
  - D. **cross-origin resource sharing**
- cross-origin resource sharing

Answer: D

Q60. What is **CORS**?

- A. A browser specification to prevent xss attack
- B. A browser specification that defines ways for a web server to allow its resources to be accessed by a webpage from the same domain
- C. **A browser specification that defines ways for a web server to allow its resources to be accessed by a webpage from a different domain**
- D. A browser specification that defines ways for search engine optimization

Answer: C

Q61. You have a web service that provides read-only access to data. You want to expose this web service so it can be called from any other website. What header would you return?

- A. `Allow: *`
- B. `Access-Control: *`
- C. `Allow-Origin: *`
- D. **`Access-Control-Allow-Origin: *`**

Answer: D

# Programming in HTML5 with JavaScript and CSS3

## Chapter 09: Asynchronous operations

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Q1. What is the **advantage of executing long-running code asynchronously?**

- A. Asynchronous operations use CPU-cores efficiently so that long-running code can finish quickly
- B. Asynchronous operations execute long-running code with higher priority
- C. Asynchronous operations create another execution path so that the long-running code can execute on one execution path while the user interface is responsive on another execution path**
- D. All of the above

Answer: C

[Ref. Page 393]

Q2. \_\_\_\_\_ is executed on a thread that is different from the **main thread**, a thread being a **separate execution** path.

Which one correctly fits in the blank space?

- A. An asynchronous operation**
- B. A synchronous operation
- C. Every jQuery method
- D. Every JavaScript method

Answer: A

Q3. **jQuery animations** are **performed asynchronously**.

- A. True**
- B. False

Answer: A

[Ref.: Page 393]

Q4. What is a **promise in JavaScript**?

- A. An alternative mechanism to execute a task asynchronously.
- B. A mechanism to schedule work to be done on a value that might not yet be computed.**
- C. A mechanism to load large JavaScript file asynchronously using a background thread.
- D. A mechanism to create full-duplex persistent connection in old browsers.

Answer: B

[Ref.: Page 394]

Q5. Which one is not a valid state of a **promise object**?

- A. pending
- B. resolved
- C. rejected
- D. faulted**

Answer: D

[Ref.: Page 394]

---

---

Q6. What are the possible states of a promise object can be?

- A. Pending
- B. Resolved
- C. Rejected
- D. Done

Answer: A, B, C

[Ref.: Page 394]

Q7. What is the state of a **promise object** when it starts?

- A. pending
- B. resolved
- C. rejected
- D. unknown

Answer: A

[Ref.: 394]

Q8. What is the benefit of using the **promise object**?

- A. It enables you to execute browser-independent AJAX calls to REST services
- B. It enables you to create persistent connection with a remote server easily
- C. It enables you to write non-blocking logic that executes asynchronously without having to write a lot of synchronization and plumbing code.
- D. All of the above

Answer: C

[Ref.: Page 394]

Q9. Which one correctly defines a **promise object**?

- A. A value which may be available now, or in the future, or never.
- B. An operation that is not available now for calling but may be available in future
- C. A placeholder of object instance which will be created in future
- D. A value which can never be computed

Answer: A

[Ref.: Page 394]

Q10. Which one is the correct syntax to create a promise object?

- A. `new Promise (function (resolve, reject) { /*...*/ });`
- B. `new Promise (resolve, reject) { /*...*/ };`
- C. `new Promise (function () { /*...*/ });`
- D. `new Promise ([resolve, reject]) { /*...*/ };`

Answer: A

Q11. Consider the code block below

```
function asyncOperation(){  
    var promise = new Promise(function(resolve, reject){  
        var result = callALongOperation();  
        if(somethingBadHappened) reject('Bad happened')  
        resolve(result);  
    });  
    return promise;
```

---

```
};
```

Which one correctly calls asyncOperation?

A. `var retVal = asyncOperation();  
console.log(retVal);`

B. `try {  
 var retVal = asyncOperation();  
 console.log(retVal);  
}  
catch(e){}`

C. `asyncOperation()  
 .then(function (retVal){  
 console.log(retVal);  
 })  
 .catch(function(err){});` asyncOperation- then, catch

D. None of the above

Answer: C

[Promise is called like below

`Promise.then(function(..){}).catch(function(..){..})`

A, B called synchronously. Will log undefined]

Q12. Which method chains asynchronous operations?

A. `pipe()`

B. `done()`

C. `resolve()`

D. `always()` chains asyncOperation- pipe()

Answer: A

[Ref.: Page 399]

Q13. Which method creates a resolved promise object?

A. `resolve()`

B. `done()`

C. `$.when()`

D. `$.Deferred()`.

Answer: C

resolved promise = \$.when()

[Ref.: Page 402]

Q14. Which method do you call to subscribe to the successful completion of an asynchronous operation?

A. `done`

B. `always`

C. `complete`

D. `success`

Answer: A

[Ref.: Page 398]

Q15. Which method do you call on the deferred object to indicate a change in progress?

A. `progress`

B. `notify`

C. `done`

---

---

D. resolve

Answer: B

[Ref.: Page 403]

Q16. Which one defines a **specification for using JavaScript** everywhere?

A. jQuery

B. Node.js

**C. CommonJS**

D. ECMA JavaScript

Answer: C

[Ref.: Page 394]

Q17. Which method of a promise object should you use to execute your code upon successful completion?

**A. done**

B. when

C. always

D. resolve

Answer: A

[Ref.: Page 397]

Q18. Which method of a promise object should you use to execute your code when the **asynchronous call** has completed, regardless of success or failure?

A. done

B. when

**C. always**

D. resolve

asynchronous call- always

Answer: C

[Ref.: Page 397]

Q19. You want to chain several asynchronous calls together. Which **promise method** will you use?

A. done

**B. pipe**

C. always

D. resolve

promise method- pipe

Answer: B

[Ref.: 399]

Q20. Which method of the deferred object do you use, when you want to **update the progress**?

A. resolve

B. reject

**C. notify**

D. progress

update the progress- notify

Answer: C

[Ref.: Page 400]

Q21. Which method of **promise object** do you use to execute code when the notify method on deferred object is executed?

A. when



- 
- B. done
  - C. always
  - D. progress

Answer: D

[Ref.: Page 400]

Q22. Which one do you use to create a **promise object in jQuery**?

- A. \$.Deferred()
- B. \$.Promise()
- C. \$.Ajax()
- D. \$.Async()

promise object in jquery- \$.Deferred()

Answer: A

[Ref.: Page 395]

Q23. Which one is **not** a method of jQuery deferred object?

- A. resolve ()
- B. reject ()
- C. notify ()
- D. then ()

not a jQuery object- Then()

Answer: D

[Ref.: Page 396]

Q24. With jQuery, the **promise** object's \_\_\_\_\_method chains **asynchronous operations**.

- A. progress
- B. then
- C. pipe
- D. always

promise asynchronous operations- pipe

Answer: C

[Ref.: Page 400]

Q25. Which method do you call on the promise object to indicate a **change in progress**?

- A. progress
- B. notify
- C. done
- D. resolve

change in progress- notify

Answer: A

Q26. Which one is used to **execute a script file asynchronously**?

- A. promise
- B. web worker
- C. node.js
- D. websocket

Answer: B

[Ref.: Page 404]

Q27. In the web worker code, you want the **asynchronous code to update the DOM**. Which method can you use?

- A. updateDom().
- B. workerUpdate().

---

C. `dom()`.

D. You cannot update the DOM from within the asynchronous code.

Answer: D

[Ref.: Page 406]

if you need to access the DOM, the web worker must post a message back to the creator, and the creator must process the message and access the DOM as needed]

Q28. Which object can be used when the web worker and the creator need to reference the same object?

A. Mutex.

B. Semaphore.

C. Closure.

D. The web worker and the creator cannot reference the same object.

Answer: D

[Ref.: Page 404, 414]

Web workers lack synchronization locks]

Q29. Web workers supports synchronization locks, critical sections, semaphores, or mutexes.

A. True

B. False

Answer: B

[Ref.: Page 404]

Web workers lack synchronization locks]

Q30. Which method do you use for communicating to and from the web worker?

A. `message`

B. `postMessage`

C. `onmessage`

D. `send`

Answer: B

[Ref.: Page 405]

# Programming in HTML5 with JavaScript and CSS3

## Chapter 10: WebSocket communications

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---

Q1. Which one is an example of two-way communications?

- A. A Web service application
- B. A single page web application
- C. A chat room application
- D. A REST services application

two-way communication-

Answer: C

[Ref.: Page 415]

Q2. Which one of the following provides bidirectional communication support to your web applications?

- A. Web API
- B. WCF Service
- C. WebSocket API
- D. jQuery AJAX

bidirectional Communication-WebSocket

Answer: C 415

Q3. Which one is true for a two-way communications pattern between a server and a client in a web application?

- A. Only the browser initiates connection and sends messages to the server
- B. Only the server initiates connection and sends messages to the server
- C. The browser initiates connection and sends messages to the server and also the server can send messages to the browser
- D. None of the above

two-way communication- sends messages, send message(2)

Answer: C

[Ref.: Page 415]

Q4. Which of the following is a web technology that provides full-duplex communications over a single TCP connection?

- A. RPC
- B. XML Web Service
- C. DCOM
- D. WebSocket protocol

full-duplex, TCP connection- WebSocket Protocol

Answer: D

[Ref.: Page 416]

Q5. Which one of the following provides a standardized way for the server to send content to the browser and to allow messages to be passed back and forth while keeping the connection open?

- A. RPC technology
- B. AJAX
- C. WebSocket protocol
- D. SOAP protocol

standardized- WebSocket protocol

---

Answer: C

[Ref.: Page 416]

Q6. The **WebSocket** protocol is

- A. an independent, TCP-based protocol
- B. an independent, UDP-based protocol
- C. a HTTP-based protocol
- D. dependent on MSMQ protocol

WebSocket- independent, TCP

Answer: A

[Ref.: Page 416]

Q7. What is the relation of **WebSocket protocol** with **HTTP**?

- A. Both are independent of TCP-based protocol
- B. Both are dependent of TCP-based protocol
- C. **WebSocket handshake is interpreted by HTTP servers as a request to switch to WebSocket protocol**
- D. All of the above

HTTP, WebSocket- Request to switch

Answer: C

[Ref.: Page 416]

Q8. The \_\_\_\_\_ **enables** a persistent connection between the **client** (browser) and the **server**?

- A. **WebSocket**
- B. Web worker
- C. Geolocation
- D. HTTP protocol

enables, client, server- WebSocket

Answer: A

[Ref.: Page 416]

Q9. Which is **not** a method of a **WebSocket object**?

- A. WebSocket constructor
- B. **open**
- C. close
- D. send

not WebSocket object- Open

Answer: B

[Ref.: Page 416]

Q10. Which one of following **communication** channels the **WebSocket** is designed for?

- A. Multiplexing
- B. Simplex
- C. **Full-duplex**
- D. Uni-directional

communication, websocket- full duplex

Answer: C

[Ref.: Page 415]

Q11. Which of the following is a **valid WebSocket instantiation**?

- A. wsConnection = new WebSocket('http://studygroup.70480.com');
- B. wsConnection = new WebSocket('tcp://studygroup.70480.com',['soap','xmpp']);
- C. wsConnection = new WebSocket('wss://studygroup.70480.com',['soap','xmpp']);
- D. wsConnection = new WebSocket('ftp://studygroup.70480.com',['soap','xmpp']);

Valid WebSocket instantiation-wss

---

Answer: C

[Ref.: Page 416]

A method that requires a URL argument and can optionally accept additional parameters to define the sub-protocol that you'll use, such as chat or rpc. All of the are valid construction

```
new WebSocket('ws://studygroup.70480.com')
```

```
new WebSocket('wss://studygroup.70480.com');
```

```
new WebSocket('ws://studygroup.70480.com',['soap','xmpp']);
```

```
new WebSocket('wss://studygroup.70480.com',['soap','xmpp']);]
```

Q12. Which of the following statements **properly handles** the reception of **data from a WebSocket?**

A. `wsConnection.onpost = function(msg){..};`

B. `wsConneciton.onreceive = function(msg){...};`

**C. `wsConnection.onmessage = function(msg){...};`**

properly handle, Data  
(on message, function msg)

D. `wsConnection.ongetdata = function(msg){...};`

Answer: C

[Ref. Page 417]

Q13. Which is **true** in about the **WebSkocket object?**

A. The *WebSocket* object, which connects to the server when the connect method is invoked

B. The *WebSocket* object, which connects to the server when first message is sent to server using the send method

**C. The *WebSocket* object, which connects to the server when its constructor is invoked**

D. The *WebSocket* object, which connects to the server when you set the URL after its constructor is invoked

Answer: C

[Page 417]

Q14. Which of the following is **not** an event of **WebSocket object?**

A. `onopen`

B. `onclose`

C. `onmessage`

WebSocket Object-`onopen`, `onclose`, `onmessage`

**D. `onready`**

Answer: D

[There are four events

`onclose`: An event property that's called when the socket is closed.

`onerror`: An event property that's called when there is an error.

`onmessage`: An event property that's called when a message is received.

`onopen`: An event property that's called when WebSocket establishes a connection.]

Q15. Which of the following are the **methods of Websocket object?**

A. `open`

**B. `close`**

**C. `send`**

D. `ready`

Answer: B, C

[Ref.: Page 416]

There is no open method on the WebSocket object. When you instantiate the WebSocket object, it automatically attempts to open asynchronously. There is no ready method]

---

Q16. When working with the **WebSocket object**, which event can be used to **retrieve** the data that was received from the server?

- A. onopen
- B. onclose
- C. **onmessage**
- D. onerror

WebSocket Object, retrieve- onmessage

Answer: C

[Ref.: Page 417, 419]

Q17. Which property of the WebSocket object indicates the **binary data** format the onmessage event receives?

- A. type
- B. format
- C. messageType
- D. **binaryType**

binary data- binary type

Answer: D

[Ref.: Page 417]

Q18. The **WebSocket URL** begins with \_\_\_\_\_.

- A. http:// or https://
- B. **ws:// or wss://**
- C. tcp:// or http://
- D. http:// or ftp://

URL-ws:// or wss://

Answer: B

[Ref.: Page 417]

wss:// for secure WebSocket protocol]

Q19. How do you **open an WebSocket connection?**

- A. Create a WebSocket object and call the open method when you want to open a WebSocket connection
- B. Create a WebSocket object and call the connect method when you want to open a WebSocket connection
- C. **There is no method to open WebSocket connection. When we instantiate the WebSocket object, it automatically attempts to open asynchronously**
- D. None of the above

Answer: C

[Ref.: Page 419]

Q20. Which property of the **WebSocket object** do you check to obtain the **state of the connection?**

- A. state
- B. ready
- C. **readyState**
- D. status

Answer: C

[Ref.: Page 417]

Q21. Which value of readyState attribute of the **WebSocket object** indicates that the connection has been closed or could **not be opened?**

- A. 0

---

B. 1

C. 2

WebSocket not be opened- 3

D. 3

Answer: D

[Ref.: Page 419]

Q22. You want to ensure that the **WebSocket connection** is not disconnected as a **result of inactivity**. How can you accomplish this?

A. Add code to the onclose event to reopen the connection when it's closed.

B. Add code to send an empty message periodically before the connection is closed.

C. Set the keepAlive property on the WebSocket object to true.

D. Create a new WebSocket object each time you send a message

Answer: B

[Ref.: Page 420]

Q23. Which of the following is or are **websocket libraries**?

A. Socket.io

B. SignalR

libraries- Socket.io, SignalR

C. Express

D. AngularJS

Answer: A, B

[Ref.: Page 423]

Q24. Which **library** would you use if you are creating a **Node.js** website and want to write browser-independent code that uses WebSocket?

A. SignalR

B. Socket.IO

Node.js- Socket.IO

C. FarmSockets

D. AgnosticSocket

Answer: B

[Ref.: Page 424]

Q25. How to **transmit WebSockets data**?

A. push(data)

B. socketConnection.push(data)

transmit- socketConnection.send(data)

C. socketConnection.send(data)

D. send(data)

Answer: C

Q26. Which of the following **activities** usually **WebSockets perform**?

A. Use a persistent connection

B. Permit server-side push

C. Do not permit client to send request to server

D. More overhead

Answer: A, B

Q27. Which one do you use to **broadcast the message** to all clients?

A. socket object

B. socket.broadcast object

broadcast message- io.sockets object

---

C. io.sockets object

D. io object

Answer: C

[Ref.: Page 427]

socket.emit – for the current client

socket.broadcast.emit – for all clients except the current client

io.sockets.emit – for all clients]

Q28. Which one do you use to broadcast the message to all clients except the current client?

A. socket object

B. socket.broadcast object

C. io.sockets object

D. io object

Answer: B

[Ref.: Page 427]

socket.emit – for the current client

socket.broadcast.emit – for all clients except the current client

io.sockets.emit – for all clients]

Q29. You are working with socket.io. You the code like below (Line numbers are illustrative purpose only)

```
1. io = require('socket.io').listen(server);
2. io.sockets.on('connection', function (socket) {
3.
4.
5. });
```

You want that whenever a client is connected an event will triggered on the client. Which code block will you insert at line 3?

A. io.sockets.emit('connectionSuccess','You are connected.');

B. socket.emit('connectionSuccess','You are connected.')

C. socket.broadcast.emit('connectionSuccess','You are connected.')

D. socket.on(('connectionSuccess','You are connected.')

Answer: B

[Ref.: Page 428]

Q30. You are working with socket.io. You the code like below (line numbers are only for reference)

```
1. io = require('socket.io').listen(server);
2. io.sockets.on('connection', function (socket) {
3.
4.
5. });
```

You want that whenever a client is connected an event will triggered on all the clients except the current client. Which code block will you insert at line 3?

A. io.sockets.emit('newConnected','You are connected.');

B. socket.emit('newConnected','You are connected.')

C. socket.broadcast.emit('newConnected','You are connected.')

D. socket.on(('newConnected','You are connected.')

Answer: C





# Programming in HTML5 with JavaScript and CSS3

## Chapter 11: HTML5 supports multimedia

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---

Q1. Why the developer must provide **formats** that are available **across most browsers** when incorporating media element such **audio or video in web pages?**

- A. So that browsers can decide which plugin or extension they should use to play the media
- B. So that browsers allow user to choose which format they want to load
- C. So that browsers can decide which format they want to support**
- D. All of the above

**formats, audio or video- support**

Answer: C

[Ref. Page 437]

Q2. What one of the following is **not** HTML5 supported **video format?**

- A. Ogg/Theora (.ogv extension)
- B. WebM/VP8 (.webm extension) **not video format= .flv extension**
- C. MPEG-4/H.264 (.mp4 extension)
- D. Flash Video (.flv extension)**

Answer: D

[Ref. Page 438]

Q3. Which one is the **most popular** video format based on performance when comparing data-stream size to picture quality?

- A. Ogg/Theora
- B. WebM/VP8
- C. MPEG-4/H.264** **most popular- MPEG-4**
- D. video/x-ms-wmv

Answer: C

[Ref. Page 438]

Q4. Why should you should include more than one **<source>** element in **<video>** element?

- A. To allow users to play one video after another
- B. To provide many sources so that the browser can choose the most appropriate video codec.**
- C. To provide user a playlist from where users can choose which video to play
- D. It is not possible to add more than one <source> element

Answer: B **<source>,<video>= appropriate video codec**

[Ref. Page 440]

Q5. Which one does **not** correctly **embeds video?**

- A. `<video width="320" height="240" controls="controls">`  
`<source src="movie.mp4" />`  
You need a browser that supports HTML5!  
`</video>`
- B. `<video src="movie.mp4" width="320" height="240" controls="controls">`  
You need a browser that supports HTML5!

---

</video>

C. <video width="320" height="240" controls="controls">

<source url="movie.mp4" />

not embeds video= url

You need a browser that supports HTML5!

</video>

D. <video width="320" height="240" controls="controls">

<source src="movie.mp4" />

</video>

Answer: C

[Ref. Page 438]

At a minimum, you need to set the src attribute to the URL of the video.

Syntax: <video src="source path" width=".." height=".." ></video>

You should include more than one <source>

<video .....>

<source src="source path" ....>

<source src="source path" ....>

<source src="source path" ....>

Fallback text

</video>]

Q6. How do the browsers choose the format of the audio/video when you provide multiple sources of various formats?

A. The browser checks all the sources and selects one which has the minimum size

B. The browser checks all the sources and selects one which takes the minimum time to download  
audio/video, multiple sources- starts looking, display

C. The browser checks all the sources and selects one which provides the best performance

D. The browser starts looking at the top and stops when it finds a file that it can display

Answer: D

[Ref. Page 439]

Q7. When providing multiple source of video, what is the recommended order?

A. Start with .mp4, then .ogv and then .webm

B. Start with .webm, then .ogv and then .mp4

order-.webm, .ogv, .mp4

C. Start with .ogv, then .webm and then .mp4

D. Start with .ogv, then .mp4 and then .webm

Answer: B

[Ref. Page 439]

Q8. Which attribute of the video element control how the video should be loaded when the page loads?

A. controls

B. loop

C. preload

control- loads- preload

D. autoplay

Answer: C

[Ref. Page 441]

Q9. How do you specify the video in a web page starts loading when the page loads?

A. By setting the preload attribute to true

---

- B. By setting the preload attribute to auto
- C. By setting the preload attribute to metadata
- D. By setting the preload attribute to none

Answer: B

[Ref. Page 441]

The preload attribute specifies how the video should be loaded when the page loads. It can be set to auto, metadata, or none. The auto setting starts loading the video when the page loads. The metadata setting loads only the metadata, and the none setting doesn't load anything.]

Q10. Which attribute should you add to `<video>` element so that the video will repeat when it has reached the end of its stream?

- A. controls
  - B. autoplay
  - C. loop
  - D. peload
- end of its stream- loop

Answer: C

[Ref. Page 441]

Q11. Which attribute of `<video>` element specifies that the URL of an image is to be shown when the video is not playing?

- A. image
  - B. img
  - C. src
  - D. Poster
- URL of an image= Poster

Answer: D

[Ref. Page 441]

Q12. Which one is the developed and recommended by W3C for subtitling video?

- A. SRT
  - B. WebVTT
  - C. VTT
  - D. XML
- W3C subtitling video= WebVTT

Answer: B

[Ref. Page 441]

New standard by W3C for subtitling is WebVTT (Web Video Text Tracks)

Popular one is SubRip Text (SRT) ( not a standard from W3C)

A less-used standard called Timed Text Markup Language (TTML) is an XML-based format W3C recommends WebVTT and TTML ]

Q133. Which of the following is or are HTML5 standards for providing captions in video?

- A. SRT
  - B. WebTT
  - C. TTML
  - D. XHTML
- captions in video= WebTT, TTML

Answer: B, C

[Ref. Page 441]

---

Q14. You want to add caption to a video which will start from at 10<sup>th</sup> second and end at 20<sup>th</sup> second. Which one is the valid content of your WebVTT file?

A. WebTT

For more information visit: [www.idb-bisew.org](http://www.idb-bisew.org) 00:00:10.000 --> 00:00:20.000

B. WebTT

00:00:10.000 --> 00:00:20.000

For more information visit: [www.idb-bisew.org](http://www.idb-bisew.org)

WebTT- then timing

C. WebTT

For more information visit: [www.idb-bisew.org](http://www.idb-bisew.org)

00:00:10.000 --> 00:00:20.000

D. WebTT

From: 00:00:10.000 To: 00:00:20.000

For more information visit: [www.idb-bisew.org](http://www.idb-bisew.org)

Answer: B

[Ref. Page 442]

Q15. You want to include a video on your webpage that has an .avi file extension. If you supply the codec information, what will be displayed in browsers that support the <video> element but don't have the codec?

A. The browser will show the <video> element, but will not play the video.

B. The browser will automatically download the codec and play the video.

C. The browser will display the contents of the <video> element.

D. The browser will automatically download a version of the browser that supports the codec.

Answer: A

[Ref. Page 443]

Q16. You don't want to supply an .ogg video because you find that the .ogg format is choppy and low quality. What other video formats can you include to be compatible with most browsers? (Choose all that apply.)

A. .webm

B. .avi

C. .mpg

D. .mp4

E. .mjpg

Answer: A, D

[Ref. Page 443]

Q17. Which one repeats the audio continuously when it completes?

A. <audio controls>

<source src="media.mp3" />

</audio>

B. <audio loop>

repeats audio continuously= loop

<source src="media.mp3" />

</audio>

- 
- C. <audio autoplay>  
<source src="media.mp3" />  
</audio>
  - D. <audio continuous>  
<source src="media.mp3" />  
</audio>

Answer: B

[Ref. Page 445]

Q18. Which object do the <audio> and <video> elements inherit from?

- A. HTMLControl
- B. HTMLElement
- C. HTMLMediaElement inherits= MediaElement
- D. Media

Answer: C

[Ref. Page 447]

Q19. Which one of the following is not a method of the HTMLMediaElement object?

- A. load ()
- B. play ()
- C. pause ()
- D. stop () MethodElement= load, play, pause

Answer: D

[Ref. Page 447]

Methods available

addTextTrack() Adds a new text track to the audio or video

canPlayType() Determines whether the browser can play the specified audio or video type

load() Reloads the audio or video

play() Plays the audio or video

pause() Pauses the currently playing audio or video]

Q20. Which property of the HTMLMediaElement gets the URL of the current audio or video?

- A. src
- B. currentSrc
- C. played current audio or video= currentSrc
- D. videoTracks

Answer: B

[Ref. Page 448]

Q21. Which property of the HTMLMediaElement can be used to determine whether the media is playing?

- A. played
- B. muted
- C. paused determined whether the media= paused
- D. readyState

Answer: C

[Ref. Page 451]

---

Q22. You want to trigger some code when the media is loaded. Which event should you subscribe to?

- A. onstalled
- B. onseeked `trigger,code= onloadeddata`
- C. onplay
- D. onloadeddata

Answer: D

[Ref. Page 449]

Q23. The W3C standardized using which format for video?

- A. .webm
- B. .mpg
- C. .mp4
- D. No standard has been selected.

Answer: D

[Ref. Page 438]

# Programming in HTML5 with JavaScript and CSS3

## Chapter 12: Drawing with HTML5

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---

Q1. Which element of the following brings ability to draw in **HTML5 without requiring any plug-in?**

- A. <figure>
- B. <canvas>**
- C. <svg> without plug-in= <canvas>
- D. <object>

Answer: B

[Page 459]

canvas is drawing. To draw you have use javascript

svg is for creating and displaying vector graphics. JavaScript is not required to work with svg]

Q2. Which element of the following to create and display **Scalable Vector Graphics (SVG)** in HTML5 without requiring any plug-in?

- A. <figure>
- B. <canvas>
- C. <svg>** Scalable Vector Graphics(SVG)= <svg>
- D. <object>

Answer: C

[Page 459]

canvas is for drawing. To draw you have to use JavaScript

svg is for creating and displaying vector graphics. JavaScript is not required to work with svg]

Q3. What is **SVG?**

- A. It is a bitmap web image format SVG- two-dimensional graphics in XML
- B. It is a image format which supports multiple layers.
- C. It is a new language to show animations in web pages
- D. SVG is a language by which to define **two-dimensional graphics in XML**

Answer: D

[SVG is a language by which to define two-dimensional graphics in XML, and the XML can be rendered by the browser by using the <svg> element]

Q4. Which one allows defining define **two-dimensional graphics in XML?**

- A. canvas
- B. svg**
- C. flash
- D. sliverlight two-dimensional graphics- svg

Answer: B

[Page 459]

Q5. How do you **create drawings on canvas element in HTML5?**

- A. Using drawing definitions in XML inside canvas element
- B. Using javascript through the canvas context**



- 
- C. Using plug-in such as Adobe flash
  - D. None of the above

Answer: B  
[Page 459]

Q6. Which one is **not** the member of the **<canvas> element**?

- A. width
  - B. height**
  - C. toDataURL()
  - D. fill()
- not <canvas> element- height

Answer: B  
[Page 460  
fill() is the method of the context object]

Q7. What is the **toDataURL() method** of the **canvas element** used for?

- A. To serialize the canvas drawings so that it can be sent to server for save as a web image format
- B. To create a URL that can be used with an element that requires an image URL**
- C. to send the canvas content to a different web page
- D. to encode canvas data into url-encoded form

Answer: B  
[Page 460]

Q8. You want to use the drawings on the canvas in an **img element**. Which method should you use?

- A. getContext()
  - B. getDataUrl()
  - C. toDataURL()**
  - D. toImageUrl()
- img element- toDataURL()

Answer: C  
[Page 460]

Q9. Which one of the following is to **draw on the canvas**?

- A. Methods of the canvas
- B. Methods of the document object
- C. Methods of the window object
- D. Methods of the context object that is returned from the getContext method of the canvas**

Answer: D  
[Page 460]

Q10. What does the **getContext method** of the canvas which accepts a parameter **2d** return?

- A. Image
  - B. Bitmap
  - C. CanvasRenderingContext
  - D. CanvasRenderingContext2D**
- getContext method 2d- CanvasRenderingContext2D

Answer: D  
[Page 463]

Q11. Which method of the context object of the canvas is used to **create a new, blank ImageData** object?

---

A. `createImageData()`

B. `getImageData()`

C. `putImageData()`

D. `drawImage()`

Answer: A

[Page 461]

Q12. Which method of the context object of the canvas **moves** the path to the specified point in the canvas without creating a line?

A. `lineTo`

B. `moveTo`

C. `beginPath`

D. `stroke`

*moves- moveTo*

Answer: B

[Page 462]

Q13. Which method of the context object of the canvas adds a new point and creates **a line** from that point to the last specified point in the canvas?

A. `lineTo`

B. `moveTo`

C. `beginPath`

D. `stroke`

*line-.lineTo*

Answer: A

[Page 461]

Q14. Which method of the context object of the canvas starts a path or resets the current **path**?

A. `restore`

B. `moveTo`

C. `beginPath`

D. `closePath`

*path- beginPath*

Answer: C

[Page 461]

Q15. Which method of the context object of the canvas creates a path from the current point back to the **starting point**?

A. `lineTo`

B. `moveTo`

C. `beginPath`

D. `closePath`

*starting point- closePath*

Answer: D

[Page 461]

Q16. Which does the **getContext method** of the canvas accepts the value as parameter to return a context object that is **supported** by all browsers including **Internet Explorer**?

A. 2

B. 2d

C. 3d

D. `webgl`

*getContext, supported, internet Explorer= 2D*

Answer: B

---

[Page 462]

Q17. What is the proper parameter to pass to the getContext method on the canvas to **create two-dimensional drawings**?

- A. WebGL
- B. 2d**
- C. 3d create two-dimensional drawings- 2D
- D. No parameter

Answer: B

[Page 462]

Q18. Which method of the **graphics context** of a canvas element should you use to draw an **unfilled rectangular area**?

- A. rect()
- B. fillRect()
- C. strokeRect()** graphics context, unfilled rectangular- strokeRect
- D. stroke()

Answer: C

[Page 462]

Q19. Which method of the rendering context **object** of a canvas element do you use to **clear** the specified **rectangular** area?

- A. clearRect(x, y, w, h)**
- B. clear(x, y, w, h)
- C. strokeRect(x, y, w, h)
- D. rect(x, y, w, h) clear, rectangular= clearRect(x,y,w,h)

Answer: A

[Page 463]

Q20. You have a **canvas element** in your page, the HTML you write

```
<canvas id='mycanvas'>
</canvas>
```

How can you get a reference to the canvas context?

- A. `var canvas = document.getElementById('mycanvas');`  
`var ctx = canvas.getContext();` canvas element= getContext('2d');
- B. `var canvas = document.getElementById('mycanvas');`  
`var ctx = canvas.getContext2D();`
- C. `var canvas = document.getElementById('mycanvas');`  
`var ctx = canvas.getRenderingContext();`
- D. `var canvas = document.getElementById('mycanvas');`  
`var ctx = canvas.getContext('2d');`**

Answer: D

[Page 463]

Q21. You are drawing on HTML5 canvas you have the code like below: (Line numbers are illustrative purpose only)

1. `var canvas = document.getElementById('canvas');`
2. `var ctx = canvas.getContext('2d');`

---

To draw a 100X100, which code segment after line 2 will do the purpose?

- A. `ctx.fillStyle = 'red';`  
`ctx.rect(0, 0, 100, 100);`  
`ctx.fill();`
- B. `ctx.fillStyle = 'red';`  
`ctx.fillRect(100, 100, 100, 100);` | `100X100= fillStyle, fillRect(100,100,100,100)`
- C. `ctx.fillStyle = 'red';`  
`ctx.rect(0, 0, 100, 100);`  
`ctx.stroke();`
- D. `ctx.fillStyle = 'red';`  
`ctx.strokeRect(100, 100, 100, 100);`

Answer: B

[Page 463]

Q22. How can you control the opacity when filling shapes?

- A. By setting the appropriate value to the opacity property of the context object
- B. By setting the appropriate value to the alpha property of the context object
- C. By creating gradient color using `createLinearGradient` or `createRadialGradient` method and then setting the `fillStyle` property of the context object to the created gradient color
- D. By setting a rgba color to the `fillStyle` property of the context object

Answer: D

[Page 465]

Q23. Which one draws a rectangle which a blue filled with opacity .25?

- A. `var canvas = document.getElementById('myCanvas');`  
`var ctx = canvas.getContext('2d');`  
`ctx.fillStyle = "rgb(0, 0, 255)";`  
`ctx.shadowBlur = .25;`  
`ctx.fillRect(0, 0, 100, 100);`
- B. `var canvas = document.getElementById('myCanvas');`  
`var ctx = canvas.getContext('2d');`  
`ctx.fillStyle = "rgb(0, 0, 255)";`  
`ctx.shadowColor = .25;`  
`ctx.fillRect(0, 0, 100, 100);`
- C. `var canvas = document.getElementById('myCanvas');`  
`var ctx = canvas.getContext('2d');`  
`ctx.fillStyle = "rgb(0, 0, 255)";`  
`ctx.fillRect(0, 0, 100, 100);`  
`ctx.stroke(.25);`
- D. `var canvas = document.getElementById('myCanvas');`  
`var ctx = canvas.getContext('2d');`  
`ctx.fillStyle = "rgba(0, 0, 255, 0.25)";`  
`ctx.fillRect(0, 0, 100, 100);`

Answer: D

[Page 465]

Q24. You want to create a gradient color using the `createLinearGradient(x1, y1, x2, y2)` method of the context object.

---

To create a **horizontal gradient**, how should you change the **parameter values**?

- A. Change the values of x1, x2 and set the values of y1, y2 equal
- B. Change the values of y1, y2 and set the values of x1, x2 equal
- C. Set the values of x1, y1 and set different values to x2, y2
- D. Set the same to all four parameters

horizontal gradient- change x1,x2 set y1,y2

Answer: A

[Page 490

Change x values and keep y values same to create horizontal gradient

Change y values and keep x values same to create vertical gradient

Change all to create diagonal gradient]

Q25. Which code example can be used to draw a rectangle on a **<canvas>** element that has an **id** of **myCanvas**?

- A. 

```
var canvas = document.getElementById('myCanvas');  
var ctx = canvas.getContext();  
ctx.rect(10, 10, 50, 75);
```
- B. 

```
var canvas = document.getElementById('myCanvas');  
canvas.rectangle(10, 10, 50, 75);
```
- C. 

```
var canvas = document.getElementById('myCanvas');  
var ctx = canvas.getContext("2d");  
ctx.fillRect(10, 10, 50, 75);
```

 id myCanva= "2d"
- D. 

```
var canvas = document.getElementById('myCanvas');  
var ctx = canvas.getContext();  
ctx.fillRect(10, 10, 50, 75);
```

Answer: C

[Page 463

The following code will do the same

```
var canvas = document.getElementById('myCanvas');
```

```
var ctx = canvas.getContext();
```

```
ctx.rect(10, 10, 50, 75);
```

```
ctx.fill();
```

You can do it using path too.

]

Q26. Which one is **not valid** value of the **lineJoin** property of the canvas rendering context object?

- A. square
- B. round
- C. bevel
- D. miter

lineJoin= round, bevel, miter

Answer: A

[Page 471

Allowable values **round, bevel, or miter.**]

Q27. Which one is the **default value** of the **lineJoin** property of the canvas rendering context object?

- A. square
- B. round
- C. bevel
- D. miter

default lineJoin= miter

Answer: D

---

[Page 471

Allowable values round, bevel, or miter. **Default is miter.**]

Q28. You want to draw an arc that is approximately **three-quarters** of a circle. Which method is the easiest to use to accomplish this task?

- A. `arcTo()`
- B. `arc()`**
- C. `circle()` *three-quarters= arc()*
- D. `dot()`

Answer: B

[Page 485, 487

Using `arcTo` method you cannot draw more than the half of a circle

Using `arc` method you can draw a circle or any part of a circle.]

Q29. You are drawing on canvas. You start the code like below

1. `var canvas = document.getElementById('myCanvas');`
2. `ctx = canvas.getContext('2d');`
3. `ctx.strokeStyle = 'blue';`
4. `ctx.fillStyle = 'yellow';`
5. `ctx.lineWidth = 5;`
- 6.
- 7.
- 8.

To draw an outline there **quarter of a circle** of radius 100 centered at point (400,300), which code should you add after line 4?

- A. `ctx.beginPath();`  
`ctx.arc(400, 300, 100, 0, 3*90);`  
`ctx.stroke();`
- B. `ctx.beginPath();`  
`ctx.arc(400, 300, 100, 0, 270);`  
`ctx.stroke();` *quarter of a circle= Math.PI/2*
- C. `ctx.beginPath();`**  
**`ctx.arc(400, 300, 100, 0, 3* Math.PI/2);`**  
**`ctx.stroke();`**
- D. `ctx.beginPath();`  
`ctx.arc(400, 300, 100, 0, Math.PI);`  
`ctx.stroke();`

Answer: C

[Page 486, 487

Angle is passed as radian]

Q30. How can you control the **vertical alignment** of the text in **relation to a point** when drawing text using the **`fillText`** method?

- A. Using the `textAlign` property of the rendering context object
- B. Using the `verticalAlign` property of the rendering context object
- C. Using the `textBaseline` property of the rendering context object**
- D. Using the `font` property of the rendering context object

Answer: C

---

[Page 488]

textBaseline - Sets the vertical alignment of the text in relation to the coordinate that is passed into the fillText or strokeText method. Can be top, hanging, middle, alphabetic, ideographic, or bottom.]

Q31. What can be passed as source image as the first parameter to the drawImage method?

- A. an <img> element
- B. a <video> element
- C. a <canvas> element
- D. an image created using JavaScript

Answer: A, B, C, D

[Page 490]

Q32. What happens when you pass a <video> element to the drawImage method as the source image?

- A. a series of snapshot frames at intervals of 1 sec are displayed
- B. a snapshot of last frame of the video is used as the image. [drawImage method- currently displayed](#)
- C. a snapshot of the frame that is currently displayed is used as the image.
- D. A blank frame is drawn as a video is not supported by the method

Answer: C

[Page 490]

Q33. \_\_\_\_\_ is a container for the XML-based commands.

- A. The <svg> element
- B. The <canvas> element
- C. The context rendering object of the <canvas> element
- D. The context rendering object of the <svg> element

[XML- svg](#)

Answer: A

[Page 496]

Q34. The content of the <svg> element is in which format?

- A. SGML
- B. HTML
- C. XHTML [XML- svg](#)
- D. XML

Answer: D

[Page 496]

Q35. Which attribute of the <path> element is used define the coordinates of points?

- A. m
- B. d [coordinates of points- d](#)
- C. a
- D. p

Answer: B

[Page 496]

Q36. How do you indicate the coordinates are relative while defining a path in svg?

- A. Using the lowercase command
- B. Using the the uppercase command [path in svg- lowercase command](#)

- C. Using the first command in lowercase
- D. By adding relative attribute to the <path> element

Answer: A

[Page 496]

When the lowercase command is used, it indicates that the coordinates are relative. When the uppercase command is used, it indicates that the coordinates are absolute.

L 100 100 moves to (100,100) from the top-left corner (0,0)

l 100 100 moves to (100,100) from the current position]

Q37. Which one is the command in **svg for closing a path** from the **current position** to the beginning of the path?

- A. M or m
- B. C or c
- C. L or l
- D. Z or z

svg closing path- Z or z

Answer: D

[Page 497]

Q38. What is the purpose of the **viewBox attribute**?

- A. It define the maximum and minimum zoom size
- B. It describes the default zoom scale of the drawing
- C. It describes the part of the drawing that you want the user to see.
- D. It describes the part of the drawing how to adjust when window is resized.

Answer: C

[Page 501]

Q39. On the **<svg>** element, what attribute provides a window into the drawing and enables **zoom capabilities**?

- A. zoom
- B. window
- C. viewBox
- D. zoomWindow

svg, zoom capabilities- viewBox

Answer: C

[Page 500]

Q40. You are drawing on HTML5 canvas you have the code like below: (Line numbers are illustrative purpose only)

1. var canvas = document.getElementById('canvas');
2. var ctx = canvas.getContext('2d');

You want to draw an 200X100 rectangle like below



Which code segment you should add after Line 2?

- A. var lg = ctx.createLinearGradient(0, 0, 200, 100);



- 
- ```
lg.addColorStop(0, 'white');
lg.addColorStop(1, 'black');
ctx.fillStyle = lg;
ctx.strokeStyle = 'black';
ctx.lineWidth = .5;
ctx.fillRect(0, 0, 200, 100);
ctx.strokeRect(0, 0, 200, 100);
```
- B. 

```
var lg = ctx.createLinearGradient(0, 0, 100, 0);
lg.addColorStop(0, 'white');
lg.addColorStop(1, 'black');
ctx.fillStyle = lg;
ctx.strokeStyle = 'black';
ctx.lineWidth = .5;
ctx.fillRect(0, 0, 200, 100);
ctx.strokeRect(0, 0, 200, 100);
```
- C. 

```
var lg = ctx.createLinearGradient(0, 0, 200, 0);
lg.addColorStop(0, 'white');
lg.addColorStop(1, 'black');
ctx.fillStyle = lg;
ctx.strokeStyle = 'black';
ctx.lineWidth = .5;
ctx.fillRect(0, 0, 200, 100);
ctx.strokeRect(0, 0, 200, 100);
```
- D. 

```
var lg = ctx.createLinearGradient(0, 0, 200, 200);
lg.addColorStop(0, 'white');
lg.addColorStop(1, 'black');
ctx.fillStyle = lg;
ctx.strokeStyle = 'black';
ctx.lineWidth = .5;
ctx.fillRect(0, 0, 200, 100);
ctx.strokeRect(0, 0, 200, 100);
```

Answer: C

[A – gradient will progress diagonally

B – gradient will be half of the width, the later half will be filled black

C- correct

D – out of range]

Q41. You are drawing on HTML5 canvas. You have the canvas rendering object ctx in your code. You want to fill a 400X400 rectangle with an image pattern.gif. Which code fragment should you use?

- A. 

```
var img = new Image();
img.src = 'images/pattern.gif';
var ptrn = ctx.createPattern(img, 'repeat');
ctx.fillStyle = ptrn;
ctx.fillRect(0, 0, 400, 400);
```
- B. 

```
var img = new Image();
img.src = 'images/pattern.gif';
img.onload = function () {
var ptrn = ctx.createPattern(img, 'repeat');
```

---

```
ctx.fillStyle = ptrn;
ctx.fillRect(0, 0, 400, 400);
}
```

- C. 

```
var img = new Image();
img.src = 'images/pattern.gif';
img.onload = function () {
  ctx.fillStyle = img;
  ctx.fillRect(0, 0, 400, 400);
}
```
- D. 

```
var img = new Image();
img.src = 'images/pattern.gif';
ctx.fillStyle = img;
ctx.fillRect(0, 0, 400, 400);
```

Q42. Which method of canvas **rendering object** do you use to **draw circle?**

- A. circle()  
B. arc()  
C. arcTo() draw circle= arc()  
D. ellipse()

Answer: B

Q43. Which of the following code draws the shapes like below?



- A. 

```
<svg width="400" height="400" xmlns="http://www.w3.org/2000/svg">
  <rect x="0" y="0" width="400" height="400" fill="black" />
  <circle cx="200" cy="200" r="180" fill="white" />
```

rect, circle

```
</svg>
```

- B. 

```
<svg width="400" height="400" xmlns="http://www.w3.org/2000/svg">
  <circle cx="200" cy="200" r="180" fill="white" />
  <rect x="0" y="0" width="400" height="400" fill="black" />
```

```
</svg>
```

- C. 

```
<svg width="400" height="400" xmlns="http://www.w3.org/2000/svg">
  <rect x="0" y="0" width="400" height="400" fill="black" />
  <arc cx="200" cy="200" r="180" fill="white" />
```

```
</svg>
```

- D. 

```
<svg width="400" height="400" xmlns="http://www.w3.org/2000/svg">
  <rectangle x="0" y="0" width="400" height="400" fill="black" />
  <circle cx="200" cy="200" r="180" fill="white" />
```

```
</svg>
```

Answer: A

Q45. Look at the following shape



Which of the following svg definition does not render the above shape properly?

- A. `<svg width="400" height="400" xmlns="http://www.w3.org/2000/svg">  
 <path d="M0 0 L100 0 L100 100 Z" fill="black" />  
</svg>`
- B. `<svg width="400" height="400" xmlns="http://www.w3.org/2000/svg">  
 <path d="M0 0 l100 0 l100 100 Z" fill="black" />  
</svg>`
- C. `<svg width="400" height="400" xmlns="http://www.w3.org/2000/svg">  
 <path d="M0 0 H100 V100 Z" fill="black" />  
</svg>`
- D. `<svg width="400" height="400" xmlns="http://www.w3.org/2000/svg">  
 <path d="M0 0 h100 v100 Z" fill="black" />  
</svg>`

Answer: B

Q46. On the `<svg>` element, what attribute provides a window into the drawing and enables zoom capabilities?

- A. zoom
- B. window
- C. viewBox
- D. zoomWindow

enables zoom capabilities- viewBox

Answer: C

[Page 500]

# Programming in HTML5 with JavaScript and CSS3

## Chapter 13: Drag and drop

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---

Q1. How do you indicate to the browser that an element can be dragged?

- A. Set draggable attribute to true
  - B. Set draggable attribute to false
  - C. Set draggable attribute to auto
  - D. Add the draggable attribute
- browser, dragged= Set draggable attribute to true

Answer: A

[Page 509]

Q2. To specify to the browser that an element can be dragged, use the \_\_\_\_\_ attribute.

- A. draggable
  - B. allowdrag
  - C. drag
  - D. data-drag
- dragged= draggable

Answer: A

[Page 509]

Q3. What does it mean when you set the draggable attribute of an element to auto?

- A. The element can be dragged
  - B. The element cannot be dragged
  - C. The browser will decide whether the element should be draggable
  - D. The element can be dragged to user desktop
- draggable+ browser, decide, draggable

Answer: C

[Page 509]

For most browsers, the auto setting is the default, which means that the browser decides whether the element should be draggable. For example, the <img> element is usually draggable by default, but a <div> element is not draggable by default]

Q4. How can you control whether the text of an element can be selected?

- A. Using css user-select property
  - B. Using css display property
  - C. Using JavaScript onselect event handler
  - D. Using JavaScript onselect event handler
- control, selected= select property

Answer: A

[Page 509]

The user-select property specifies whether the text of an element can be selected.

In web browsers, if you double-click on some text it will be selected/highlighted. This property can be used to prevent this.

Syntax

user-select: auto|none|text|all;

auto - Default. Text can be selected if the browser allows it

---

---

none - Prevent text selection

text - The text can be selected by the user

all - Text selection is made with one click instead of a double-click

Example

Prevent text selection of a <div> element:

```
div {  
  -webkit-user-select: none; /* Safari 3.1+ */  
  -moz-user-select: none; /* Firefox 2+ */  
  -ms-user-select: none; /* IE 10+ */  
  user-select: none; /* Standard syntax */  
}
```

For details <https://developer.mozilla.org/en-US/docs/Web/CSS/user-select>

Q6. Which of the following is **not** the event of a **dragged element**?

A. dragstart

B. drag

C. dragend

**D. drop**

not, dragged element- drop

drag(3):  
1. dragstart  
2. drag  
3. dragend

Answer: D

[Page 510

drop is the event of drop target element]

Q7. Which of the following is **not** an event of the **drop target**?

**A. dragstart**

B. dragenter

C. dragover

D. dragleave

not drop target= dragstart

drop(4):  
1.dragenter  
2.dragover  
3.dragleave  
4.drop

Answer: A

[Page 510

dragstart is the event of drag source element]

Q8. Which of the following is **not** an event of the **dragged element**?

A. dragstart

B. drag

**C. drop**

D. dragend

not dragged element- drop

drag(3):  
1. dragstart  
2. drag  
3. dragend

Answer: C

[Page 510]

Q9. When the **drag event is triggered**?

A. Triggers when the drag is started

**B. Triggers continuously as the element is being dragged**

C. Triggers continuously as the element is dragged over the drop zone

D. Triggers when the drag enters a drop zone

drag triggered= continuously, bring dragged

Answer: B

[Page 510]

Q10. Which of the following is **not** an event of the **drop target element**?

- 
- A. dragenter not drop target element= drag
  - B. drop
  - C. drag
  - D. dragleave

Answer: C  
[Page 511]

Q11. The dragenter and dragover events default to **rejecting dragged** items. How can you enable dropping?

- A. By adding alldrop attribute to the drop target
- B. **By cancelling the default action on these events**
- C. By setting css user-select property to none
- D. By returning false from the event handler method reject dragged= cancelling

Answer: B  
[Page 511]

Default action must be cancelled otherwise you can't drop.  
you should code like

```
document.getElementById('targetid')
.ondragenter = (e) =>{
    e.preventDefault();
}
document.getElementById('targetid')
.ondragover = (e) =>{
    e.preventDefault();
    return true;
}
```

returning true is important in most browsers]

Q12. You are implementing HTML5 drag and drop. You have subscribed to dragenter event of the drop target like below

```
document.getElementById('drop-target').addEventListener('dragenter', function (evt) {
    evt.preventDefault();
}, false);
```

Why do you call the **preventDefault()** on event object?

- A. **To prevent the rejection of the dragged items**
- B. To accept the dragged items
- C. To cancel event bubble
- D. None of the above

Answer: A  
[Page 512]

The dragenter and dragover events default to rejecting dragged items, which is why you can't currently drop an item. You can enable dropping by cancelling the default action on these events.]

Q13. How can you **pass data** from the **dragstart** event to the **drop event**?

- A. **Using the DataTransfer object**
- B. Using a global variable
- C. Using a local variable
- D. All of the above pass data= Data Transfer Object

Answer: A

---

[Page 513]

Q14. Which property of the `dataTransfer` object is used to set the type of drag operation and the cursor type?

- A. `dropEffect`
  - B. `effectAllowed`
  - C. `types`
  - D. `cursor`
- `dataTransfer, cursor= dropEffect`

Answer: A

[Page 514]

Q15. Which one is **not** a valid value for the `DataTransfer` object's `effectAllowed` property?

- A. `copy`
  - B. `move`
  - C. `paste`
  - D. `link`
- `valid DataTransfer= copy, move, link`

Answer: C

[Page 514]

`effectAllowed` – type of operation `copy/move/link/none`]

Q16. Using the `DataTransfer` object, what kind of data can you pass to the drop event?

- A. Any valid string, number, date/time, or Boolean value
- B. Any URL that is within the same domain as the webpage
- C. Any JSON object
- D. Any object that can be represented as a string or URL

Answer: D

[Page 517]

Q17. You are coding for HTML5 drag and drop in JavaScript. You have handled `dragstart` and `drop` event like below: (Line numbers are illustrative purpose only)

```
Line 1:     draggableElement.on('dragstart' function(evt){
Line 2:     var id = evt.target.id;
Line 3:         evt.dataTransfer.setData('text/plain', id);
Line 4:     });
Line 5:     dropTarget.on('drop', function(evt){
Line 6:
Line 7:         //code
Line 8: });
```

You want to capture the data passed in `dragstart` event at line 2 in `drop` event. Which code should you add at line 6?

- A. `var id = evt.dataTransfer.getData();`
- B. `var id = evt.dataTransfer.getData('id');`
- C. `var id = evt.dataTransfer.getData('plain');`
- D. `var id = evt.dataTransfer.getData('text/plain');`

Answer: D

[Page 515]

Q18. In which event, do you set the desired drag effect for the drag source?

- A. `dragstart`

- B. drag
- C. dragend
- D. dragmove

Answer: A  
[Page 510]

Q19. Which of the following is **not** a property on the **File object**?

- A. name
- B. **path**
- C. type File object= name, type, size
- D. size

Answer: B  
[Page 517]

Q20. Which one is **not** a property of the **File object**?

The File object provides the name, type, and size properties

- A. name
- B. type
- C. size File object= name, type, size
- D. **extension**

Answer: D  
[Page 517]

Q21. You want to allow users to drop files on a division element in your web page. The html for the division is like below

```
<div id='target'>
    <p>Drop files here...</p>
</div>
```

You want to access the files a user dropped in drop event. You have code like below: (Line numbers are illustrative purpose only)

```
Line 1:      document.getElementById('target')
Line 2:      .addEventListener('drop', function(evt){
Line 3:
Line 4:          //mode code
Line 4:      }, false);
```

Which code should you add at line 3?

- A. var files = evt.files
- B. var files = evt.target.files
- C. var files = evt.data.files
- D. var files = evt.dataTransfer.files

Answer: D  
[Page 520]

Q22. Which object provides access to the **dropped files**?

- A. **DataTransfer**
- B. Data dropped files= Data Transfer
- C. Target
- D. Window

Answer: A





# Programming in HTML5 with JavaScript and CSS3

## Chapter 14: Making your HTML location-aware

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---

Q1. What are the **underlying location** information **sources of Geolocation**?

- A. locations inferred from network
- B. radio frequency identification (RFID)
- C. Wi-Fi and Bluetooth MAC addresses
- D. All of the above**

Answer: D

[Page 539]

Underlying location information sources such as the Global Positioning System (GPS) and locations inferred from network signals such as IP address, radio frequency identification (RFID), Wi-Fi and Bluetooth MAC addresses, and cellular IDs and from user input]

Q2. Which one of the following provides a way to **integrate location** services into a web page?

- A. The Web storage API
- B. The Geolocation API**
- C. The AppCache API
- D. The Media Query API

**integrate location= Geolocation API**

Answer: B

[Page 539]

Q3. Using the **Geolocation API**, you can get \_\_\_\_\_.

- A. the current position of the server from which the application is serving the web page to the user device  
**Geolocation API= current position, application is running**
- B. the current position of the user or the device in which the application is running**
- C. the current position of the nearest GPS device available to the user device
- D. the current position of the network server that provides user or the device internet gateway

Answer: B

[Page 539]

Q4. You are **creating a web application** that will help users finding nearby points of interest or checking into their favorite **social community sites**. Which feature you will use?

- A. The Web storage API
- B. The Geolocation API**
- C. The AppCache API
- D. The Media features

**creating a web application, social community sites= The Geolocation API**

Answer: B

[Page 539]

Q5. The **Geolocation API** is **designed to support** \_\_\_\_\_?

- A. one-shot position requests only.
- B. repeated position updates only.
- C. both one-shot position requests and repeated position updates.**

---

D. None of above

Answer: C

[Page 539]

Q6. You get a **reference** to the **Geolocation API** using

- A. geolocation
- B. window.geolocation
- C. navigator.geolocation**
- D. window['geolocation']

Answer: C

[Page 540]

Q7. The **Geolocation object** is accessible by using the \_\_\_\_\_ **global variable?**

- A. window.geolocation
  - B. navigator.geolocation**
  - C. browser.geolocation
  - D. location.geolocation
- global variable- navigator.geolocation

Answer: B

[Page 540]

Q8. You want to determine whether the user's browser provides support **Geolocation API**. Which of the following code does not accomplish it properly?

- A. 

```
if('geolocation' in navigator) {  
    //code  
}
```
- B. 

```
if(navigator.geolocation) {  
    //Code  
}
```
- C. 

```
if(navigator['geolocation']) {  
    //Code  
}
```
- D. 

```
if(geolocation) {  
    //Code  
}
```**

Answer: D

[Page 540]

Property can be accessed using key in JavaScript  
window.location is equivalent to window['location']

Property can be enumerated using foreach in JavaScript  
foreach (var prop in window) { //work with prop }

So 'geolocation' in navigator will return true if supported otherwise false (null which evaluate to false)]

Q9. Which one of the following is **not** a valid call to **getCurrentPosition method** of the Geolocation object?

- A. getCurrentPosition()**
  - B. getCurrentPosition(positionCallback)
  - C. getCurrentPosition(position Callback, positionErrorCallback)
  - D. getCurrentPosition(positionCallback, positionErrorCallback, positionOptions)
- not,getCurrentPosition- getCurrentPosition()

---

Answer: A

[Page 541

getCurrentPosition(positionCallback, [positionErrorCallback], [positionOptions])

First parameter is mandatory, other two are optional

position Callback - is called after the current position is determined.

positionErrorCallback - is called if any errors occur when trying to get the current position

position Options - lets you set some special options that control how the getCurrentPosition method behaves.]

Q10. Which of the following is not the methods of the Geolocation object?

A. getCurrentPosition()

B. watchPosition()

C. clearWatch()

D. LatLng()

Answer: D

[Page 540

LatLng() is the method of Google map API, actually it is a object constructor]

Q11. What is **not** a **parameter** of the **Geolocation object's getCurrentPosition** method?

A. A success callback

B. An error callback

C. options array

D. timestamp

not parameter= timestamp

Answer: D

[Page 540]

Q12. Which method **continuously monitors** your current location from the **Geolocation object**?

A. watchPosition()

B. watchLocation()

C. getCurrentPosition()

continuously, Geolocation object= watchPosition

D. getCurrentLocation()

Answer: A

[Page 541, 546]

Q13. What is the type of the parameter that the **success callback** of the **getCurrentPosition** or **watchPosition** method accepts?

A. Geoposition

B. Coordinate

C. Latitude

D. Longitude

Answer: A

[Page 540]

Q14. Which property of the Geoposition object allows to access information about current position like **longitude, latitude** etc.?

A. position

B. longitude

longitude, latitude= coords

C. latitude

D. coords

---

Answer: D  
[Page 540]

Q15. Which of the following are the members of Geoposition object?

- A. coords
  - B. timestamp
  - C. longitude
  - D. latitude
- members of Geoposition= coords, timestamp

Answer: A, B  
[Page 541]

Q16. What does the coords property of the Geoposition return?

- A. a Coordinates object
- B. a LatLng object
- C. a Map object
- D. a JSON object

Answer: A  
[Page 541]

Q17. Which one is not a member of the Coordinate object?

- A. latitude
  - B. longitude
  - C. altitude
  - D. enableAccuracy
- Coordinate object= latitude and longitude, altitude

Answer: D  
[Page 541]

latitude - Gets the latitude in decimal degrees

longitude - Gets the longitude in decimal degrees

altitude - Gets the height in meters

accuracy - Gets the accuracy of the coordinates in meters altitudeAccuracy Gets the accuracy of the altitude in meters heading Gets the direction of travel in degrees

speed - Gets the speed of travel in meters/second]

Q18. Which property of the Geoposition of the direction of travel?

- A. direction
  - B. travelDirection
  - C. heading
  - D. travel
- Geoposition of the direction of travel= heading

Answer: C  
[Page 541]

Q19. How do you control how the getCurrentPosition method behaves?

- A. By setting a PositionOptions object to the Geolocation object's option property
- B. By passing a PositionOptions object as the third parameter while calling the getCurrentPosition method
- C. By setting a PositionOptions object to the options property of the Geoposition before calling the getCurrentPosition method
- D. By passing a PositionOptions object as a parameter to the success callback for the getCurrentPosition method

---

Answer: B  
[Page 544]

Q20. Which property of the **PositionOptions** object is used to indicate to use a cached **result** if available?

- A. timeout
- B. enableHighAccuracy
- C. **maximumAge**
- D. cache

**PositionOptions, result- MaximumAge**

Answer: C  
[Page 543]

**enableHighAccuracy** This causes the method to be more resource intensive if set to true. The default is false. If true, the **getCurrentPosition** method tries to get as close as it can to the actual location.

**timeout** This specifies a timeout period for how long the **getCurrentPosition** method can take to complete. This number is measured in milliseconds and defaults to zero. A value of zero represents infinite.

**maximumAge** If this is set, the API is being told to use a cached result if available, rather than make a new call to get the current position. The default is zero, so a new call is always be made. If **maximumAge** is set to a value and the cache isn't older than the allowable age, the cached copy is used. This value is measured in milliseconds.]

Q21. What is the default value of the **maximumAge property** of **PositionOptions** object?

- A. -1
- B. **0**
- C. 1000
- D. 5000

**maximumAge property, PositionOptions= 0**

Answer: B  
[Page 545]

Q22. Which one always get the **updated current position**?

- A. **navigator.geolocation.getCurrentPosition((pos) =>{} , (err) =>{});**
- B. **navigator.geolocation.getCurrentPosition((pos) =>{} , (err) =>{} , {timeout:0, maximumAge:1000} );**
- C. **navigator.geolocation.getCurrentPosition((pos) =>{} , (err) =>{} , {maximumAge:5});**
- D. **navigator.geolocation.getCurrentPosition((pos) =>{} , (err) =>{} , {timeout:1000,maximumAge:5000});**

Answer: A  
[Page 544]

Q23. Which one correctly get the **new position** if cache is older than **5 seconds**?

- A. **navigator.geolocation.getCurrentPosition((pos) =>{} , (err) =>{});**
- B. **navigator.geolocation.getCurrentPosition((pos) =>{} , (err) =>{} , 5000);**
- C. **navigator.geolocation.getCurrentPosition((pos) =>{} , (err) =>{} , {maximumAge:5});**
- D. **navigator.geolocation.getCurrentPosition((pos) =>{} , (err) =>{} , {maximumAge:5000});**

Answer: D  
[Page 545]

---

Q24. The default value of the `maximumAge` of the `PositionOptions` object is set to 0. What does it indicate?

- A. It means that a cached location is used if available.
- B. It means that a cached location is not used.
- C. It means that it will prompt user to decide whether a cached location is to be used or not
- D. None of the above

Answer: B

[Page 545]

Q25. Which of the following calls the `getCurrentPosition` method of the `Geolocation` object?

- A. 

```
navigator.geolocation.getCurrentPosition(function (position) {  
    // Code to access co-ordinates  
},  
function (err) {  
    //Error handling  
},  
{enableHighAccuracy: true, timeout: 3000,  
  maximumAge:20000 });
```
- B. 

```
navigator.geolocation.getCurrentPosition({enableHighAccuracy: true, timeout: 3000,  
maximumAge: 20000 },  
function (position) {  
    //Code to access co-ordinates  
}, function (err) {  
    //Error handling  
});
```
- C. 

```
navigator.geolocation.getCurrentPosition(function (position) {  
    // Code to access co-ordinates  
},  
{enableHighAccuracy: true, timeout: 3000,  
maximumAge: 20000 });
```
- D. 

```
navigator.geolocation.getCurrentPosition(function () {  
    // Code to access co-ordinates ;  
}, function (err) {  
    //Error handling  
},  
{enableHighAccuracy: true, timeout: 3000,  
maximumAge: 20000 });
```

Answer: A

[Page 545]

Q26. You are working with `Geolocation` object. You want to know the user's current position. You have the following code: (line numbers are illustrative purpose only)

```
Line 1:      if(navigator['geolocation']) {  
Line 2:          navigator.geolocation.getCurrentPosition(function (position) {  
Line 3:  
Line 4:  
Line 5:              //code to work with latitude and longitude  
Line 6:          }, function (err) {  
Line 7:              //Error handling code
```

---

Line 8:                               });

Line 9:            }

Which code segment should you add after line 2?

- A. `var lat = position.latitude;`  
   `var lng = position.longitude;`
- B. `var lat = position.coords.latitude;`  
   `var lng = position.coords.longitude;`
- C. `var lat = position.LatLng.latitude;`  
   `var lng = position. LatLng.longitude`
- D. `var latlng = new LatLng(position.coords);`  
   `var lat = latlng.latitude;`  
   `var lng = latlng.longitude;`

Answer: B

[Page 542]

Q27. Which method of the **Geolocation object** is used to **retrieve continuous position** updates?

- A. `getCurrentPosition`
- B. `watchPosition`
- C. `clearWatch`
- D. `watch`

Answer: B

[Page 546]

Q28. Which of the following is or are true?

- A. `getCurrentPosition()` of the Geolocation object calls one-time the success callback with the **current position**
- B. `getCurrentPosition()` of the Geolocation object calls continuously calls the success callback with the current position
- C. `watchPosition()` of the Geolocation object calls one-time the success callback with the current
- D. `watchPosition()` of the Geolocation object calls continuously calls the success callback with **the current position**

Answer: A, D

[Page 540]

Q29. Which of the following formulas can you use to **calculate** the distance **between two samples**?

- A. **haversine**
  - B. Pythagorean theorem
  - C. quadratic
  - D. hyperbolic
- calculate, two samples- haversine

Answer: A

[Page 548]

Q30. What does the **watchPosition method** return?

- A. **A Geoposition object**
- B. A Coordinate object                    **watchPosition-A Geoposition object**
- C. A PositionOptions object
- D. An id which is used in `clearWatch` method to stop monitoring user's location

Answer: A



---

[Page 546, 549]

Q31. Which method **monitors your location**?

- A. `getCurrentPosition`
  - B. `watchPosition`
  - C. `clearWatch`
  - D. `watch`
- monitors your location- watchPosition*

Answer: B

[Page 549]

Q32. How do create a Map object using **Google Map API**?

- A. By using `google.Map` class
  - B. **By using `google.maps.Map` class**
  - C. By using `google.maps.LatLng`
  - D. By using `Map` class
- Google Map API = google.maps.Map*

Answer: B

[Page 512]

Q33. You want to show Google map pointing user position in your application. You have the following code

1. `navigator.getCurrentPosition ((position)=>{`
- 2.
3. `});`

Which code should you write at line 2?

- A. `var map = new google.maps.Map(document.getElementById('map'),position);`
- B. `var map = new google.maps.Map(document.getElementById('map'), position.latitude,position.longitude);`
- C. `var map = new google.maps.Map(document.getElementById('map'), {lat: position.latitude, lng: position.longitude });`
- D. **`var map = new google.maps.Map(document.getElementById('map'), { center: {lat: position.latitude, lng: position.longitude}});`**

Answer: D

[Page 512]

Google Map constructor

`google.maps.Map(mapcontainer, [mapOption])`

MapOption center property is `LatLng` set objects

`LatLng.lat` - latitude

`LatLng.lng` - longitude]

# Programming in HTML5 with JavaScript and CSS3

## Chapter 15: Local data with web storage

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---

Q1. Which one is an API for storing web page data locally?

- A. Geolocation API
- B. Web storage API
- C. AppCache API
- D. Filesystem API

API storing- Web storage API

Answer: B

[Page 555, 558]

Q2. What are the two forms of storage the Web storage API provides?

- A. localStorage
- B. sessionStorage
- C. cookie
- D. appCache

two forms, Web storage API= local, session

Answer: A, B

[Page 564]

Q3. Which one is also known as DOM storage?

- A. Geolocation
- B. Web storage
- C. AppCache
- D. Filesystem

DOM storage- Web storage

Answer: B

[Page 555]

Q4. Which one has been for years for storing small bits of information on client device?

- A. Cookie
- B. Web storage
- C. Web sql
- D. Filesystem

small bits, client device= cookie

Answer: A

[page 556]

Q5. What is maximum size of data for storing cookie data?

- A. 1 KB
- B. 2 KB
- C. 4 KB
- D. Unlimited

Answer: C

[Page 557]

Q6. Which one uses key/values pairs to store data on browser?

- A. Web storage

- 
- B. Web SQL
  - C. Indexeddb
  - D. Filesystem API

Answer: A  
[Page 558]

Q7. Which one provides full power of relational database for storing complex data on browser?

- A. Web storage
  - B. Web SQL
  - C. Indexeddb
  - D. Filesystem API
- full relational database, complex- Web SQL

Answer: B  
[Page 558]

Q8. Which one provides way to store complex data on browser as a non-relational database but with indexing and transaction support?

- A. Web storage
  - B. Web SQL
  - C. Indexeddb
  - D. Filesystem API
- non-relational, transaction support- Indexeddb

Answer: C  
[Page 558]

Q9. What is the difference between the localStorage and sessionStorage?

- A. localStorage is cleared when the session is closed, whereas sessionStorage is still be accessible after a session closes
- B. sessionStorage is cleared when the session is closed, whereas localStorage is still be accessible after a session closes
- C. sessionStorage is accessible within the current is closed, whereas localStorage is accessible in the all open tab
- D. localStorage is accessible within the current is closed, whereas sessionStorage is accessible in the all open tab

Answer: B  
[Page 564]

Q10. Which of following URLs can access that data storage that was created using the URL http://www.example.com/area1/page1.html?

- A. http://store.example.com/area1/page1.html
  - B. http://example.com/area1/page1.html
  - C. http://www.example.com/area1/page2.html
  - D. http://www.example.com/area2/page1.html
- area1= area1, area2

Answer: C, D  
[Page 559]

Q11. Which method removes all the item that has been saved in localStorage?

- A. clear()
  - B. removeAll()
  - C. abandon()
  - D. reset()
- method removes= clear()

---

Answer: A  
[Page 560]

Q12. Which one should you use to retrieve the stored at index position 3?

- A. `localStorage.get(3);`
- B. `localStorage.getItem(3);`
- C. `localStorage[3];` index position 3- `localStorage.getItem(localStorage.key(3));`
- D. `localStorage.getItem(localStorage.key(3));`

Answer: D  
[Page 561]

Q13. How much minimum size for localStorage most browsers allows?

- A. 5 KB
- B. 1 MB
- C. 5 MB
- D. Unlimited

Answer: C  
[Page 561]

Q14. Which property of localStorage do you use to determine whether any value is stored local storage?

- A. `length`
- B. `size`
- C. `value` Property of localStorage- `length`
- D. `key`

Answer: A  
[Page 560]

Q15. You want to read all items from localStorage if any value stored. Which code should you use?

- A. `if(localStorage){ /*code*/ }`
- B. `if(localStorage>0){ /*code*/ }`
- C. `if(localStorage.length>0){ /*code*/ }`
- D. `if(localStorage.key>0){ /*code*/ }`

Answer: C  
[Page 560]

Q16. You have stored data to localStorage with key x, which of the following cannot retrieve that data?

- A. `localStorage.getItem('x')`
- B. `localStorage['x'];`
- C. `localStorage.x` localStorage- `localStorage.get('x')`
- D. `localStorage.get('x')`

Answer: D  
[Page 560]

`localStorage.getItem("x"), localStorage.x, localStorage["x"]` does the same but `localStorage.get("x")` does not]

Q17. What type of data can be stored in web storage?

- A. object

- B. json
- C. string
- D. any type of data

Answer: C

[Page 562]

Currently, only string values can be stored in web storage]

Q18. To store complex **JSON object** in web storage which method is used?

- A. JSON.toString()
  - B. JSON.parse()
  - C. JSON.toObject()
  - D. JSON.stringify()
- JSON object-JSON.stringify

Answer: D

[Page 562]

Q19. How do you store **JSON object** to **local storage**?

- A. Simply store it with a key
  - B. Use JSON.stringify() method to convert the object to a string that can then be placed in web storage
  - C. Use toString() to convert the object to a string that can then be placed in web storage
  - D. None of the above
- JSON object-JSON.stringify

Answer: B

[Page 562]

Q20. Which type of **storage data** is **sandboxed** to only the current tab or **window** and is cleared when closed?

- A. localStorage
  - B. sessionStorage
  - C. offline cache
  - D. cookie
- storage sandboxed= sessionStorage

Answer: B

[Page 564]

Q21. What is the web storage limit currently recommended by the World Wide Web Consortium (W3C)?

- A. 4 KB
  - B. 5 MB
  - C. 500 MB
  - D. 10 MB
- (W3C)= 5MB

Answer: B

[Page 561]

Q22. What is the correct syntax for **removing** all values existing in localStorage?

- A. localStorage.clear();
  - B. localStorage.removeAll();
  - C. localStorage.abandon();
  - D. localStorage.reset();
- removing-.clear();

Answer: A

[Page 560]

---

Q23. Which of the following storage mechanisms has the highest level of cross-browser support?

A. Web storage

B. Web SQL

C. IndexedDB

D. FileSystem API

mechanisms, cross-browser- Web storage

Answer: A

[Page 558]

Q24. Which of the following features does web storage support?

A. Indexing

B. Transactions

C. Asynchronous read/write

D. Simple key/value pair storage

Answer: D

[Page 558]

Q25. Which one is not true web storage?

A. Only string can be stored

B. operates asynchronously

C. no transaction support

D. Does not support indexing

not true web storage= operates asynchronously

Answer: B

[Page 564]

Q26. How can you keep in sync all the open tab with localStorage data so that if one tab modified data other tabs are updated accordingly?

A. periodically check storage update if any modification found

B. use insert, update callback

C. use StorageEvent

D. Any one of the above

Answer: C

[Page 566]

Q27. Which of the following is not a property of the StorageEvent object?

A. oldValue

B. key

C. changeType

D. storageArea

StorageEvent object= changeType

Answer: C

[Page 566]

Q28. Which of the following is the correct way to cancel a storage event?

A. event.returnValue = false;

B. event.preventDefault();

C. event.stopPropagation();

D. Storage events cannot be canceled after they are triggered.

Answer: D

[Page 567]

---

Q29. Which web storage is **accessible** to only the **current tab** or window and is cleared when closed?

- A. HTTP Cookie
- B. FileSystem API
- C. localStorage accessible, current tab= sessionStorage
- D. sessionStorage**

Answer: D

[Page 564]

Q30. Web storage supports advanced features such as transactions or **indexing**?

- A. True
- B. False**

Answer: B not indexing

[Page 564]

Q31. What is the correct syntax for **removing all values** existing in *localStorage*?

- A. localStorage.clear();**
- B. localStorage.removeAll();
- C. localStorage.abandon();
- D. localStorage.reset();

Answer: A

[Page 560]

Q32. Which of the following features does **web storage support**?

- A. Indexing
- B. Transactions
- C. Asynchronous read/write
- D. Simple key/value pair storage** web storage support= simple key/value pair storage

Answer: D

[Page 564]

Q33. Which web storage provide the power of a **full relational database**, including support for **SQL commands**, transactions, and performance tuning?

- A. Web sql**
- B. indexedDB SQL commands- web sql
- C. localStorage
- D. sessionStorage

Answer: A

[Page 558]

Q34. Which of the following is **true** about **Session Storage** in HTML5?

- A. HTML5 introduces the sessionStorage attribute which would be used by the sites to add data to the session storage.
- B. It will be accessible to any page from the same site opened in that window i.e. session.
- C. As soon as you close the window, session would be lost.**
- D. All of the above.

Answer: C

true session storage- close>lost

[Page 562]

Q35. Which of the following is **true about Cookies**?

- 
- A. Cookies are included with every HTTP request, thereby slowing down your web application by transmitting the same data.
  - B. Cookies are included with every HTTP request, thereby sending data unencrypted over the internet.
  - C. Cookies are limited to about 4 KB of data . Not enough to store required data.
  - D. All of the above.

Answer: C

[Page 557]

Q36. You would like to store the user's name after he authenticates on your site, but he will need to authenticate again on his next visit, at which time you would reload his information (including name). Which storage **mechanism** should you use??

- A. Web sql
- B. indexedDB
- C. localStorage
- D. sessionStorage

**mechanism= sessionStorage**

Answer: D

[Page 565]



# Programming in HTML5 with JavaScript and CSS3

## Chapter 16: Offline web applications

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---

Q1. When you need more advanced features such as true asynchronous support, indexing for faster searching, or transactions for offline web storage, which of the following you might use?

- A. localStorage
- B. sessionStorage
- C. Web SQL
- D. Indexeddb

Answer: C, D  
[Page 581]

Q2. Which one of the following offline web storage is an object database providing the power of indexing and transactions without the need to set up a formal relational structure?

- A. localStorage
- B. sessionStorage
- C. Web SQL
- D. Indexeddb

Answer: D  
[Page 581]

Q3. Which one the following storage is suitable for storing files such as images, text files, XML, or even movies?

- A. HTTP cache
- B. Filesystem API
- C. Web SQL
- D. Indexeddb

images, text files, XML or even movies= Filesystem API

Answer: B  
[Page 581]

Q4. Which one the following can you use to make an entire website offline-friendly with very little effort?

- A. HTTP cache
- B. Filesystem API
- C. Web SQL
- D. Indexeddb

offline-friendly, little= HTTP cache

Answer: A  
[Page 581]

Q5. Which one provides all the features of a relational database on the client side?

- A. HTTP Cache
- B. Web SQL
- C. IndexedDB
- D. Filesystem API

relational, client side= Web SQL

---

Answer: B

[Page 582, 591]

IndexedDB is object-based database]

Q6. Which one provides object-based database on the client side?

A. Web storage

B. Web SQL

C. IndexedDB

provides object-based database- indexedDB

D. Filesystem API

Answer: C

[Page 581]

Q7. Which one is ideal for storage of files like text file, xml files or even media files on the client side?

A. Web storage

B. Web SQL

C. IndexedDB

D. Filesystem API

text file, xml files or even media files= Filesystem API

Answer: D

[Page 581]

Q8. Which database standard the most current implementation of Web SQL is built on?

A. SQL Server

B. MySQL

C. SQLite

current implementation- SQLite

D. Oracle

Answer: C

[Page 582]

SQLite is popular in-memory embedded database]

Q9. When you attempt to open a database openDatabase method of the Web SQL API, what will happen if the database you are trying to open does not exist?

A. the openDatabase method will return 'undefined'

B. a database will be created automatically

C. an exception will be thrown

D. a prompt will be opened asking to enter database name

Answer: B

[Page 582]

Q10. Which one is the complete definition of the openDatabase method of Web SQL API?

A. openDatabase (name, version)

B. openDatabase (name, version, displayName)

C. openDatabase (name, version, displayName, creationCallback)

D. openDatabase (name, version, displayName, estimatedSize, creationCallback)

Answer: D

[Page 583]

Q11. When is the creationCallback passed in the openDatabase method invoked?

A. Always, if already exists or if the database does not yet exist and is being created, the callback will be invoked

- 
- B. If the database exists, the callback will be invoked
  - C. If the database does not yet exist and is being created, the callback will be invoked
  - D. If the database version is changed, the callback will be invoked

Answer: C

[Page 583]

Q12. Which code block tries to open a database Library database of size 1MB if exists, otherwise it should be created and a callback function is invoked?

- A. 

```
var db = openDatabase('Library', '1.0', 'My library', 1 * 1024 * 1024);  
db.oncreate = (db) =>{/*code*/}
```
- B. 

```
var db = openDatabase('Library', '1.0', 'My library', 1 * 1024 * 1024);  
db.onsuccess = (db) =>{/*code*/}
```
- C. 

```
var db = openDatabase('Library', '1.0', 'My library', 1 * 1024 * 1024);  
db.open = (db) =>{/*code*/}
```
- D. 

```
var db = openDatabase('Library', '1.0', 'My library', 1 * 1024 * 1024,(db) =>{/*code*/});
```

Answer: D

[Page 584]

If database does not exist it will be created and creationCallback is called]

Q13. How do you close a database connection with Web SQL?

- A. Call the close method on database object.
- B. Call the transaction on the database object, inside the method call the commit method on the transaction object
- C. Set database object to null
- D. You don't have to close the connection manually, it is automatically handled

Answer: D

[Page 583]

Q14. What is the typical default database size in Web SQL?

- A. 1 MB
- B. 5 MB
- C. 10 MB
- D. Unlimited

Answer: B

[Page 583]

Q15. How do apply modifications such as adding or dropping a table to an existing database with the Web SQL?

- A. Use changeVersion method
- B. Use transaction method
- C. Use creationCallback in openDatabase method
- D. Use executeSql method

Answer: A

[Page 583]

Q16. Which code fragment drops an existing table, adds a new table to the existing database?

- A. 

```
var db = openDatabase('mydb', '1.0','my db', 1*1024*1024);  
db.transaction((tx) =>{  
    tx.executeSql("DROP TABLE tblold");
```

- ```

    tx.executeSql("CREATE TABLE tblnew (I'd INTEGER, code TEXT) ");
});
B. var db = openDatabase('mydb', '1.0', 'my db', 1*1024*1024);
    db.changeVersion('1.0','2.0',(tx) =>{
        tx.executeSql("DROP TABLE tblold");
        tx.executeSql("CREATE TABLE tblnew (I'd INTEGER, code TEXT) ");
    }, (err) =>{/error*/}, () =>{/done*/});
C. var db = openDatabase('mydb', '2.0', 'my db', 1*1024*1024,(db)=>{
    db.transaction((tx) =>{
        tx.executeSql("DROP TABLE tblold");
        tx.executeSql("CREATE TABLE tblnew (I'd INTEGER, code TEXT) ");
    });
D. var db = openDatabase('mydb', '2.0', 'my db', 1*1024*1024);
    db.transaction('1.0','2.0',(tx) =>{
        a. tx.executeSql("DROP TABLE tblold");
        b. tx.executeSql("CREATE TABLE tblnew (I'd INTEGER, code TEXT) ");
    }, (err) =>{/error*/}, () =>{/done*/});

```

Answer: B

[Page 583]

The best option is changeVersion call and pass a callback. Do the modifications in the callback.]

Q17. The name of the database you pass to openDatabase method is case-sensitive.

A. True

B. False

Answer: A

[Page 583]

Q18. Which code block correctly creates a database and create a table in it?

- ```

A. var db = openDatabase('mydb', '1.0', 'my first database', 2 * 1024 * 1024);
    db.executeSql('CREATE TABLE IF NOT EXISTS T1 (id unique, text)');
B. var db = openDatabase('mydb', '1.0', 'my first database', 2 * 1024 * 1024);
    db.transaction('CREATE TABLE IF NOT EXISTS T1 (id unique, text)');
C. var db = openDatabase('mydb', '1.0', 'my first database', 2 * 1024 * 1024);
    db.transaction(function (tx) {
        tx.executeSql('CREATE TABLE IF NOT EXISTS T1 (id unique, text)');
    });
D. var db = openDatabase('mydb', '1.0', 'my first database', 2 * 1024 * 1024);
    db.create(function (tx) {
        tx.executeSql('CREATE TABLE IF NOT EXISTS T1 (id unique, text)');
    });

```

Answer: C

[Page 584]

Q19. Which method of the Database object in Web SQL provides a transaction to execute SQL statements allowing both read and write commands?

A. transaction

B. readTransaction

C. writeTrasnsaction

D. executeSql

---

Answer: A  
[Page 584]

Q20. What is the required parameter of the transaction method of the Database object in Web SQL?

- A. A callback function
- B. A success callback function
- C. An error callback function
- D. A Database object

Answer: A  
[Page 585]

Q21. What does the callback function of the Database object's transaction method accept as parameter?

- A. A Database object
- B. A transaction object
- C. A SQL statement
- D. Array of objects

Answer: B  
[Page 585]

Q22. With Web SQL, Schema migration support is available by using the \_\_\_\_\_ method.

- A. migrated()
- B. changeVersion()
- C. transaction()
- D. executeSql()

Answer: B  
[Page 589]

Q23. In Web SQL, what does the openDatabase method do?

- A. Opens a database if exists and returns the opened database. If the database does not exist returns null
- B. Opens a database and returns it if it exists otherwise throws exception
- C. Opens a database, if it does not exist it create one and returns it
- D. Opens a database if exists and returns the opened database. If the database does not exist does nothing

Answer: C  
[Page 588]

Q24. Which one is not a valid call to open a Web SQL database?

- A. `var db = openDatabase('Library');`
- B. `var db = openDatabase('Library', '1.0', 'My library');`
- C. `var db = openDatabase('Library', '1.0', 'My library', 5 * 1024 * 1024);`
- D. `var db = openDatabase('Library', '1.0', 'My library', 5 * 1024 * 1024, function(e){  
alert('New db created');`  
`});`

Answer: A  
[Page 583]

Q25. You are working with Web SQL. Your code is like below

---

```
1. var db = openDatabase('Library', '1.0', 'My library', 5 * 1024 * 1024);
2. function migrateDB(t) {
3.     t.executeSql("CREATE TABLE IF NOT EXISTS authors(" +
4.         "id INTEGER PRIMARY KEY AUTOINCREMENT, name TEXT)");
5. }
6. function onError(error) {
7.     alert("Error code: " + error.code + " Message: " + error.message);
8. }
9. function onSuccess() {
10.    alert("Migration complete!");
11. }
12.
13.
```

You want change version of the database. Which code would you add at line 13?

- A. db.changeVersion('1.0' , '2.0', onSuccess, onError, migrateDB);
- B. db.changeVersion('1.0' , '2.0', onError, onSuccess, migrateDB );
- C. db.changeVersion('1.0' , '2.0', migrateDB, onSuccess, onError );
- D. db.changeVersion('1.0' , '2.0', migrateDB, onError, onSuccess );

Answer: D

[Page 584]

Q26. To insert a row in a table in Web SQL database which method of the Web SQL database object do you use?

- A. transaction
- B. executeSql
- C. insert
- D. add

Answer: A

[Page 585]

Don't confuse with executeSql which is a method of transaction object. Transaction is the method of Database object.

```
var db = openDatabase(.....);
db.transaction((tx)=>{ //callback function which accepts transaction parameter
    tx.executeSql(".....");
});
```

Q27. Which one following is the required parameter of the transaction method of the Web SQL database object?

- A. Callback to execute command
- B. Callback method to invoke if an error occurs while the transaction is being processed
- C. Callback method to invoke if all statements successfully execute within the transaction
- D. All of the above

Answer: A

[Page 585]

Q28. What commands does the readTransaction method of the Web SQL database object support?

- A. Read commands
- B. Insert commands
- C. Update commands
- D. Delete commands

---

Answer: A  
[Page 585]

Q29. Which one is **not** true about IndexedDB?

- A. IndexedDB use tables with defined schema
- B. IndexedDB uses object stores, which are key/value storage areas
- C. IndexedDB a key/value database in which values can range from simple strings to complex object structures
- D. IndexedDB maintains indexes over the records it stores for fast retrieval

Answer: A  
[Page 589]

Q30. When upgradeneeded event is trigger if you call to open an IndexedDB database?

- A. if the requested database does not exist
- B. if the version requested does not match the current version of the existing database
- C. if the database exceeds the size allowed in browser settings
- D. if version is not supplied with the database name

Answer: A, B  
[Page 591]

Q31. Which code block correctly creates an object store in an IndexedDB database?

- A. 

```
var indexedDB = window.indexedDB;
var openRequest = indexedDB.open('Library', 1);
openRequest.onsuccess = function(response) {
    var db = openRequest.result;
    db.createObjectStore("authors", { keypath: 'id', autoIncrement: true });
};
```
- B. 

```
var indexedDB = window.indexedDB;
var openRequest = indexedDB.open('Library', 1);
openRequest.onupgradeneeded = function(response) {
    response.currentTarget.result.createObjectStore("authors", { keypath: 'id',
    autoIncrement: true });
};
```
- C. 

```
var indexedDB = window.indexedDB;
var openRequest = indexedDB.open('Library', 1);
openRequest. onupgradeneeded = function(response) {
    var db = openRequest.result;
    db.createObjectStore("authors", { keypath: 'id', autoIncrement: true });
};
```
- D. 

```
var indexedDB = window.indexedDB;
var openRequest = indexedDB.open('Library', 1);
openRequest.onsuccess = function(response) {
    response.currentTarget.result.createObjectStore("authors", { keypath: 'id',
    autoIncrement: true });
};
```

Answer: B  
[Page 591]

---

Q32. Which JavaScript object contains a method for making requests to open communication with the file system?

- A. Window
- B. Document
- C. Navigator
- D. Media

Answer: A

[Page 601]

Q33. Which code should you use at the top to make your FileSystem request compatible with all versions of Chrome?

- A. `window.requestFileSystem = window.requestFileSystem`  
`|| navigator.webkitRequestFileSystem;`
- B. `window.requestFileSystem = window || window.webkitRequestFileSystem;`
- C. `window.requestFileSystem = window.requestFileSystem`  
`|| window.webkitRequestFileSystem;`
- D. `window.requestFileSystem = window.requestFileSystem`  
`&& window.webkitRequestFileSystem;`

Answer: C

[Page 601]

Q34. What are the parameters in order of the requestFileSystem method?

- A. type, size
- B. type, size, callback
- C. type, size, successCallback, errorCallback
- D. type, size, errorCallback, successCallback

Answer: C

[Page 601]

Q35. What are the valid values of type of the requestFileSystem method?

- A. FILE or DIRECTORY
- B. TEXT or BINARY
- C. TEMPORARY or PERSISTENT
- D. LOCAL or REMOTE

Answer: C

[Page 601]

Q36. What type of parameter the success callback function of requestFileSystem method accept?

- A. Path
- B. File
- C. FileSystem
- D. DirectoryEntry

Answer: C

[Page 601]

Q37. Which one you must have to create a file?

- A. DirectoryEntry Object
- B. File Entry object
- C. File object



---

D. Blob object

Answer: A

[Page 602]

To create a file, you must first have a DirectoryEntry object so you have an allocated place in which to put the file

You get DirectoryEntry object from the root property of the FileEntry object]

Q38. How can you get the DirectoryEntry object to create file?

- A. From the method named getFile of the FileSystem object
- B. From the property named directory of the FileSystem object
- C. From the property named root of the FileSystem object
- D. From the property named path of the FileSystem object

Answer: C

[Page 602]

Q39. Which code opens a file an existing file if it does not exist it creates one and the newly created file?

- A. `fileSystem.root.getFile("example.txt", successCallback, errorCallback);`
- B. `fileSystem.root.getFile("example.txt", { }, successCallback, errorCallback);`
- C. `fileSystem.root.getFile("example.txt", { create: true }, successCallback, errorCallback);`
- D. `fileSystem.root.getFile("example.txt", { new: true }, successCallback, errorCallback);`

Answer: C

[Page 602]

Q40. What does the write method of the File Writer object accept as argument?

- A. string
- B. json
- C. blob
- D. Any data

Answer: C

[Page 602]

Q41. How do you get a FileWriter to write content to a opened file?

- A. Using the create Writer method of the FileSystem object
- B. Using the createWriter method of the FileEntry object
- C. Using the create method of the FileSystem object
- D. Using the create method of the FileEntry object

Answer: B

[Page 602]

Q42. How do you get a FileReader to read content from a opened file?

- A. Using the file method of the FileSystem object
- B. Using the file of the FileEntry object
- C. Using the createReader method of the FileSystem object
- D. Using the createReader method of the FileEntry object

Answer: B

[Page 601]

---

Q43. Which of the following methods should you use when storing files that are relatively unimportant and can be removed if the browser is low in available space?

- A. `window.requestFileSystem(LOW, 5 * 1024 * 1024, getDirectory, handleError);`
- B. `window.requestFileSystem(PERSISTENT, 5 * 1024 * 1024, getDirectory, handleError);`
- C. `window.requestFileSystem(SIMPLE, 5 * 1024 * 1024, getDirectory, handleError);`
- D. `window.requestFileSystem(TEMPORARY, 5 * 1024 * 1024, getDirectory, handleError);`

Answer: D

[Page 601]

Q44. Which of the following allows `FileWriter` to append data to the end of the file?

- A. `fileWriter.seek(fileWriter.length);`
- B. `fileWriter.seek(fileWriter.end);`
- C. `fileWriter.moveLast()`
- D. `fileWriter.moveToEnd();`

Answer: A

[Page 603]

Q45. Which method of the `FileReader` do you use to read content types other than text?

- A. `read`
- B. `readAsBinary`
- C. `readAsText`
- D. `readAsDataURL`

Answer: D

Q46. Which method of the `FileReader` do you use to read text content?

- A. `read`
- B. `readAsText`
- C. `readAsData`
- D. `readAsDataURL`

Answer: B

Q47. Which of the following removes a directory that contains existing files?

- A. `directoryEntry.remove(directoryRemoved, handleError);`
- B. `directoryEntry.removeRecursively(directoryRemoved, handleError);`
- C. `directoryEntry.removeAll(directoryRemoved, handleError);`
- D. `directoryEntry.remove(directoryRemoved, ALL, handleError)`

Answer: B

[Page 606]

Q48. Which one is not of the `FileReader` for reading the contents of a file?

- A. `read`
- B. `readAsText`
- C. `readArrayBuffer`
- D. `readAsDataURL`

Answer: A

Q49. How files are created and opened with `FileSystem`?

- A. Using the `createWriter` method on the `DirectoryEntry` object

- 
- B. Using the getFile method on the DirectoryEntry object
  - C. Using the seek method on the DirectoryEntry object
  - D. Using the requestFileSystem method

Answer: B

Q50. How do you configure how files are cached in your application?

- A. By including a manifest file.
- B. By including a browser configuration file
- C. By including browser plug-in
- D. By including alternate offline page

Answer: A

Q51. Which one is key to caching being served correctly?

- A. Using the text/cache-manifest content type in the HTTP response.
- B. Adding manifest attribute in the <html> tag
- C. Putting the manifest file in the root directory of the application
- D. The manifest file has the .manifest extension

Answer: A

Q52. Which one is not a section in cache manifest?

- A. CACHE
- B. OFFLINE
- C. NETWORK
- D. FALLBACK

Answer: B

Q53. Which section of the cache manifest files contains the items to be cached?

- A. CACHE
- B. OFFLINE
- C. NETWORK
- D. FALLBACK

Answer: A

Q54. Which section of the cache manifest files contains the substitutions for resources in offline mode?

- A. CACHE
- B. OFFLINE
- C. NETWORK
- D. FALLBACK

Answer: D

Q55. Which section of the cache manifest files contains the resources that will not be available in offline mode?

- A. CACHE
- B. OFFLINE
- C. NETWORK
- D. FALLBACK

Answer: C

---

Q56. Which of the following is a valid statement for the first line of a manifest file?

- A. CACHE
- B. CACHE MANIFEST
- C. CACHE-MANIFEST
- D. CACHE-ALWAYS

Answer: C

[page 608]

Q57. Which event is fired after an existing cache has been updated with new resources?

- A. downloading
- B. cached
- C. updateReady
- D. completed

Answer: C

[Page 610]

Q58. You are working with indexedDB. Your code is like below.

1. var indexedDB = window.indexedDB;
2. var openRequest = indexedDB.open('Library', 1);
3. var db;
4. openRequest.onsuccess = function(evt) {
- 5.
6. };

You want to store opened database in db variable. Which code statement is correct?

- A. db = openRequest.result;
- B. db = openRequest
- C. db = evt.result;
- D. db = evt.target.result;

Answer: D

[Page 596]

Q59. Consider the code below

```
var indexedDB = window.indexedDB = window.indexedDB || window.mozIndexedDB  
|| window.webkitIndexedDB || window.msIndexedDB;
```

What is the type of indexedDB variable?

- A. indexedDB object
- B. IDB
- C. IDBFactory object
- D. Simple JavaScript object

Answer: C

Q60. How does open method IDBFactory object work?

- A. It is synchronous process, it opens the target database and returns the reference
- B. It is asynchronous process, it begins an asynchronous process to open database and fires onsuccess event when database is ready to use.
- C. It is asynchronous process, it begins an asynchronous process to open database and invokes the callback any supplied to notify when database is ready.
- D. None of the above

---

Answer: B  
[Page 591]

Q61. How does indexedDB store data?

- A. indexedDB stores data in tables where Each table contains a set of columns, each of which has a name and a data type.
- B. IndexedDB uses spaces called object stores, which are key/value storage areas.
- C. IndexedDB stores data in key/value pairs and both key and value can be JSON objects
- D. IndexedDB stores data in key/value pairs and both key and value are strings

Answer: B  
[Page 591]

Q62. What happens if supplied version to indexedDB open method does not match with the current version?

- A. An exception is thrown
- B. Version of the database is changed to supplied version
- C. If version supplied is higher than the current one, version of the database is changed otherwise an exception is thrown
- D. An onupgradeneeded event that will be triggered

Answer: D  
[Page 591]