Solutions to Quick Checks

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# Quick Check Answers

Quick Check 1

1. What is the difference between the target property and the currentTarget property?

The target property returns the element that initiated the event at the bottom of the object hierarchy; the currentTarget property returns the element that is currently experiencing the event as it propagates through the object hierarchy.

**Feedback**: The target property references the element that receives the event during the target phase; the currentTarget property references the element that is currently receiving the event as it propagates through the object hierarchy.

1. What sequence of events is initiated during a mouse click and in what order?

mousedown mouseup mouseclick

**Feedback**: A mouse action can combine several events in quick succession. The action of clicking the mouse button combines three events fired in the order: mousedown, mouseup, and mouseclick.

1. What event properties provide the coordinates of the pointer relative to the web page?

e.pageX and e.pageY

**Feedback**: The e.pageX property returns the distance in pixels of the pointer from the left edge of the page; the e.pageY property returns the distance in pixels of the pointer from the top edge of the page.

1. What is the touch cascade?

The touch cascade is a sequence of touch and emulated mouse events fired in response to a touch action.

**Feedback**: Touchscreen browsers aid users by emulating mouse events so that users can tap a hypertext link on page instead of clicking the link with a mouse. This is accomplished by initiating a touch cascade of touch and mouse actions.

1. What two events are treated by the browser as equivalent to the pointerdown event?

mousedown and touchstart

**Feedback**: For apps that need to accommodate both mouse and touch events, pointerdown, mousedown, and touchstart are treated as equivalent events.

Quick Check 2

1. What must be added to an HTML element to make it draggable?

The attribute draggable="true"

**Feedback**: To make an element draggable you must add the attribute draggable="true" to the element tag.

1. What event handler is applied to an element when it starts being dragged?

ondragstart

**Feedback**: The dragstart event is fired when a draggable item is first being dragged.

1. What property and method can be used to store data associated with a drag and drop action?

dataTransfer.setData(*mimeType*, *string*)

**Feedback**: Use the setData() method of the dataTransfer object to store data that will be transferred along with the dragged item.

1. What is the difference between the keypress and keydown events?

The keypress event is fired when a character is generated from a keyboard action; the keydown event is fired when a keyboard key is physically pressed down.

**Feedback**: The distinction between the keydown/keyup events and keypress event lies in the difference between the physical keyboard and the generated character. The keydown/keyup events are fired in response to the physical act of pressing and releasing a keyboard key, while keypress is fired in response to the creation of a character.

1. How do you determine if the Ctrl key is pressed down during a pointer event?

The ctrlKey property of the event object will return a value of true.

**Feedback**: In addition to character keys, JavaScript supports the modifier keys Alt, Ctrl, Shift, and Command using the altKey, ctrlKey, shiftKey, and metaKey properties, which return true if the key is pressed down during an event.

Quick Check 3

1. Provide code for a map options object named mapOpt that is centered at 43.992722° latitude and ‑102.241509° longitude with a zoom level of 15.

mapOpt = {  
 zoom: 15,  
 center: {lat: 43.992722, lng: -102.241509}  
}

**Feedback:** Map options are entered as an object literal with the zoom field indicating the magnification of the map and the center field indicating the latitude and longitude of the map center.

1. Provide code to create a new marker named cityMarker using options defined in the object literal, cityOptions.

cityMarker = new google.maps.Marker(cityOptions)

**Feedback:** Use the Marker(*markerOpt*) method of the google.maps object to create a pin marker.

1. What does it mean if the Geolocation API returns an error code of 3?

The Geolocation Server has timed out without returning a global position.

**Feedback:** An error code of 3 means TIMEOUT (the position was not retrieved with the allotted time).

1. What is the difference between the DirectionsService object and the DirectionsRenderer object?

The DirectionsService object queries the directions server to generate directions between a starting point and an ending point. The DirectionsRenderer object provides tools to display that route in a map as turn-by-turn directions within a web page element.

**Feedback:** The Google Maps API provides two objects to manage directions. The DirectionsService object queries the Google Maps Direction service to find the most efficient route between two locations for a given mode of travel. The DirectionsRenderer object draws that route on a map or writes the turn-by-turn directions to the web page.

1. Why would you minify a file?

You minify a file to remove characters and comments that are not strictly necessary for the running of the script, thus reducing overall file size.

**Feedback:** In a large web app that will be used by mobile devices, it is important for developers to remove every unneeded character, reducing the download size as much as possible. One commonly used method is minifying files, by removing comments, indents, and line breaks, and tweaking the code in other ways to make the file size smaller.