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Mobile Simulation 기말고사.

2017. 12. 05(화)

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1. Which sign does jQuery use as a shortcut for jQuery?  

A. the \$ Sign	B. the & Sign
C. the # Sign	D. the ? Sign
  
2. What is the correct jQuery code to set the background color of all p elements to red?  

A. <code>\$("p").style("background-color","red");</code>	B. <code>\$("p").layout("background-color","red");</code>
C. <code>\$("p").css("background-color","red");</code>	D. <code>\$("p").set("background-color","red");</code>
  
3. What is the correct jQuery code for making all div elements 200 pixels high?  

A. <code>\$("#div").height="200"</code>	B. <code>\$("#div").yPos(200)</code>
C. <code>\$("#div").{height: 200}</code>	D. <code>\$("#div").height(200)</code>
  
4. Which jQuery function is used to prevent code from running, before the document is finished loading?  

A. <code>\$(document).init()</code>	B. <code>\$(document).ready()</code>
C. <code>\$(document).load()</code>	D. <code>\$(document).onload()</code>
  
5. What does the abbreviation 'JSON' stand for?  

A. JavaScript Object Name	B. JavaScript Object Network
C. JavaScript Object Notation	D. JavaScript Object Navigation

6. We can use jQuery by inserting the following script to set CDN for jQuery.

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.2.1/jquery.min.js">
```

What does the abbreviation 'CDN' stand for?

- A. Content Design Network
- B. Content Delivery Notation
- C. Content Delivery Network
- D. Content Design Notation

7-9. 다음 빈칸에 적절한 단어를 아래 보기에서 찾아 기입하십시오.

HTML5에서는 ([7] **geolocation** ) 객체를 통해 위치정보서비스를 제공하며, 현재 위치를 알아내기 위해 ([8] **getCurrentPosition()**) 메소드를 호출하고, 이동 중인 경우 위치가 바뀔 때마다 위치를 통보받으자 하면 ([9] **watchPosition()**) 메소드를 호출한다.

location, navigator, geonavigator, wifilocation, geolocation, geoposition, getLocation(), getPosition(), getCurrentPosition(), repeatPosition(), searchPosition(), searchLocation(), findLocation(), getChangePosition(), findPosition(), watchPosition(), askPosition(), tracePosition()

10. What is the incorrect introduction to Node.js?

- A. Node.js is a JavaScript runtime built on Chrome's V8 JavaScript engine.
- B. Node.js uses an action-driven architerture.
- C. Node.js uses a non-blocking I/O model across distributed devices.
- D. Npm is Node.js' package ecosystem with open source libraries.

11. What is the name of a file that contains all information of a node project?

- A. package.cfg
- B. node.cfg
- C. package.json
- D. node.json

12. Where is the suitable keyword to make a local module that user defines in the below code? The name of local module is "msnninfo.js".

```
// msnninfo.js
module.____[12]____ = function (id, name, phone) {
    console.log('My Info');
    console.log('ID : ' + id);
    console.log('Name : ' + name);
    console.log('Phone : ' + phone);
}
```

- A. exports      B. export      C. packages      D. package

13. How can you use a local module "msnninfo.js"?

```
// myinfo.js
var myinfo = ____[13]____('./msnninfo');
myinfo('ms77', 'COMSI', '010-1234-5678');
```

- A. import      B. callback      C. request      D. require

14. The below code snippets simply runs HTTP server in node.js.

```
// http server (web server)
var http = require('http');
var port = 3000;
var server = http.createServer(function(request, response) {
    response.writeHead(200, {
        "Content-Type": "text/plain"
    });
    response.write("Hello HTTP server from node.js!");
    response.end();
});
server.____[14]____(port);
console.log("Server Running on " + port +
    "\nLaunch http://localhost:" + port);
```

14. What function is used to connect a server to a port?

- A. send      B. require      C. listen      D. connect

**[15-17]. Answer three questions about loadJSONDoc(). [AJAX & JSON]**

**When html is loaded, the method loadJSONDoc() is to be executed.**

```
function loadJSONDoc() {
    var jsonreq;
    var txt;
    var jsonDoc;

    if (window.[15]) { // code for IE7+, Firefox, Chrome, Opera, Safari
        jsonreq = new [15]();
    } else { // code for IE6, IE5
        jsonreq = new ActiveXObject("Microsoft.jsonreq");
    }
    jsonreq.onreadystatechange = function() {
        if (jsonreq.readyState == 4 && jsonreq.status == 200) {
            jsonDoc = JSON.[16](jsonreq.responseText);
            txt = "";
            txt = txt + "이름 : " + jsonDoc.name + "<br>";
            txt = txt + "국가 : " + jsonDoc.address.nation + "<br>";
            txt = txt + "사는곳 : " + jsonDoc.address.city + "<br>";
            txt = txt + "취미 : " + jsonDoc.hobby + "<br>";
            txt = txt + "포트폴리오.프로그래밍언어 : " + jsonDoc.portfolio.[17] +
            "<br>";

            document.getElementById("myDiv").innerHTML = txt;
        }
    };
    jsonreq.open("GET", "data/ms00.json", true); // async mode
    jsonreq.send();
}
```

**// ms00.json**

```
{
    "name": "Comsi",
    "age": 21,
    "address": {
        "nation": "Korea",
        "city": "김해",
        "postalCode": "621-749"
    },
    "hobby": ["등산", "걷기", "조깅", "웹서핑"],
    "phone": "010-1235-4567",
    "email": "comsi@inje.ac.kr",
    "company": "인제대학교",
    "department": "컴퓨터시뮬레이션",
    "portfolio": {
        "lecture": ["Arduino", "모바일 프로그래밍", "모바일 시뮬레이션"],
        "pro_language": ["Javascript", "Java", "Android", "jQuery", "Python", "Arduino"],
        "certificate": ["OCJP", "정보처리기사", "MS Pro", "IOT master", "ML developer"]
    }
}
```

15. What object is used for loading json file through internet?

- A. HttpRequest
- B. JSONHttpRequest
- C. XMLHttpRequest
- D. AJAXHttpRequest

16. Data in json file is returned as an jsonreq object.  
What is the proper function to read content in a json file?

- A. read
- B. parse
- C. html
- D. load

-----

17. What is the correct code to get the above result as 'Arduino' in 포트폴리오.프로그래밍언어?

- A. pro\_language[2]
- B. pro\_language[3]
- C. pro\_language[4]
- D. pro\_language[5]

### Learning AJAX : load JSON

MSnn, My personal information:

이름 : Comsi  
국가 : Korea  
사는곳 : 김해  
취미 : 등산, 걷기, 조깅, 웹서핑  
포트폴리오.프로그래밍언어 : jQuery

[Get my information](#)

[18-20]. Answer three questions about Drag&Drop in SVG blackhole.

[SVG, Drag&Drop]

```
<body>
  <h1>Learning Drag & Drop : </h1>

  <h2> SVG blackhole: drop your things</h2>

  <svg id="svg2" width="400" height="300" style="background-color:#000"
[18.A]      <ondrop="handleDrop(event)"
[18.B]      <ondragover="allowDrop(event)">

    <circle r="150" cx="200" cy="150" fill="[19] (#grad_Radial)" stroke="#00fa"
stroke-width="7">
      <animate attributeName="r" from="0" to="150" dur="5s" />
      <animate attributeName="cx" from="100" to="200" dur="5s" />
    </circle>

    <defs>
      <linearGradient y2="100%" x2="100%" y1="0%" x1="0%" id="grad_Linear">
        <stop stop-color="#ff0000" offset="0%"/>
        <stop stop-color="#ffff00" offset="100%"/>
      </linearGradient>
      <radialGradient id="grad_Radial" cx="50%" cy="50%" r="50%" fx="50%" fy="50%">
        <stop offset="0%" style="stop-color:rgb(0,0,0);
stop-opacity:1" />
        <stop offset="100%" style="stop-color:rgb(255,255,255);stop-opacity:1" />
      </radialGradient>
    </defs>
  </svg>
</body>
```



```

<script>
    function allowDrop(ev) {
        ev.[20] _____;
    }

    function handleDragStart(ev) {
        ev.dataTransfer.effectAllowed = 'move';
        ev.dataTransfer.setData("Text", ev.target.id);
    }

    function handleDrop(ev) {
        ev.[20] _____;
        var src = ev.dataTransfer.getData("Text");
        ev.target.appendChild(document.getElementById(src));
    }
</script>

```

18. What are the correct setting of [19.A , 19.B] to make it possible to drop into SVG blackhole?

- A. ondrag , ondropover
- B. ondrag , ondragover
- C. ondrop , ondragover
- D. **ondrop , ondropover**

19. What is the proper method to set gradient on SVG object?

- |               |         |
|---------------|---------|
| A. <b>url</b> | B. set  |
| C. css        | D. grad |

20. What is the proper method to stop the default action of an element from happening?

- |                   |                            |
|-------------------|----------------------------|
| A. allowDefault() | B. <b>preventDefault()</b> |
| C. setDefault()   | D. provideDefault()        |

**[21-22]. Answer two questions about flight route animation. [Goocoding]**

```
<button onclick="startGeolocation()">위치 정보 시작</button>
<button onclick="stopGeolocation()">위치 정보 중지</button>
<div id="target"> <h2> Click the button to get your location.</h2> </div>
<script>
  var id;
  var myDiv = document.getElementById("target");
  function startGeolocation() {
    if (navigator.geolocation) {
      id = navigator.geolocation.[21]_____(showGeolocation, showError);
    } else {
      myDiv.innerHTML="No gps support";
    }
  }
  function showGeolocation(location) {
    myDiv.innerHTML = "(위도: " + location.[22]_____.latitude.toFixed(6) +
      ", 경도: " + location.[22]_____.longitude.toFixed(6) + ")";
  }
  function stopGeolocation() {
    if (navigator.geolocation) {
      navigator.geolocation.clearWatch(id);
    }
    myDiv.innerHTML="Stop location search.";
  }
  function showError(error) {
    switch(error.code) {
      case error.PERMISSION_DENIED:
        myDiv.innerHTML = "User denied the request for Geolocation.";
        break;
      case error.POSITION_UNAVAILABLE:
        myDiv.innerHTML = "Location information is unavailable.";
        break;
      case error.TIMEOUT:
        myDiv.innerHTML = "The request to get user location timed out.";
        break;
    }
  }
}
</script>
```

**21. What is the correct function to check the change in location?**

- |                         |                         |
|-------------------------|-------------------------|
| <b>A. checkLocation</b> | <b>B. watchLocation</b> |
| <b>C. checkPosition</b> | <b>D. watchPosition</b> |

**22. What is the proper attribute to keep information of a location?**

- |                  |                  |
|------------------|------------------|
| <b>A. pos</b>    | <b>B. geopos</b> |
| <b>C. coords</b> | <b>D. latLng</b> |



[23-24]. Answer two questions about flight route animation. [Google Map]

```
<script>
var map;
var flightPath;
// Defining arrow symbol
var arrowSymbol = {
    strokeColor: '#00F',
    scale: 3,
    path: google.maps.SymbolPath.FORWARD_CLOSED_ARROW
};

function addAnimatedPolyline() {
// the path of Korean flight between Gimpo, Jeju, and Busan, Korea.
var flightPlanCoordinates = [
    new google.maps.LatLng(37.558909, 126.803083), // Gimpo airport
    new google.maps.LatLng(33.507758, 126.491434), // Jeju airport
    new google.maps.LatLng(35.173431, 128.946659), // Gimhae airport
];

flightPath = new google.maps.Polyline({
    path: flightPlanCoordinates,
    //geodesic: true,
    icons: [{
        icon: arrowSymbol,
        offset: '100%'
    }],
    strokeColor: '#FF0000',
    strokeOpacity: 0.8,
    strokeWeight: 3,
    map: map
});
// Calling the arrow animation function
animateArrow();
}

function animateArrow() {
    var counter = 0;
    var intervalID=window.setInterval(function() {
        counter = (counter + 1) % 201;
        var arrows = flightPath.get('icons');
        arrows[0].[23]_____ = (counter / 4) + '%';
        flightPath.set('icons', arrows);
        if(counter==[24]_____){
            clearInterval(intervalID);
        }
    }, 50);
}
```

```

function initialize() {
    var mapProp = {
        zoom: 7,
        center: new google.maps.LatLng(35.840212, 127.125173), // 전주
        mapTypeId: google.maps.MapTypeId.TERRAIN
    };

    map = new google.maps.Map(document.getElementById('googleMap'),
        mapProp);

    addAnimatedPolyline();
}

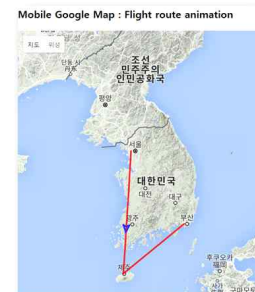
google.maps.event.addDomListener(window, 'load', initialize);
</script>
</head>

<body>
<h2>Mobile Google Map : Flight route animation </h2>

<div id="googleMap"> </div>

</body>

```



23. What is the proper attribute that defines the relative position from the start position?
- A. path                      B. interval  
C. **offset**                      D. position
24. What is the correct value to stop flight animation?
- A. 100                      B. **200**  
C. 300                      D. 400

[25-28]. Answer four questions about getting informations of places around my location.

[Google Map library : places]

```
<div id="floating-panel">
  <button onclick="show_places('food')">Foods</button>
  <button onclick="show_places('store')">Stores</button>
  <button onclick="show_places('book_store')">서점</button>
  <button onclick="show_places('pharmacy')">약국</button>
  <button onclick="show_places('cafe')">Coffee shops</button>
  <button onclick="show_places('bar')">Bar</button>
  <button onclick="show_places('hospital')">의원</button>
  <button onclick="show_places('dentist')">치과</button>
  <button onclick="show_places('hair_care')">미용실</button>
  <br><b>Choose location: </b>
  <select id="target">
    <option value='{ "lat": 35.249164,"lng": 128.901881}'>김해, 인제대
  </option>
    <option value='{ "lat": 35.132151,"lng": 129.111748}'>MS00 Home
  </option>
    <option value='{ "lat": 42.318388,"lng": -83.706521}'>Ann Arbor</option>
  </select>
</div>
<div id="map"> </div>
<script>
  var map;
  var markers = []; // array to store all markers
  var infowindow;
  var service;
  var target_location; // name of check-up location
  var e323 = {lat: 35.249164, lng: 128.901881}; // 35.249164, 128.901881
  var annarbor = {lat: 42.318388, lng: -83.706521}; // ann arbor, mi

  function initMap() {
    target_location=e323; // annarbor
    map = new google.maps.Map(document.getElementById('map'), {
      center: target_location, //myhome, ann arbor,
      zoom: 15
    });

    infowindow = new google.maps.InfoWindow();

    show_places('cafe');

    var onChangeHandler = function() {
      var obj = JSON.parse(document.getElementById('target').value);
      //console.log(obj.lat);
      target_location = {lat:[25]_____obj.lat, lng:[25]_____obj.lng};
      // select type of places
      show_places('cafe');
    };
    document.getElementById('target').addEventListener('change', onChangeHandler);
  }
}
```

```

function show_places(whatplace) {
    clearMarkers(); // clear all previous markers
    map = new google.maps.Map(document.getElementById('map'), {
        center: target_location, //target_location, //pyrmont,ann arbor,
        zoom: 15
    });
    service = new google.maps.places.PlacesService(map);
    service.nearbySearch({
        location: target_location, //target_location, //annarbor, //pyrmont,
        radius: 2000,
        types: [whatplace] // store, food
    }, [26] _____ callback);
}

function callback(results, status) {
    if (status === google.maps.places.PlacesServiceStatus.OK) {
        for (var i = 0; i < results.length; i++) {
            createMarker(results[i]);
        }
    }
}

function createMarker(place) {
    var placeLoc = place.geometry.location;
    var marker = new google.maps.Marker({
        map: map,
        position: placeLoc //place.geometry.location
    });
    markers.[27] _____ push(marker);

    google.maps.event.addListener(marker, 'click', function() {
        infowindow.setContent(place.name);
        infowindow.open(map, this);
    });
}

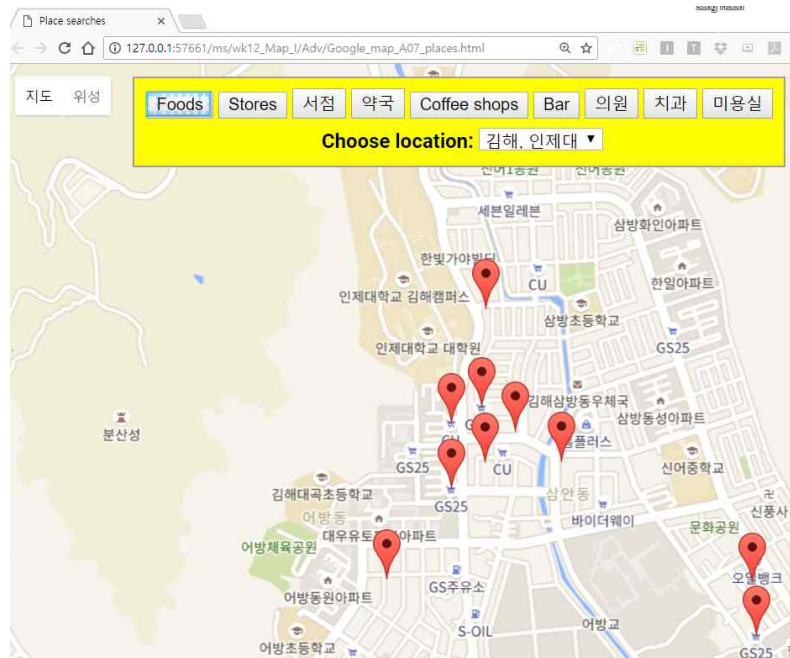
// Sets the map on all markers in the array.
function setMapOnAll(map) {
    for (var i = 0; i < markers.length; i++) {
        markers[i].[28] _____ setMap(map);
    }
}

// Removes the markers from the map, but keeps them in the array.
function clearMarkers() {
    setMapOnAll(null);
}

// Shows any markers currently in the array.
function showMarkers() {
    setMapOnAll(map);
}

// Deletes all markers in the array by removing references to them.
function deleteMarkers() {
    clearMarkers();
    markers = [];
}
</script>

```



25. Write down the correct variable here to get location.

--- ( **obj** )

26. What is the correct function to mark places selected by me?

- |                 |                    |
|-----------------|--------------------|
| A. createMarker | B. <b>callback</b> |
| C. showMarkers  | D. setMapOnAll     |

27. What is the correct function to add a marker to the array "markers"?

- |                |        |
|----------------|--------|
| A. put         | B. get |
| C. <b>push</b> | D. pop |

28. What is the proper function to set all markers on a map?

- |              |                  |
|--------------|------------------|
| A. setMarker | B. putMarker     |
| C. getMap    | D. <b>setMap</b> |

29-30.[2점]. The javascript function fire() gets velocity and angle from inputs in <div id="control">.

Replace two lines [A,B] with jQuery code.

```
<div id="control">
  속도<input id="velocity" value="30" type="number" min="0" max="100" step="1" />
  각도<input id="angle" value="45" type="number" min="0" max="90" step="1" />
  네트 높이<input id="netHeight" value="150" type="number" min="50" max="150" step="10"
    onchange="redrawNet()"/>
  <div id="score">점수 = 0</div>
  <button onclick="fire()" style="height:24pt;width:50pt">발사</button>
  <button onclick="clearOrbit()" style="height:24pt;width:80pt">궤도 지우기</button>
</div>
```

```
function fire() {
  init_screen();
  velocity = Number(document.getElementById("velocity").value);
  angle = Number(document.getElementById("angle").value);    // [A]
  angle = Number($("#angle").val());
  var angleR = angle * Math.PI / 180;

  ballVx = velocity * Math.cos(angleR); // to the right
  ballVy = -velocity * Math.sin(angleR); // upward

  net_h = Number(document.getElementById("netHeight").value); // [B]
  net_h = Number($("#netHeight").val()); // [A, B] 같은 방식으로 처리.
  draw();
  timerId = setInterval(calculate, 100);
  return false;
}
```

[29] \_\_\_\_\_

[30] \_\_\_\_\_