**Questions**

**HTML CSS:**

1. Give an explanation on these tags and what they do?
   1. <div>

element with new line

* 1. <ul>

list element container

* 1. <td>

data element in a table

* 1. <thead>

header element in a table

* 1. <section>

literally a section in the html

* 1. <img>

image in the html

* 1. <form>

a form element

* 1. <label>

label of the input element

* 1. <input>

an element that recives user input

* 1. <option>

option element under a <select> tag

1. Describe the following common CSS units of length:
   1. cm

a centimeter

* 1. em

unit accorrding to font-size

* 1. in

an inch

* 1. mm

a millimeter

* 1. px

a pixel

* 1. vh

unit according to the height of the window

* 1. vw

unit according to the width of the window

* 1. rem

unit according to browser font size

* 1. %

unit according to the length/width of the parent

**JavaScript, AJAX, JQuery**

1. What is the use of the ‘this’ keyword?

'this' keyword refers to the global object if it's in the global scope, parent object otherwise

1. What is a function?

it's a user defined 'program' that can be called repeatly

1. Create a function that takes height in cm and weight in kg as parameters, it should return the BMI using the two inputs present.

(weight in kg)

(height in meters) \* (height in meters)

<https://en.wikipedia.org/wiki/Body_mass_index>

(weight, height) => {

return weight / Math.pow(height, 2);

}

**6)**

Accessing objects in JS

1. **var** car **=** {
2. brands: {
3. BMW: {
4. 6-series: {
5. sold: 1805
6. }
7. },
8. Tesla: {
9. Model-S: {
10. sold: 200
11. },
12. "Model-A": {
13. sold: 14
14. },
15. }
16. }
17. }

Access the number of 6-series cars sold

car.brands.BMW['6-series'].sold

Access the number of Model-A cars sold

car.brand.Tesla['Model-A'].sold

**7)**

**var** restaurants **=** [

{name: "Ollies", group: "Castelo Concepts"},

{name: "Wagyu", group: "Castelo Concepts"},

{name: "Zaks", group: "Castelo Concepts"},

{name: "Black Salt", group: "Black Sheep"},

{name: "Salt and Barrel", group: "Black Sheep"}

]

Return an array of just the restaurants in the group Castelo Concepts

restaurants.filter(element => element.name == "Castelo Concepts");

Create an array all the names of the restaurantsI

restaurants => {

var output = new Array;

restaurants.filter(element => {

return (element.group == "Castelo Concepts") ? output.push(element.name) : null;

});

return output;

}

**8)**

Using Getters and Setters create a class called Pet it should take a name and an age

Three methods should be associated with the class, Age() = will return the age of the pet

Age(age) 🡪 sets the age of the animal (resets to the value given)

Info() returns the most updated age and name of the pet in a string.

Initialise a new pet ensure these are the outputs.

Outputs: pet.Age // “I’m 4 year’s old”

pet.Age = 14;

pet.Age // “I’m 14 year’s old”

pet.Info // “My name is {given name}, I am 14 years old”

class Pet {

constructor(name, age) {

this.name = name;

this.age = age;

}

set Age(age) {

this.age = age;

}

get Age() {

return `I'm ${this.age} year's old`

}

get Info() {

return `My name is ${this.name}, I am ${this.age} years old`

}

}

**9)**

Construct a button in an html file, when pressed, the button calls this api: <https://randomuser.me/api/>, every time a user presses the button you should add the random user’s name to the html page using JQuery.

<!DOCTYPE html>

<!--[if lt IE 7]> <html class="no-js lt-ie9 lt-ie8 lt-ie7"> <![endif]-->

<!--[if IE 7]> <html class="no-js lt-ie9 lt-ie8"> <![endif]-->

<!--[if IE 8]> <html class="no-js lt-ie9"> <![endif]-->

<!--[if gt IE 8]><!--> <html class="no-js"> <!--<![endif]-->

<head>

<meta charset="utf-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<title></title>

<meta name="description" content="">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="">

</head>

<body>

<!--[if lt IE 7]>

<p class="browsehappy">You are using an <strong>outdated</strong> browser. Please <a href="#">upgrade your browser</a> to improve your experience.</p>

<![endif]-->

<button>Press Me</button>

<div class='name'>

</div>

<script

src="https://code.jquery.com/jquery-3.3.1.js"

integrity="sha256-2Kok7MbOyxpgUVvAk/HJ2jigOSYS2auK4Pfzbm7uH60="

crossorigin="anonymous"></script>

<script>

$('button').on('click',function(){

const data = $.get(`https://randomuser.me/api/`);

data.done(function(data){

$('.name').append(data.results[0].name.title + " " + data.results[0].name.first + " " + data.results[0].name.last + " ");

});

})

</script>

</body>

</html>

**10)**

Construct a button in an html file, when pressed, the button calls this api: <https://randomuser.me/api/>, get information for two users when you have this information fire off a second request to <https://api.sunrise-sunset.org/> api, you will need to pass the users latitude and longitude into the api call, once you have the information using JQuery add the users timezone to the html page as well as the Sunrise and Sunset time.

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<div class='info'>

</div>

<script src="https://code.jquery.com/jquery-3.3.1.js" integrity="sha256-2Kok7MbOyxpgUVvAk/HJ2jigOSYS2auK4Pfzbm7uH60="

crossorigin="anonymous"></script>

<script>

$('button').on('click', function () {

const data = $.get(`https://randomuser.me/api/`);

data.done(function (data) {

const sunData = $.get(`https://api.sunrise-sunset.org/json?lat=${data.results[0].location.coordinates.latitude}&lng=${data.results[0].location.coordinates.longitude}&date=today&formatted=0`)

sunData.done(function (sunData) {

$('.info').append(`<div>Timezone: G.M.T. ${data.results[0].location.timezone.offset} ${data.results[0].location.timezone.description} Time</div><div>Sunrise:${sunData.results.sunrise}</div><div>Sunset:${sunData.results.sunset}</div>`)

})

});

})

</script>

</body>

</html>