

## DESCRIPTION

SUTDENT'S NAME:	<b>RICHA BAKSHI</b>
PROGRAM:	<b>Web design</b>
DATE:	<b>25-09-2021</b>
TEACHER'S NAME:	<b>SUTHAKHAR</b>
COURSE:	<b>Data Processing Technologies (TTD)</b>
TYPE OF EXAM:	<b>Final exam</b>
DURATION:	<b>3 hours</b>
AUTHORIZED MATERIAL:	<b>None</b>

## OTHER INSTRUCTIONS FROM THE TEACHER

The exam has **5** pages including the cover page. In accordance with the syllabus, the evaluation is worth **25 %** of the final grade.

Penalties imposed on a student accused of an attempt at plagiarism could include, but are not limited to, a grade of 0% for examination or for the entire course. The student could also be either put on probation, suspended and / or expelled from the program.

## OTHER INFORMATION

Prepared by : **Jean-Guy Turgeon**

Revised by : **M.-J. Villeneuve**

Approved by : \_\_\_\_\_

**Good luck !**

**Question 1**

/3

Briefly explain what is an API.

**Ans.** *API is the acronym for Application Programming Interface, which is a software intermediary that allows two applications to talk to each other. Each time you use an app like Facebook, send an instant message, or check the weather on your phone, you're using an API. When you use an application on your mobile phone, the application connects to the Internet and sends data to a server. The server then retrieves that data, interprets it, performs the necessary actions and sends it back to your phone. The application then interprets that data and presents you with the information you wanted in a readable way. This is what an API is - all of this happens via API.*

**Question 2**

/3

Briefly explain what is a third party API.

**Ans.** *As implied, a third-party API is an API that's developed out-of-house, which is typically much less specialized in comparison to a first-party API. Third-party APIs also include those that are incorporated into a project, such as Google Maps.*

*The strengths associated with third-party APIs, include:*

- As long as you do not require a solution that's specifically tailored to a client's unique needs, a third-party API will often be the more efficient, and often safer solution.*
- Your ability to save an immense amount of time. For example, if you're developing an in-house API and require a maps platform. Why go through the trouble of designing and developing a maps solution when you could just use Google Maps?*
- Access to outside experience, as well as a different point-of-view, is particularly beneficial when aiming to solve a more complex problem.*
- Your ability to focus on building your applications instead of APIs. This is particularly useful during mobile application development.*

**Question 3**

/3

Give an example of a browser's API.

**Ans.** *APIs for manipulating documents loaded into the browser. The most obvious example is the DOM (Document Object Model) API, which allows you to manipulate HTML and CSS — creating, removing and changing HTML, dynamically applying new styles to your page, etc. Every time you see a popup window appear on a page or some new content displayed, for example, that's the DOM in action. Find out more about these types of API in Manipulating documents.*

**Question 4**

/3

Briefly explain what is a public API.

***Ans. An open API, also called public API, is an application programming interface made publicly available to software developers. Open APIs are published on the internet and shared freely, allowing the owner of a network-accessible service to give a universal access to consumers.***

***An API is a software intermediary that makes it possible for application programs to interact with each other and share data. It's often used regarding REST APIs that expose a specific service or software functionality while protecting the rest of the application.***

**Question 5**

What is an endpoint?

(Circle the letter corresponding to your answer)

/3

- a) A computer system linked to a public database.
- b) The final line of an API script closing an external file containing data
- ☒ c) The URL of a file containing data.
- d) An AJAX request.
- e) None of the above.

**Question 6**

/3

(True or false, circle your answer)

In order to retrieve data from an external file using JavaScript, it isn't always mandatory to make an AJAX request.

TRUE

FALSE

**Question 7**

/3

Name the two languages most commonly used to make data available using an API.

*Ans. We can create an API in any computer language, the two most commonly used languages are following:*

★ PHP

★ Python

➤ *The most popular application programming interface created by PHP developers are: Open weather map,*

*API football, IMDb, Cricket live scores, musicXmatch.*

➤ *The most popular API's created by python developers are : Yahoo finance, Temp mail, Spoonacular, IEX..etc*

**Question 8**

/3

What language is used in the following script example :

```
<container>
  <name>John</name>
  <age>42</age>
</container>
```

*Ans. Language used: XML (eXtensible Markup Language)*

**Question 9**

/3

What language is used in the following script example :

```
{
  name: "John",
  age: "42"
}
```

*Ans. On the basis of given example syntax { name: "John", age: "42" }, it can be said that the language used here should be most likely Javascript, as the given syntax resembles to the javascript objects syntax, and since JSON syntax is derived from JavaScript object notation, and no more details are specified in the question, there is a chance that the language used here can be JSON (within javascript) as well.*

**Question 10**

/5

Supposing data are gathered in an external file named «mydata.json», write the jQuery instructions needed to display the name in a DIV containing #result as ID (not including the AJAX request).

Data :

```
{
  name: "John",
  age: "42"
}
```

Ans <!DOCTYPE html>

```
<html>
<head>
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
<script>
$(document).ready(function(){
  $('button').click(function(){
    $.getJSON('demo_ajax_json.js', function(result){
      $('#result').append(result.firstName + " ");
    });
  });
});
</script>
</head>
<body>
<button>Get JSON data</button>
<div id="result"></div>
</body>
</html>
```

**Question 11**

/10

Supposing data are gathered in an external file named «mydata.json», write the jQuery instructions needed to display the age in a DIV containing #result as ID (including the AJAX request).

Data :

```
{
  users: [
    nom: "John",
    age: "42"
  ]
}
```

**Ans.** `<div id="result"></div>`  
`<script>`  
`$(document).ready(function(){`  
**Data:**  
`{`  
`users: [`  
`nom: "John",`  
`age: "42"`  
`]`  
`}`  
`$('#result').html(Data.users.age);`  
`});`  
`</script>`

## Question 12

/3

(Circle your answer)

In order to evaluate the number of items contained in an array named « container », how could we proceed?

- a) container[i]
- b) find(container).[i]
- ☒ c) container.length
- d) \$.length("container")
- e) None of the above