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| DESCRIPTION | |
| SUTDENT’S NAME: Princepreet Singh | |
| PROGRAM: | **Web design** |
| DATE: 25th September,2021 | |
| TEACHER’S NAME: Suthakhar | |
| COURSE: | **Data Processing Technologies (TTD)** |
| TYPE OF EXAM: | **Final exam** |
| DURATION: | **3 hours** |
| AUTHORIZED MATERIAL: | **None** |

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 INSTRUCTIONS FROM THE TEACHER

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OTHER INFORMATION

# Good luck !

**Question 1** /3

Briefly explain what is an API.

Answer: **Application Programming Interface known as API** is a software intermediary that allows two applications to talk to each other. An API is a set of functions that allows applications to access data and interact with external software components, operating systems.

Application programming interfaces consist of two components:

* Technical specification describing the data exchange options between solutions with the specification done in the form of a request for processing and data delivery protocols
* Software interface written to the specification that represents it

API gives the developer to make a specific “call” or ‘request” in order to send or receive information. This communication is done using a programming language called “JSON”. It can also be used to make a defined action such as updating or deleting data. For example, 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.

Answer: Third party APIs are provided by companies allowing to access some of their data using JavaScript on a web

page. It allows you to access a third party functionality or data to use on your site or application. For example Mapquest or Google map making it possible to show custom maps on a web page. Although most of the APIs have their particularities, they also generally offer common features and work. Following are the guidelines to use most of the APIs

* **Find an API:** We will first have to explore and find the proper API for our needs.
* **Get a developer key:** APIs require you to use an ID key for security reasons and accountability. We

may have to create an account first in order to get your API key.

* **Test the endpoint:** The end point is the page containing the data you will be able to use (usually in JSON).

Test the end point in a browser. APIs usually have different endpoints and different ways for reaching them.

* **Parsing content in your browser:** Reading raw data can be quite awful. In order to have your JSON data look good on screen, you can use JSON view extension.
* **Find and read the documentation:** When we want to use a third party's API, one of the very first step to take is to find and read it's documentation. This is how you will find out about the API's features and how to use it.

# Question 3 /3

Give an example of a brower's API.

Answer: DOM( document object model)

# Question 4 /3

Briefly explain what is a public API.

ANSWER: An open ****API**** (often referred to as a ****public API****) is a publicly available application programming interface that provides developers with programmatic access to a proprietary software application or web service. ****APIs**** are sets of requirements that govern how one application can communicate and interact with another.

# Question 5

What is an endpoint?

(Circle the letter corresponding to your answer)

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1. A compouter system linked to a public database.
2. The final line of an API script closing an external file containing data
3. The URL of a file containing data.
4. An AJAX request.
5. None of the above.

Answer: C

# Question 6 /3

(True or false, circle your answer)

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

TRUE FALSE

Answer: False

# Question 7 /3

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

**Answer:** JSON and XML

# Question 8 /3

What language is used in the folowwing script example :

<container>

<name>John</name>

<age>42</age>

</container>

Answer: XML Language ( extensible markup language)

# Question 9 /3

What language is used in the folowwing script example :

{

name: "John",

age: "42"

}

Answer: ****JSON****

# 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 #re- sult as ID (not including the AJAX request).

Data :

{

name: "John",

age: "42"

}

**Answer:** <!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(“mydata.json”, function(result){  
                      $(“#result”).append(result.firstName + ” “);  
});  
});  
});  
</script>  
</head>  
<body>  
<button>Get JSON data</button>  
<div id=“result”></div>  
</body>  
</html>

# Question 11

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.

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Data :

{

users: [ nom: "John",

age: "42"

]

}

**Answer:** <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 « con- tainer », how could we proceed?

1. container[i]
2. find(container).[i]
3. container.length
4. $.length.("container")
5. None of the above

Answer: C