University of Oum El Bouaghi
Department of Mathematics and Computer Science

14/01/2024
Duration : 1H 30
AWP Module Exam (3rd year Bachelor ISSE)

First Name: ……………………Last name:……………………….GR :…………

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➢ **Course comprehension questions:** choose the correct answers. **(7pts)**

1- JavaScript is a language that allows:
- Create static web pages
- Create dynamic web pages
- Create hybrid web pages
2- In which part of an html document can we insert JavaScript code?
- \<body\> only
- \<head\> only
- \<head\> and \<body\>
3- Web application:
- Requires server-side programs only
- Requires client-side programs only
- Requires server-side programs and sometimes a client-side part
4- What is the HTML code for creating links?
- \<a src="URL"\>linkText \</a\>
- \<a href="http://example.com" name="lien"\>Click here\</a\>
- \<link http="URL" /\>
- \<a name="http://example.com"\> Clickhere \</a\>
5- How to create a function in JavaScript?
- function f()
- function = f()
- function : f()
6- A thin client can:
- Execute treatments
- Respond to requests
- Perform requests
7- Choose the output of the following code:
let person = { name: "Leila" };
const members = [person];
person = null;
console.log(members);

- null	- [null]	- [{}]	- [{ name: " Leila " }]

➢ **Briefly, what is the difference you see between: AJAX, JSON, XML and PHP? (1 pt)**

………
………
………
………

1

Exercise 1: (5 pts) Give the following code display

```html
<html>
   <thead>
     <title>Exercise</title>
   </thead>
<body>
   <style>
     .title {
        color: red;
     }
   </style>
   <center>
<h3 class="title">Exercises 02</h3>
<button disabled>Add task </button>
<table border="2" width="60%" CELLSPACING="6" CELLPADDING="4">
<caption class="title">Task schedule T by team</caption>
<thead bgcolor="silver">
   <tr><th rowspan='2'>Teams</th><th colspan='5'>January</th><th rowspan='2'></th></tr>
   <tr><th>Monday</th><th>Tuesday</th><th>Wednesday</th><th>thursday</th><th>Fridy</th></tr>
</thead>
<tbody>
<tr><td>Team1</td><td colspan='3'>T1</td><td colspan='2'>T2</td><td rowspan='2'>week1</td></tr>
<tr><td> Team2</td><td colspan='2'>T1</td><td colspan='3'>T2</td></tr>
<tr><td> Team1</td><td colspan='1'>T3</td><td colspan='3'>T4</td><td>T5</td>
<td rowspan='2'>week2</td></tr>
</tbody>
</table>
</center>
</body>
</html>
```

Exercice 2: Write JavaScript code: (7pts)

1. Which asks the user for the age of a person and following a click on a button, it informs them of their category :
- «Junior» for ages 10 to 11.
- « Cadet » for 12 to 13.
- « Adult » for 18 to 70.

The script displays an error message if the user entered blank value or a non-numeric or a numeric value greater than 70.

2. Allowing adding the date of entry of each age.

3. Verifying if the entered number (age) is prime or not.

4. Taking as input a child's age and returns "Happy birthday!" if the age is a perfect number.
Note: The sum of the divisors of the perfect number is equal to itself (e.g., the sum of the divisors 1, 2, 3 equals 6), 6=1+2+3.

5. Creating an address object representing person's address (with properties such as street, city, Postal code, etc.) and adding it to the person object.

Typical Solution

1- JavaScript is a language that allows:

- Create static web pages
- Create dynamic web pages **X**
- Create hybrid web pages

2- In which part of an html document can we insert JavaScript code?

- <body> only
- <head> only
- <head> and <body> **X**

3- Web application:

- Requires server-side programs only
- Requires client-side programs only
- Requires server-side programs and sometimes a client-side part **X**

4- What is the HTML code for creating links?

- linkText
- Click here **X**
- <link http="URL" />
- Clickhere

5- How to create a function in JavaScript?

- function f() **X**
- function = f()
- function : f()

6- A thin client can:

- Execute treatments
- Respond to requests
- Perform requests **X**

8- Choose the output of the following code:

```
let person = { name: "Leila" };
const members = [person];
person = null;
console.log(members);
```

| - null | - [null] | - [{}] | - [{ name: " Leila " }] **X** |

➤ **Briefly, what is the difference you see between: AJAX, JSON, XML and PHP? (1 pt)**

Explanation in the course

Exercise 1: (7 pts)

HTML code display is as follows:

<h2 style="color:red; text-align:center">Exercises 02</h2>

Add task

Task schedule T by team

Teams	January					
	Monday	**Tuesday**	**Wednesday**	**thursday**	**Fridy**	
Team1	T1			T2		week1
Team2	T1		T2			
Team1	T3	T4			T5	week2

Exercise 2: (7pts)

```
<script>
function checkAge() {
   var age = parseInt(document.getElementById("ageInput").value);
   var categoryResult = document.getElementById("categoryResult");
   var errorResult = document.getElementById("errorResult");

   if (isNaN(age) || age === "" || age < 0 || age > 70) {
      errorResult.textContent = "Please enter a valid age between 0 and 70.";
      categoryResult.textContent = "";
      return;
   }

   errorResult.textContent = "";

   if (age >= 10 && age <= 11) {
      categoryResult.textContent = "Junior";
   } else if (age >= 12 && age <= 13) {
      categoryResult.textContent = "Cadet";
   } else if (age >= 18 && age <= 70) {
      categoryResult.textContent = "Adult";
   }

   var currentDate = new Date();
   var entryDate = currentDate.toDateString();
   console.log("Entry date: " + entryDate);

   if (isPrime(age)) {
      alert("Happy birthday!");
   }
```

```javascript
    // Creating an address object representing person's address
    var address = {
        street: "123 Main St",
        city: "Anytown",
        postalCode: "12345"
    };

    console.log("Address object: ", address);
}

// Function to check if a number is prime
function isPrime(n) {
    if (n <= 1) {
        return false;
    }
    for (var i = 2; i <= Math.sqrt(n); i++) {
        if (n % i === 0) {
            return false;
        }
    }
    return true;
}
</script>
```