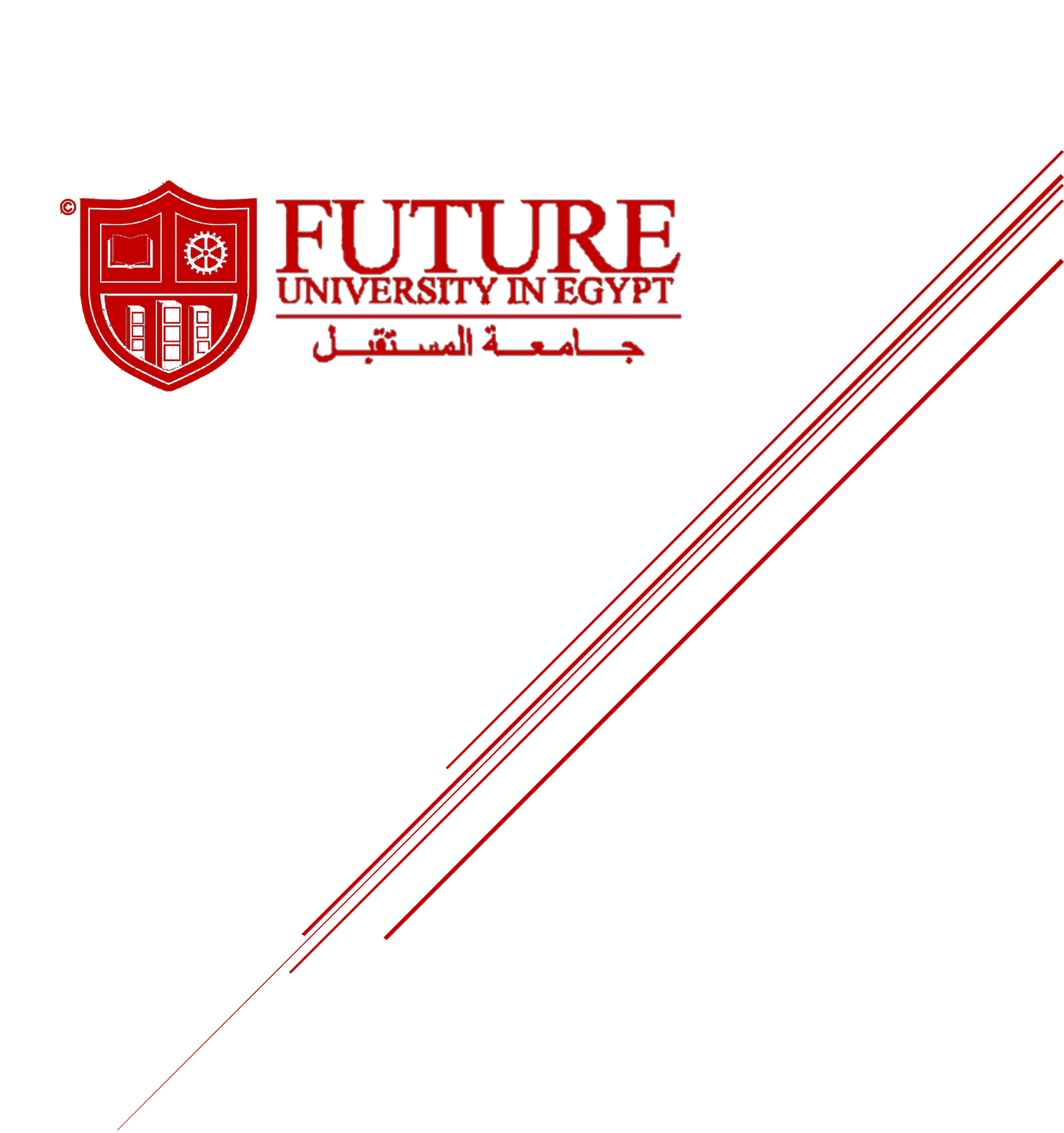
**Faculty Computers & Information Technology**

**[Angular]**



**radwan ibrahim 20183560**

Q1 :

**1)**

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| What is an Event Loop  The event loop is the key of asynchronous programming in JavaScript.  All actions in JS are performed on a single thread, but by employing a few clever data structures, we are given the illusion of multi-threading.   * The call stack is in charge of keeping track of all the activities that are scheduled to be executed.   When a function is done, it is removed from the stack.   * The event queue is in charge of passing new functions to the stack for processing.   It adheres to the queue data structure to ensure that all operations are executed in the right order. |

**2)**

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| 1. How do you add an element at the begining of an array 2. add one at the end?   A -Use the unshift() Method    B- (push , splice) |

Q2 )

1)

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| --- |
| 3 |

2)

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| --- |
| 0  1  2  3  4 |

3)

|  |
| --- |
| ['baz'] |

4)

|  |
| --- |
| 1 , Hello , true |

5)

|  |
| --- |
| Error |

Q3)

1)

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| --- | --- | --- |
| |  |  | | --- | --- | | 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18 | **function** sum(object)  {  sum=**0**;  **for**( **var** x **in** object)  {  **if**(object.hasOwnProperty(x))  {  sum+=parseFloat(object[x])  }  }  **return** sum;  }  **let** sums={first:**5**,  second:**6**,  third:**5**,  fourth:**10**}  console.log("The sum : "+sum(sums)); | |

2)

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| --- | --- | --- |
| |  |  | | --- | --- | | 1  2  3  4  5  6  7  8 | setTimeout( **function** number1(){  console.log('Realmadrid')},**2000**)  setTimeout( **function** number2(){  console.log('zidane')},**1500**)  setTimeout(**function** number3(){  console.log('messi')},**100**) | |

3)

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| |  |  | | --- | --- | | 1  2  3  4  5  6  7  8  9  10  11  12 | **var** array=[**5**,**6**,**8**,**10**,**4**,**5**];  **var** max=array[**0**];  **var** maxindex=**0**;  **for**(**var** i=**0**;i<array.length;i++)  {  if(array[i] > max)  {  maxindex = i;  max = array[i];  }  }  console.log("the max index is :"+max); | |

another solution

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| --- | --- | --- |
| |  |  | | --- | --- | | 1  2  3  4  5  6  7  8  9  10  11  12  13  14 | **function** indexOfMaximum(arr) {  if (arr.length === **0**) {  return -**1**;  }  **var** max = arr[**0**];  **var** maxIndex = **0**;  **for** (**var** i = **1**; i < arr.length; i++) {  if (arr[i] > max) {  maxIndex = i;  max = arr[i];  }  }  **return** maxIndex;  } | |

4)

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| --- | --- | --- |
| |  |  | | --- | --- | | 1  2  3  4  5 | **var** date1 = **new** Date("08/30/2022");  **var** date2 = **new** Date("07/30/2020");  **var** Difference\_In\_Time = date2.getTime() - date1.getTime();  **var** Difference\_In\_Days = Difference\_In\_Time / (**1000** \* **3600** \* **24**);  console.log("Total number of days between dates is " + Difference\_In\_Days); | |

5)

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| --- | --- | --- |
| |  |  | | --- | --- | | 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49 | <!DOCTYPE html>  <html>  <head>  <meta charset=utf-**8** />  <title> </title>  <style type="text/css">  body {**margin**: **30**px;}  </style>  </head>  <body>  <form>  **1**st Number : <input type="text" id="firstNumber" /><br>  **2**nd Number: <input type="text" id="secondNumber" /><br>  <input type="button" onClick="multiplyBy()" Value="Multiply" />  <input type="button" onClick="divideBy()" Value="Divide" />  <input type="button" onClick="sum()" Value="sum" />  <input type="button" onClick="difference()" Value="difference" />  </form>  <p>The Result is : <br>  <span id = "result"></span>  </p>  <script>  **function** multiplyBy()  {  num1 = document.getElementById("firstNumber").value;  num2 = document.getElementById("secondNumber").value;  document.getElementById("result").innerHTML = num1 \* num2;  }    **function** divideBy()  {  num1 = document.getElementById("firstNumber").value;  num2 = document.getElementById("secondNumber").value;  document.getElementById("result").innerHTML = num1 / num2;  }  **function** sum() {  num1 = document.getElementById("firstNumber").value;  num2 = document.getElementById("secondNumber").value;  document.getElementById("result").innerHTML = num1 + num2;  }  **function** difference() {  num1 = document.getElementById("firstNumber").value;  num2 = document.getElementById("secondNumber").value;  document.getElementById("result").innerHTML = num1 - num2;  }    </script>  </body>  </html> | |

6)

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| --- | --- | --- |
| |  |  | | --- | --- | | 1  2  3  4  5  6  7  8 | **function** x() {  const n = **5**;  const r = **5**;  return n\* r;  }  **const** s = x();  console.log(s); | |

7)

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| --- | --- | --- |
| |  |  | | --- | --- | | 1  2  3  4 | **let** arr = [**1**, **2**, **4**,**5**];  **let** reverseArr = [arr].reverse();  console.log(arr);  console.log(reverseArr); | |

8)

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| --- | --- | --- |
| |  |  | | --- | --- | | 1  2  3  4  5  6  7  8  9  10 | **const** person = {  firstName: 'John',  lastName: 'Doe'  };  **const** propertyNames = Object.keys(person);  console.log(propertyNames);  **const** entries = Object.entries(person);  console.log(entries); | |

**Bonus ++**

1)

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| --- | --- | --- |
| |  |  | | --- | --- | | 1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18 | **const** convertTime12to24 = time12h => {  const [time, modifier] = time12h.split(" ");  let [hours, minutes] = time.split(":");  if (hours === "12") {  hours = "00";  }  **if** (modifier === "PM") {  hours = parseInt(hours, **10**) + **12**;  }  **return** `${**hours**}:${**minutes**}`;  };  **var** convertedTime = convertTime12to24("11:00 PM");  console.log(convertedTime); | |

2)

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| |  |  | | --- | --- | | 1  2  3  4  5  6 | **function** add(a){  return function(b){  console.log(a + b);  }  }  add(**2**)(**3**); | |

another solution

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| --- | --- | --- |
| |  |  | | --- | --- | | 1  2  3  4  5  6  7  8 | **var** add =**function**(num1)  {  return function(num2)  {  return num1+num2;  };  }  console.log(add(**3**)(**2**)); | |

3)

|  |  |  |
| --- | --- | --- |
| |  |  | | --- | --- | | 1  2  3  4  5  6 | **const** cjohn = ["john", "radwan ","realmadrid"];  **function** checkjohn(j)  {  return j="john";  }  console.log(cjohn.some(checkjohn) ) | |