

Please complete both the assignments given below.

## General Requirements

### Code Requirements

- Use modern javascript ES6 syntax.

### Other Requirements

- Use Git for version control, and host the project in a Github repository.

Q1. Write a program to show a current time in below reference format.

For example current day is Aug 20, 2021 then write a function to print output in following formats:

=> Format A : Fri, Aug 20, 2021, 05:32 PM

=> Format B : 11:50 AM, Monday, 24 January 2022

=> Format C: 25/11/2021 11:50 AM

Write a JavaScript program to calculate days left until next Christmas.

Q2. Write a JavaScript function to convert a binary number to a decimal number.

*Test Data :*

```
console.log(bin_to_dec('110011')); => 51
```

```
console.log(bin_to_dec('100')); => 4
```

Q3. Write a JavaScript function to format a number up to specified decimal places

```
console.log(decimals(2.100212, 2)); => "2.10"
```

```
console.log(decimals(2.100212, 3)); => "2.100"
```

```
console.log(decimals(2100, 2)); => "2100.00"
```

Q4. Write a JavaScript function to test if a number is a power of 2.

```
console.log(power_of_2(16)); => true
```

Q5. Write a JavaScript function to calculate the percentage (%) of a number.

Test Data :

```
console.log(percentage(1000, 47.12));  
471.2
```

Q6. Write a program to determine leap year using if else

Q7. Refactor leap year program using ternary operator

Q8. Write a program to return a day if pass day index using switch case, like (Sunday=0, Monday=1, Tuesday=2 ..)

Q9. Write a program to print a full pyramid of \* using for loop

Q10. Refactor full pyramid of \* in while and do while

Q11. Write a program to check unique alphabet char from a string using loop and break.

note: if covered all alphabet then loop should be break

if already covered same alphabet then loop should be continue

Example:

String = Sample test for unique char check.

Unique characters : s,a,m,p,l,e,t,s,f,o,r,u,n,i,q,u,c,h,k

Write a JavaScript function that accepts a string as a parameter and find the longest word within the string.

*Example string* : 'Web Development Tutorial'

*Expected Output* : 'Development'

Q12. Write a JavaScript program to check whether a number is even or not using RECURSION

Q13. Write a JavaScript function to sort the following array of objects by title value.

Sample object :

```
var library = [  
  { author: 'Bill Gates', title: 'The Road Ahead', libraryID: 1254},  
  { author: 'Steve Jobs', title: 'Walter Isaacson', libraryID: 4264},  
  { author: 'Suzanne Collins', title: 'Mockingjay: The Final Book of The Hunger Games', libraryID:  
3245}  
];
```

Expected Output:

```
[[object Object] {  
  author: "Suzanne Collins",  
  libraryID: 3245,  
  title:"Mockingjay:The Final Book of The Hunger Games"  
}, [object Object] {  
  author: "Bill Gates",  
  libraryID: 1254,  
  title: "The Road Ahead"  
}, [object Object] {  
  author: "Steve Jobs",  
  libraryID: 4264,  
  title: "Walter Isaacson"  
}]
```

Q14. Write a JavaScript function to check whether a given value is an valid url or not using Regex

Q15. Get sum of all the salaries using for in loop.

```
salaries= {  
  A : 3000,  
  B : 4000,  
  C : 5000  
}
```

Q16. Get sum of all the salaries using for of loop.

```
salaries = [3000, 4000, 5000]
```

Q17. Write a program to filter Array by multiple age value and value will age array

```
like ageArr =[24,16,20]
```

```
let userArr = [{name:'A', age:20},{name:'B', age:17}, {name:'C', age:24}, {name:'A',  
age:30},{name:'D', age:16},{name:'E', age:24}, {name:'F', age:16}, {name:'G', age:16}]
```

```
let output = [{name:'D', age:16}, {name:'F', age:16}, {name:'E', age:24},{name:'A', age:20}]
```

Q18. Need to interchange the div text and BG color on click the button.

```
div-1 with yellow BG  
div-2 with red BG
```

Q19. Set random color to the paragraph text on hover the paragraph  
(color should be only: red, green, yellow, blue, orange)

Q20. What will be the output of the following consoles

```
function getValue1() {  
  setTimeout(()=>{  
    console.log('A')  
  },1000)  
}
```

```
function getValue2() {  
  setTimeout(()=>{  
    console.log('B')  
  },3000)  
}
```

```
function getValue3() {  
  setTimeout(()=>{  
    console.log('C')  
  },2000)  
}
```

```
function AllValues() {  
  getValue1();  
  getValue2();  
  getValue3();  
}
```

print console log in sequence like  
-A,B,C

- # Do it using callback function
- # Do it using Promise
- # Do it using async/await

Q21. Solve below problem using Promise and async/await:

```
var tasks = ['task-1', 'task-2', 'task-3', 'task-4', 'task-5'];  
These tasks are completed in random seconds.
```

- # first assign the random seconds for each tasks using loop and Math.floor(Math.random() \* 1000)
- # say alert when task is complete in defined order like:  
Alert: task-1 is completed

task-2 is completed  
task-3 is completed