Question 1: Answer The Following Questions

1- What is Object Destructuring?
2- Explain Closures in JavaScript.
3- What do you understand by hoisting in JavaScript?
4- Explain the @Component Decorator In Angular .
5- What is Eager and Lazy loading?
6- How to use ngFor in a tag?
7- How do you specify units in the CSS?. What are the different ways to do it?
8- What property is used for changing the font face?
9- How is border-box different from content-box?
10- How to center align a div inside another div? [2 Ways]

Question2 : What is The Output ?

```
const SumBy = num1 => num2 => num1 + num2;
const sumByTwo = SumBy(2);
const sumByThree = SumBy(3);

console.log(sumByTwo(4));
console.log(sumByThree(5));
```

```
class Chameleon {
  static colorChange(newColor) {
    this.newColor = newColor;
    return this.newColor;
  }

  constructor(newColor) {
    this.newColor = newColor;
  }
}

const freddie = new Chameleon('Purple');
console.log(freddie.colorChange('orange'));
```

```
function Person(firstName, lastName) {
  this.firstName = firstName;
  this.lastName = lastName;
}
const member = new Person('Lydia', 'Hallie');
Person.getFullName = function() {
  return `${this.firstName} ${this.lastName}`;
};
console.log(member.getFullName());
```

```
var p = new Promise((resolve, reject) => {
  reject(Error('The Fails!'))
})
p.catch(error => console.log(error))
p.catch(error => console.log(error.message))
p.catch(error => console.log(error.message))
```

```
const add = (() => {
  let state = 0;
  return (v) => {
    return (state += v);
  };
})();

class Calculator {
  constructor(addFn) {
    this.addFn = addFn;
  }

  add(v1, v2) {
    return this.addFn(v1), this.addFn(v2);
  }
}
const c1 = new Calculator(add);
const c2 = new Calculator(add);
console.log(c1.add(1, 1));
console.log(c2.add(1, 1));
```

Question 3 :

1- Consider the following code snippet

```
for (var i = 0; i < 5; i++) {
  var btn = document.createElement('button');
  btn.appendChild(document.createTextNode('Button ' + i));
  btn.addEventListener('click', function(){ console.log(i); });
  document.body.appendChild(btn);
}
```

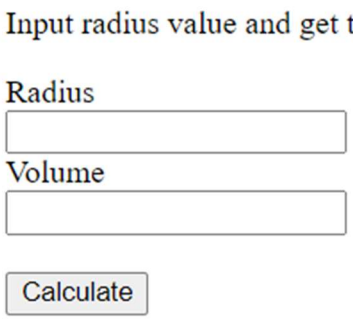
(a) What gets logged to the console when the user clicks on "Button 4" and why?

(b) Provide one or more alternate implementations that will work as expected.

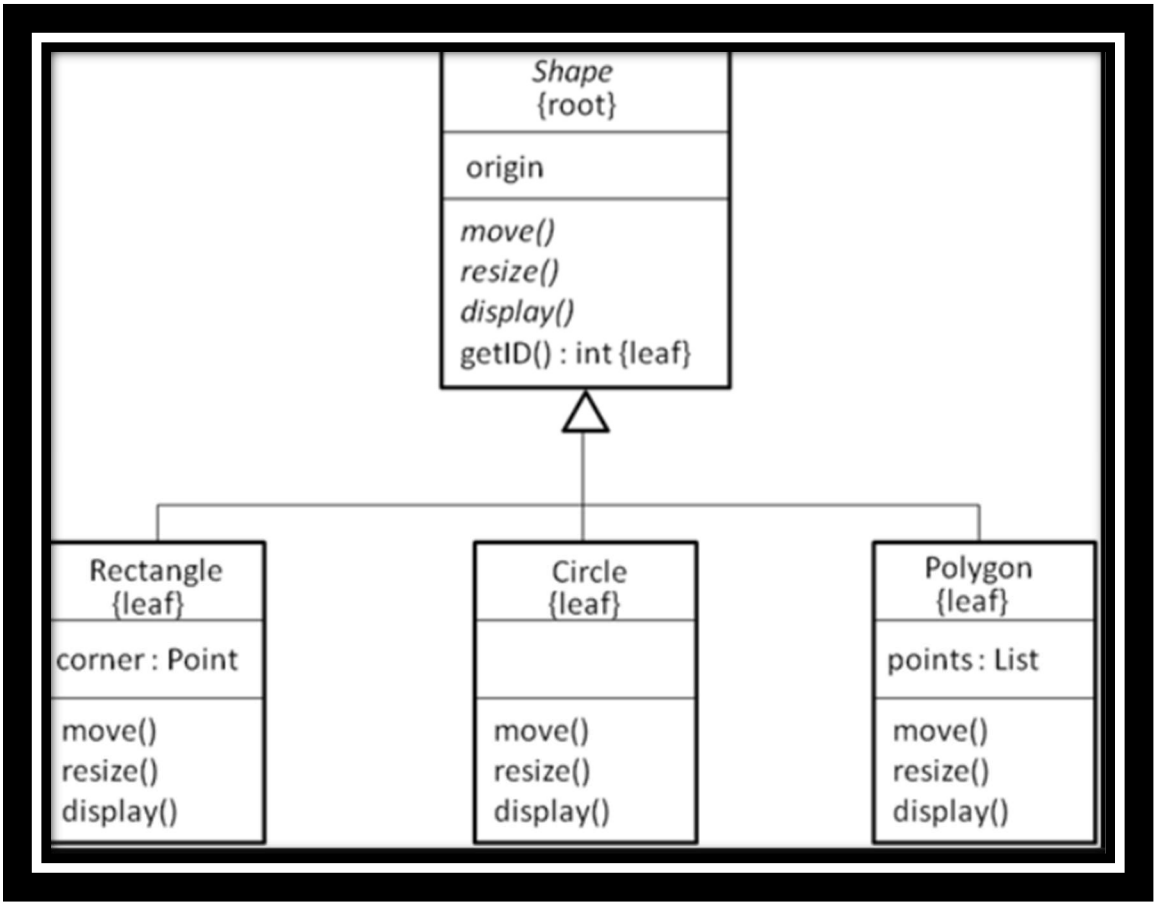
2- Given an integer x, return true if x is palindrome integer.
An integer is a palindrome when it reads the same backward as forward.
For example, 121 is a palindrome while 123 is not.

3- Write a JavaScript program to remove items from a dropdown list.

4- Write a JavaScript program to calculate the volume of a sphere.



5- Write a function that returns the length of a string. Make your function recursive.
6- Create sticky footer using html , css and javascript
7- Make This Possible

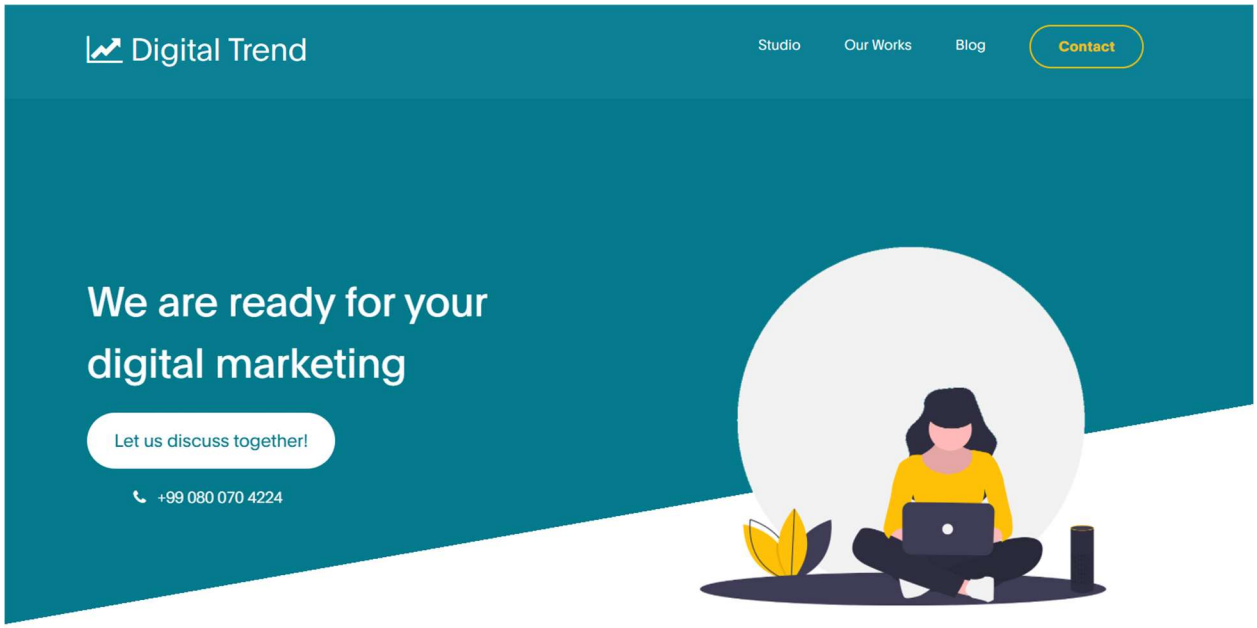


8- Add Validation To This Form Using Reactive Form Module In Angular.
Email Address Make it Required
Message Make it Required Min-length = 50 And Max Length 240

9- From This Api Link Fetch Data And Show id , title and body
https://jsonplaceholder.typicode.com/posts

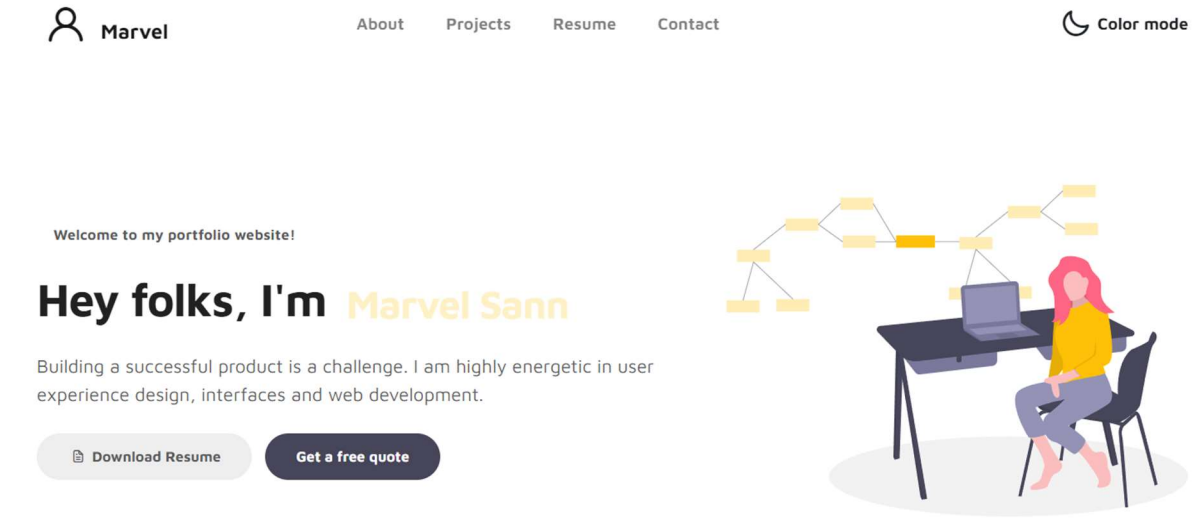
a) Use fetch function and display data into card
b) Using Angular Framework Display Data into Table

10- Using Html5 and Css3 Make This Image Possible



11- Using Jquery Add And Remove Todo Element

12- Using Sass Make This Possible



Question4 : True Or False

1- JavaScript is synchronous, blocking, single-threaded language. True
2- With interpolation, Angular Converts the expression results to strings.
3- Javascript provides a parameterless constructor for each class. True
4- A method inside an abstract class must be declared abstract False

5- Two formal parameters for the same method may use the same name in Javascript False

6- A class may extend only one other class and implement only one interface False

7- If class A extends class B, class A is a subclass of B and B is a superclass of A. True

8- Encapsulation is the concept of object-oriented programming that “shows” only essential attributes and “hides” unnecessary information. False => Abstraction

9- Elements that have higher z-index values are displayed in front of elements with lower z-index values. True

10- Enums or enumerations are a TypeScipt data type that allows us to define a set of named constants

GoodLuck 😊

Eng:Hesham Mohamed