



CSM3103

FRONT-END PROGRAMMING

NAME : NUR ELYA FARHANA BINTI ZAINORDIN

MATRIC NO : S63723

LAB : 3

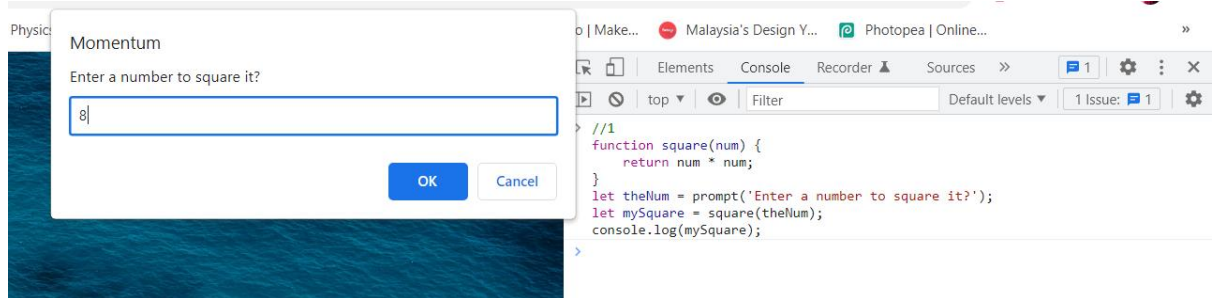
GROUP : K1

LECTURER : DR RABIEI B MAMAT MAMAT

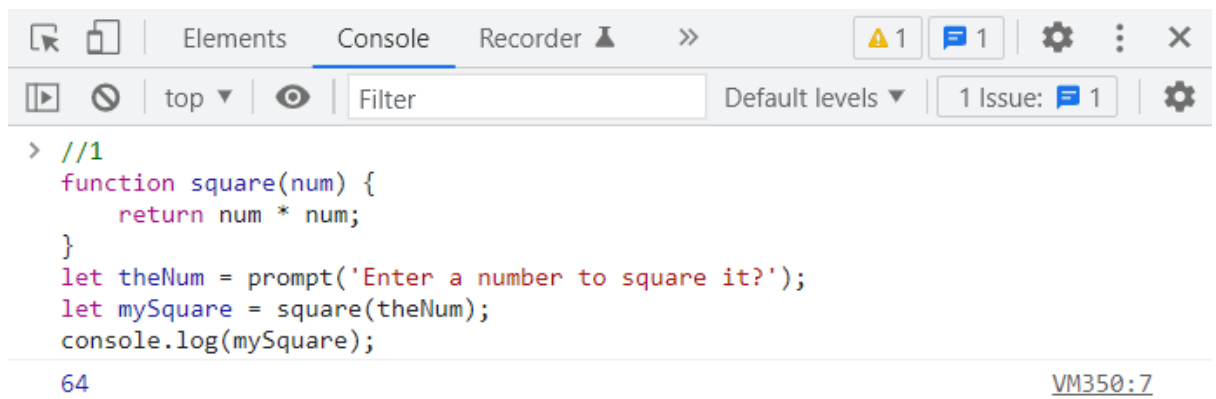
GITHUB : <https://github.com/elya11ana/Lab-Module-3>

TASK 1: JavaScript Function

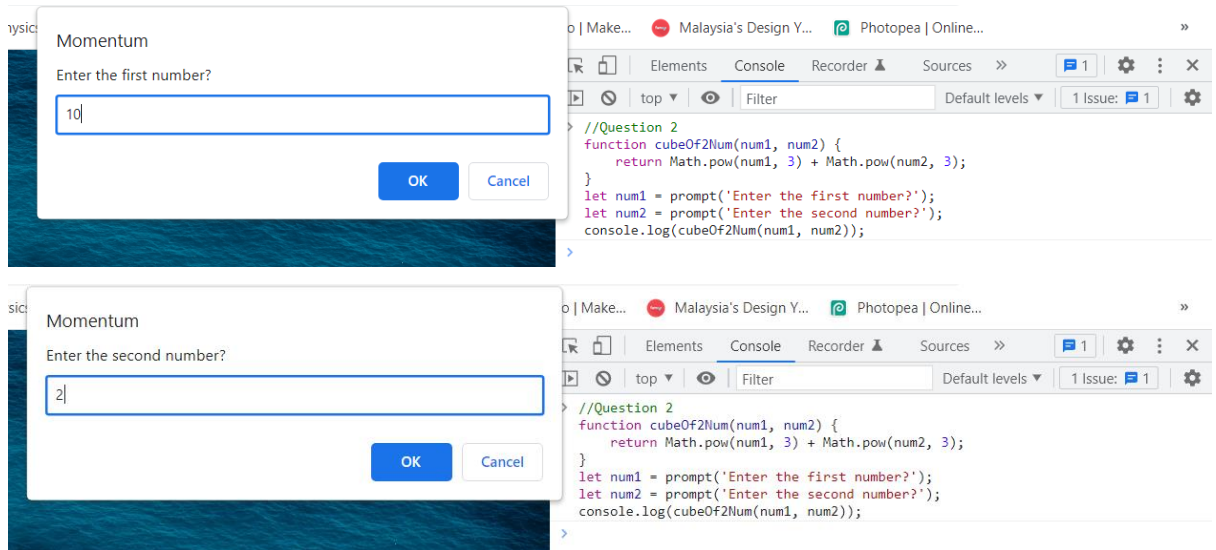
1. Write a function to find the square of a given number



Output:



2. Write a function to find sum of cubes of two numbers



Output:

```

> //Question 2
function cubeOf2Num(num1, num2) {
    return Math.pow(num1, 3) + Math.pow(num2, 3);
}
let num1 = prompt('Enter the first number?');
let num2 = prompt('Enter the second number?');
console.log(cubeOf2Num(num1, num2));

1008 VM709:7
```

3. Write a function to reverse a number

[Hint n =12345 output : 54321]

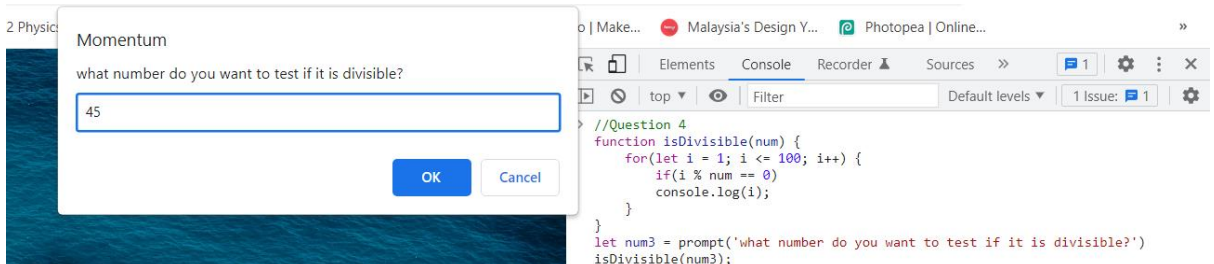
Output:

```

> function reverse_number(n)
{
    n = n + "";
    return n.split("").reverse().join("");
}
console.log(Number(reverse_number(12345)));

54321 VM756:6
```

4. Write a function to print all numbers between 1 and 100 which is divisible by given number z



Output:

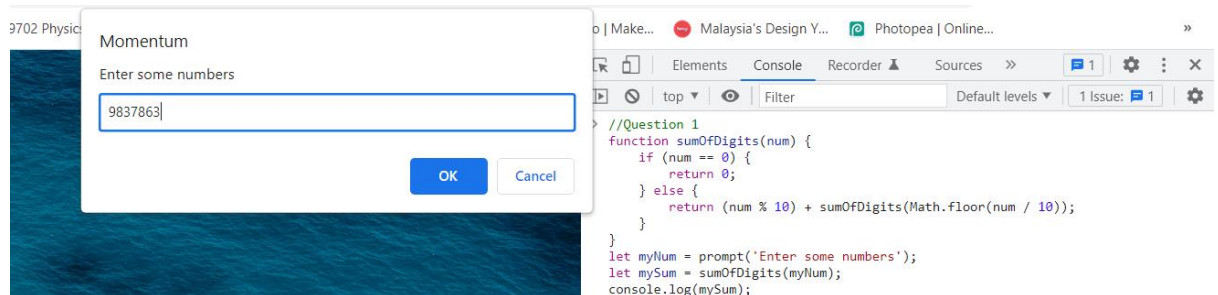
```

> //Question 4
function isDivisible(num) {
    for(let i = 1; i <= 100; i++) {
        if(i % num == 0)
            console.log(i);
    }
}
let num3 = prompt('what number do you want to test if it is divisible?')
isDivisible(num3);

45 VM1040:5
90 VM1040:5
```

TASK 2: JavaScript Recursion Function

1. Write a JavaScript function to find sum of digits of a number



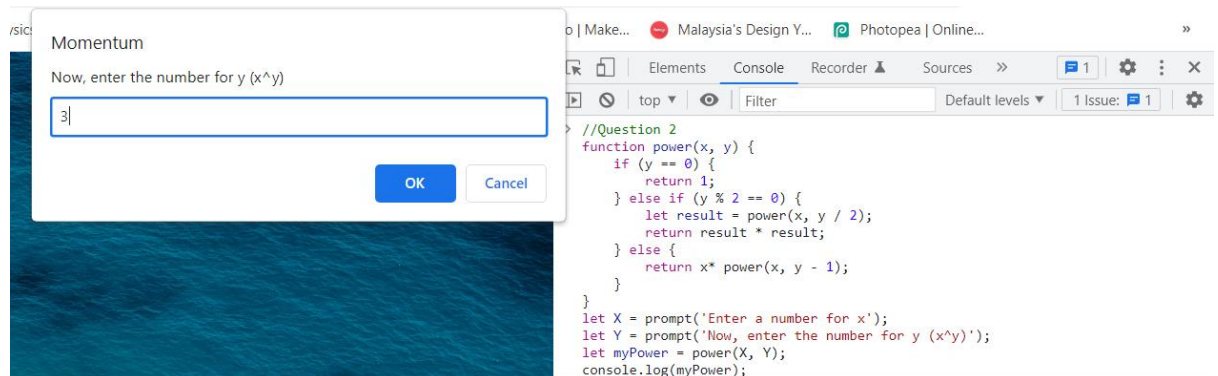
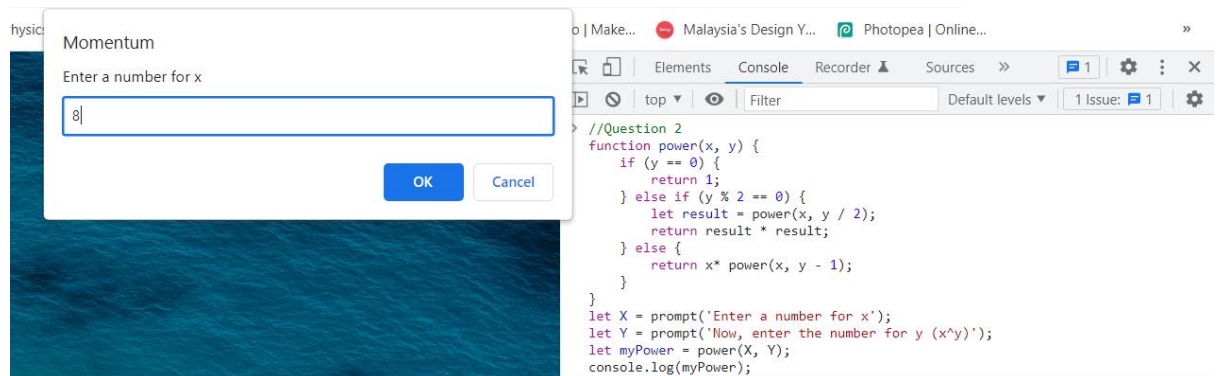
Output:

```
> //Question 1
function sumOfDigits(num) {
  if (num == 0) {
    return 0;
  } else {
    return (num % 10) + sumOfDigits(Math.floor(num / 10));
  }
}
let myNum = prompt('Enter some numbers');
let mySum = sumOfDigits(myNum);
console.log(mySum);
```

44

VM1222:11

2. Write a JavaScript program to compute x raise to the power y using recursion



Output:

```
> //Question 2
function power(x, y) {
  if (y == 0) {
    return 1;
  } else if (y % 2 == 0) {
    let result = power(x, y / 2);
    return result * result;
  } else {
    return x* power(x, y - 1);
  }
}
let X = prompt('Enter a number for x');
let Y = prompt('Now, enter the number for y (x^y)');
let myPower = power(X, Y);
console.log(myPower);
```

TASK 3: JavaScript Object and Prototype

1. Write a JavaScript program to create object product,
 - a. Add the property Product Name, Quantity and price.

```
> //Question 1
let product = {
  prodName: "Birkin bag",
  quantity: 1,
  price: 672.99
};
```

- b. Access all the properties and display them.

```
console.log('Product Name: ' + product.prodName);
console.log('Quantity: ' + product.quantity);
console.log('Price: ' + product.price);
```

Product Name: Birkin bag

[VM1657:7](#)

Quantity: 1

[VM1657:8](#)

Price: 672.99

[VM1657:9](#)

2. Write a JavaScript program to create object book
 - a. Add the property book name, author name

```
> //Question 2
function Book(bookName, authorName) {
  this.bookName = bookName;
  this.authorName = authorName;
}

Book.prototype.price = 9.88;

let myBook = new Book('Nancy Drew', 'Carolyn Keene');
```

- b. Add the prototype property price.

```
Book.prototype.price = 9.88;
```

- c. Display all the properties.

```
console.log('Book Name: ' + myBook.bookName);
console.log('Author Name: ' + myBook.authorName);
console.log('Price: ' + myBook.price);
```

Book Name: Nancy Drew

[VM1769:11](#)

Author Name: Carolyn Keene

[VM1769:12](#)

Price: 9.88

[VM1769:13](#)

3. Write a JavaScript program to create Parent object employee (Property: Employee Name , Employee Id , Salary) and Child object Manager (Property: Manager Name , Branch). Inherit all the properties of employee and display all the properties.

```
> //Question 3
let employee = {
  employeeName: "Fritz Heinz",
  employeeId: 1001,
  salary: 10500
};

let manager = Object.create(employee);
manager.managerName = 'Hayden Cole';
manager.branch = 'Virginia';

console.log('Employee Name : ' + manager.employeeName);
console.log('Employee ID : ' + manager.employeeId);
console.log('Salary : ' + manager.salary);
console.log('Manager Name : ' + manager.managerName);
console.log('Branch : ' + manager.branch);
```

Employee Name : Fritz Heinz	VM1808:12
-----------------------------	---------------------------

Employee ID : 1001	VM1808:13
--------------------	---------------------------

Salary : 10500	VM1808:14
----------------	---------------------------

Manager Name : Hayden Cole	VM1808:15
----------------------------	---------------------------

Branch : Virginia	VM1808:16
-------------------	---------------------------

TASK 4: Event Manager

1. Create a HTML page with `<p>` paragraph. Change the paragraph colour according to the following mouse events

- a. Onclick, yellow background

This is a paragraph. Hover over it or click on it to see the color change.

- b. ondblclick, blue background

This is a paragraph. Hover over it or click on it to see the color change.

- c. onmouseover , red background

This is a paragraph. Hover over it or click on it to see the color change.

- d. onmouseout, green background

This is a paragraph. Hover over it or click on it to see the color change.

2. Create a HTML page with textfield. Show some effects on the textfield when the following events occurred:

- a. Onchange

Enter your name: ajsdfj

- b. Onfocus

Enter your name: |

- c. onblur

Enter your name: sdfadf

TASK 5

1. Using javascript add the following record into table

a. Name: Mukhriz Jamil Asoka

b. Email: mukriz@corp.jo

c. Phone: 651181187223

```
var table = document.querySelector("table");
var tbody = table.querySelector("tbody");

var newRow = document.createElement("tr");
var newNumber = document.createElement("td");
var newName = document.createElement("td");
var newEmail = document.createElement("td");
var newPhone = document.createElement("td");

newNumber.textContent = tbody.children.length + 1;
newName.textContent = "Mukhriz Jamil Asoka";
newEmail.textContent = "mukhriz@corp.jo";
newPhone.textContent = "651181187223";

newRow.appendChild(newNumber);
newRow.appendChild(newName);
newRow.appendChild(newEmail);
newRow.appendChild(newPhone);

tbody.appendChild(newRow);
```

Output:

1	Ahmad Faisal	ahmadfaisal@gmail.com	0199088888
2	Ismail Sabri	isabri@mail.com	0199076760
3	Fateh Yakin	ffateh@hotmail.com	0176067762
4	Mukhriz Jamil Asoka	mukhriz@corp.jo	651181187223

2. Using javascript add the table header as follow:

a. #, Name, Email, Phone #

```
var table = document.querySelector("table");
var tbody = table.querySelector("tbody");

// Create the table header row
var thead = document.createElement("thead");
var headerRow = document.createElement("tr");

// Create and append the header cells
var headerNumber = document.createElement("th");
headerNumber.textContent = "#";
headerRow.appendChild(headerNumber);

var headerName = document.createElement("th");
headerName.textContent = "Name";
headerRow.appendChild(headerName);

var headerEmail = document.createElement("th");
headerEmail.textContent = "Email";
headerRow.appendChild(headerEmail);

var headerPhone = document.createElement("th");
headerPhone.textContent = "Phone #";
headerRow.appendChild(headerPhone);

// Append the header row to the thead element
thead.appendChild(headerRow);

// Append the thead element to the table element
table.appendChild(thead);
```

Output:

#	Name	Email	Phone #
1	Ahmad Faisal	ahmadfaisal@gmail.com	0199088888
2	Ismail Sabri	isabri@mail.com	0199076760
3	Fateh Yakin	ffateh@hotmail.com	0176067762
4	Mukhriz Jamil Asoka	mukhriz@corp.jo	651181187223

3. Using javascript, delete any row from table when clicked on that row

```
var table = document.querySelector("table");
var rows = table.querySelectorAll("tr");

for (var i = 0; i < rows.length; i++) {
    rows[i].addEventListener("click", function () {
        this.parentNode.removeChild(this);
    });
}
```

#	Name	Email	Phone #
1	Ahmad Faisal	ahmadfaisal@gmail.com	0199088888
2	Ismail Sabri	isabri@mail.com	0199076760
3	Fateh Yakin	ffateh@hotmail.com	0176067762
4	Mukhriz Jamil Asoka	mukhriz@corp.jo	651181187223

#	Name	Email	Phone #
1	Ahmad Faisal	ahmadfaisal@gmail.com	0199088888
2	Ismail Sabri	isabri@mail.com	0199076760
3	Fateh Yakin	ffateh@hotmail.com	0176067762
4	Mukhriz Jamil Asoka	mukhriz@corp.jo	651181187223

#	Name	Email	Phone #
4	Mukhriz Jamil Asoka	mukhriz@corp.jo	651181187223

TASK 6

Write a JavaScript program to move two small squares inside one big square in a random manner. User should be able to start and stop this animation using button based events

`Math.floor(Math.random() * Math.floor(max))` will give you a random number that is less than max value

HTML

```
<div id="big-square">
  <div id="small-square1" class="small-square"></div>
  <div id="small-square2" class="small-square"></div>
</div>

<button id="start-btn">Start</button>
<button id="stop-btn">Stop</button>
```

CSS

```
#big-square {
  position: relative;
  width: 300px;
  height: 300px;
  border: 1px solid black;
}

.small-square {
  position: absolute;
  width: 50px;
  height: 50px;
  background-color: red;
}

#small-square1 {
  top: 0;
  left: 0;
}

#small-square2 {
  bottom: 0;
  right: 0;
}
```

JS

```
<script>
  const bigSquare = document.getElementById("big-square");
  const smallSquare1 = document.getElementById("small-square1");
  const smallSquare2 = document.getElementById("small-square2");
  const startBtn = document.getElementById("start-btn");
  const stopBtn = document.getElementById("stop-btn");

  let intervalId;

  function moveSquares() {
    const max = 200;
    const min = 0;
    const random1 = Math.floor(Math.random() * (max - min + 1)) + min;
    const random2 = Math.floor(Math.random() * (max - min + 1)) + min;
    smallSquare1.style.top = random1 + "px";
    smallSquare1.style.left = random1 + "px";
    smallSquare2.style.bottom = random2 + "px";
    smallSquare2.style.right = random2 + "px";
  }

  startBtn.addEventListener("click", function() {
    intervalId = setInterval(moveSquares, 1000);
  });

  stopBtn.addEventListener("click", function() {
    clearInterval(intervalId);
  });
</script>
```

Output:

