

# **Mechi Multiple Campus**

(Tribhuvan University)

Bhadrapur, Jhapa



## **Lab Report of Scripting Language(CACS-254)**

Faculty of Humanities & Social Sciences

Tribhuvan University

Kritipur, Nepal

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## **Certificate from the supervisor**

This is to certify that the Lab Report entitled “**Scripting Language**” is an academic work done by “**Santosh Bhandari**” submitted in the partial fulfillment of the requirements for the degree of **Bachelor of Computer Application** at Faculty of Humanities and Social Science, Tribhuvan University under my guidance and supervision. To the best of my knowledge, the work performed by him in the Lab report is his own creation.

Signature of the Supervisor:-

Name:-

Designation:-

Date:-

## **Acknowledgement**

I would like to express my special thanks of gratitude to my Scripting Language teacher “Mr. Krishna Pd. Acharya” and to the whole faculty member of humanities and social science who has provided me this opportunity. I am really grateful to sir Krishna Pd. Acharya for this kind of support in my project.

We are making this report as it compulsory required by Mechi Multiple Campus. It is compulsory report that should be submitted to the college in order to get practical marks. For this report our Scripting Language teacher has motivated us. We are also guided by him to score good marks in practical. He has suggested how to make the report. He was the main source for us to make the report ready for Mechi Multiple Campus. In this report, we the student of BCA were engaged and I would like to express my deep thankful particularly to all of them. We are doing this report to be very helpful for coming days.

Thank You.

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## LABSHEET-1

1. WAP to find Sum of two numbers.

```

<html>
<head>
    <title> Sum </title>
</head>
<body> </body>
<script>
    let n1 = parseInt(prompt("Enter First Number : "));
    let n2 = parseInt(prompt("Enter Second Number : "));
    alert("Sum = " + (n1+n2));
</script>
</html>

```

2. WAP to find product of two numbers.

```

<html>
<head>
    <title> Product </title>
</head>
<body> </body>
<script>
    let n1 = parseInt(prompt("Enter First Number : "));
    let n2 = parseInt(prompt("Enter Second Number : "));
    alert("Product = " + (n1 * n2));
</script>
</html>

```

3. WAP to add, subtract, multiply and divide two numbers.

```

<html>
<head>
    <title> Calculation </title>
</head>
<body> </body>
<script>
    let n1 = parseInt(prompt("Enter First Number : "));
    let n2 = parseInt(prompt("Enter Second Number : "));
    alert("Add = " + (n1+n2) + "\nSubtract = " + (n1-n2) + "\nMultiply = " +
        (n1 * n2) + "\nDivision = " + (n1/n2));
</script>
</html>

```

4. WAP to find Simple Interest.

```

<html>
  <head>
    <title> Simple Interest </title>
  </head>
  <body>
    Principal : <input type="number" id="n1" value="0"/> <br/>
    Time : <input type="number" id="n2" value="0"/> <br/>
    Rate : <input type="number" id="n3" value="0"/> <br/>
    <button onclick="calc()">Calculate </button>
    <p> Interest = <span id="interest"> 0 </span> </p>
  </body>
  <script>
    function calc() {
      let p = parseInt(document.getElementById("n1").value);
      let t = parseInt(document.getElementById("n2").value);
      let r = parseInt(document.getElementById("n3").value);
      document.getElementById("interest").innerText = (p * t * r) / 100;
    }
  </script>
</html>

```

5. WAP to calculate area of rectangle.

```

<html>
  <head>
    <title> Area of Rectangle </title>
  </head>
  <body></body>
  <script>
    let l = Number(prompt("Enter a length:"));
    let b = Number(prompt("Enter a breadth:"));
    alert("Area: " + l * b);
  </script>
</html>

```

6. WAP to find area of circle.

```

<html>
  <head>
    <title> Area of Circle </title>
  </head>

```

```

<body></body>
<script>
    let r = Number(prompt("Enter a Radius of circle :"));
    Alert("Area : " + (3.1415 * r * r));
</script>
</html>

```

7. WAP to find largest among Two Numbers.

```

<html>
<head>
    <title> Largest Number </title>
</head>
<body> </body>
<script>
    let a = Number(prompt("Enter a first Number :")),
        let b = Number(prompt("Enter a Second Number :"));
    let r = a > b ? a : b;
    alert("Largest : " + r);
</script>
</html>

```

8. WAP to find Smallest among Two Numbers.

```

<html>
<head>
    <title> Smallest Number </title>
</head>
<body> </body>
<script>
    let a = Number(prompt("Enter a first Number :")),
        let b = Number(prompt("Enter a Second Number :"));
    let r = a < b ? a : b;
    alert("Smallest : " + r);
</script>
</html>

```

9. WAP to find largest among three Numbers.

```
<html>
<head>
    <title> Largest Number </title>
</head>
<body></body>
<script>
    let a = Number(prompt("Enter a First Number :"));
    let b = Number(prompt("Enter a Second Number :"));
    let c = Number(prompt("Enter a Third Number :"));
    let r = a > b ? a : b;
    r = r > c ? r : c;
    alert("Largest Number : " + r);
</script>
</html>
```

10. WAP to find Smallest among three Numbers.

```
<html>
<head>
    <title> Smallest Number </title>
</head>
<body></body>
<script>
    let a = Number(prompt("Enter a First Number :"));
    let b = Number(prompt("Enter a Second Number :"));
    let c = Number(prompt("Enter a Third Number :"));
    let r = a < b ? a : b;
    r = r < c ? r : c;
    alert("Smallest Number : " + r);
</script>
</html>
```

11. WAP to check whether a number is odd or even.

```
<html>
<head>
    <title> Odd OR Even </title>
</head>
<body></body>
<script>
    let n = Number(prompt("Enter a Number :"));

```

```

let r = n%2==0 ? "Even Number": "Odd Number";
alert(r);
</script>
</html>

```

12. WAP to check whether a number is divisible by 7 or not.

```

<html>
<head>
    <title> Divisible by 7 </title>
</head>
<body> </body>
<script>
    let n = Number(prompt("Enter a Number:"));
    let r = n%7==0 ? "Divisible by 7": "Not Divisible By 7";
    alert(r);
</script>
</html>

```

13. WAP to check whether a number is exactly divisible by 5 and 10.

```

<html>
<head>
    <title> Divisible By 5 and 10 </title>
</head>
<body> </body>
<script>
    let n = Number(prompt("Enter a Number:"));
    let r = n%5==0 && n%10==0 ? "Divisible By 5 and 10": "Not
        Divisible By 5 and 10";
    alert(r);
</script>
</html>

```

14. WAP to check whether a number is divisible by 7 but not by 13.

```

<html>
<head>
    <title> Divisible by 7 Not By 13 </title>
</head>
<body>
    Enter a Number: <input type="number" id="n" value="0"/> <br/>
    <button onclick="calc()"> Check </button>

```

```

<p> Result = <span id="res"></span> </p>
<body>
<script>
function calc() {
    let a = document.getElementById("n").value;
    let res = document.getElementById("res");
    if(a%7==0 && a%13!=0)
        res.innerHTML = "Divisible By 7 Not By 13";
    else if (a%7==0 && a%13==0)
        res.innerHTML = "Divisible By 7 and 13";
    else
        res.innerHTML = "Not Divisible By 7";
}
</script>
</body>

```

15. WAP to input CP and SP and check profit or loss. Also find profit or loss Amount.

```

<html>
<head>
<title> Profit and Loss </title>
</head>
<body> <h1>
<script>
let CP = Number(prompt("Enter CP"));
let SP = Number(prompt("Enter SP"));
let r = CP > SP ? "Loss\nLoss Amount = " + (CP - SP) : "Profit\nProfit Amount = "
            + (SP - CP);
alert(r);
</script>
</body>

```

16. WAP to find prime numbers from 2 to 10.

```

<html>
<head>
<title> Prime Numbers </title>
</head>
<body>
<h1> Prime Numbers From 2 to 10 </h1>
<body> <p id="res"> </p>

```

<script>

```

let prime = "";
for(i=1; i<=10; i++) {
    count = 0;
    for(j=2; j<i; j++) {
        if(i%j == 0)
            count++;
    }
    if(count == 0)
        prime += i + "<br>";
}

```

document.getElementById("res").innerHTML = prime;

</script>

</html>

17. WAP to find sum of numbers from 5 to 100.

<html>  
<head>

<title>SUM </title>

<head>

<body>

<h4>Sum of Numbers from 5 to 100 = <span id='res'></span> </h4>

</body>

<script>

let sum = 0

for(i=5; i<=100; i++)

sum += i;

document.getElementById("res").textContent = sum;

</script>

</html>

18. WAP to print following series.

a. 5, 10, 25, 50, --- 50

<html>

<head>

<title>Printing Series </title>

<head>

<h2>Series </h2>

<h4 id='series'></h4>

</body>

<script>

```
let ser = "";
for(i=1; i<=10; i++)
    ser += i * 5 + ", ";
document.getElementById("series").textContent = ser;
</script>
</html>
```

- b. 1, 4, 9, 16, --- Up to 20 terms.

<html>

<head>  
 <title>Printing Series </title>

</head>

<body>

<h2>Series </h2>

<h4 id="series"> </h4>

</body>

<script>

let ser = "";

for(i=1; i<=20; i++)
 ser = ser + Math.pow(i, 2) + ", ";

document.getElementById("series").textContent = ser;
</script>

</html>

- c. 100, 98, 96, 94, --- Up to 10 terms.

<html>

<head>  
 <title>Printing Series </title>

</head>

<body>

<h2>Series </h2>

<h4 id="series"> </h4>

</body>

<script>

let ser = "";

let nos = 100;

```

for(i=1; i<=10; i++) {
    ser = ser + num + ", ";
    num = num - 2;
}
document.getElementById("series").textContent = ser;
</script>
</html>

```

19. WAP to print first 15 even Numbers.

```

<html>
<head>
    <title> Even Number </title>
<head>
<body>
    <h1> First 15 Even Number </h1>
    <h4 id="even"> </h4>
</body>
<script>
    let even = "";
    count = 0;
    for(i=1; count < 15; i++) {
        if(i % 2) {
            even = even + i + ", ";
            count++;
        }
    }
    document.getElementById("even").textContent = even;
</script>
</html>

```

20. WAP to find sum of odd Numbers from 1 to 100.

```

<html>
<head>
    <title> SUM </title>
<head>
<body>
    <h4> Sum of Numbers from 1 to 100 = <span id="res"></span>
    </h4>
</body>
<script>
    let sum = 0

```

```

for(i=1; i<=100; i++)
    if(i%2)
        sum = sum + i;
    document.getElementById("res").textContent = sum;
</script>
</html>

```

21. WAP to find factorial of a given number

```

<html>
<head>
    <title> Factorial </title>
</head>
<body></body>
<script>
    let n = Number(prompt("Enter a Number:"));
    let f = 1;
    for(i=1; i<=n; i++)
        f = f * i;
    alert("Factorial = " + f);
</script>
</html>

```

22. WAP to print following Fibonacci Series. 1, 1, 2, 3, 5, 8, ... up to 15 terms.

```

<html>
<head>
    <title> Fibonacci Series </title>
</head>
<body>
    <h1> Fibonacci Series </h1>
    <h2 id="ser"></h2>
</body>
<script>
    let a = 1, b = 0, c, fib = "";
    for(i=1; i<=15; i++) {
        c = a + b;
        fib = fib + c + ", ";
        a = b;
        b = c;
    }
</script>
</html>

```

3

```

document.getElementById("ser").textContent = fib;
</script>
</html>

```

23. WAP TO PRINT FOLLOWING PATTERN.

a) \*

\*\*

\*\*\*

\*\*\*\*

\*\*\*\*\*

```
<html>
  <head>
    <title> Pattern </title>
  </head>
  <body>
    <h1> Pattern </h1>
    <p id='res'> </p>
  </body>
  <script>
    let pat = "";
    for(i=1; i<5; i++) {
      for(j=1; j<=i; j++)
        pat = pat + "*";
      pat = pat + "<br/>";
    }
    document.getElementById("res").innerHTML = pat;
  </script>
</html>
```

b) \*\*\*\*\*

\*\*\*\*

\*\*\*

\*\*

\*

```
<html>
  <head>
    <title> Pattern </title>
  </head>
  <body>
    <h1> Pattern </h1>
    <p id='res'> </p>
  </body>
  <script>
    let pat = "",
```

```

for(i=5; i>1; i--) {
    for(k=1; k<=5; k++)
        pat=pat+" ";
    for(j=1; j<=i; j++)
        pat=pat+"*";
    pat=pat+"<br/>";
}

```

3  
`document.getElementById("res").innerHTML=pat;`  
`</script>`  
`</html>`

c) 1

12  
123  
1234  
12345

```

<html>
<head>
    <title>Pattern </title>
</head>
<body>
    <h1>Pattern </h1>
    <p id="res"></p>
</body>
</script>

```

let pat="";  
for(i=1; i<=5; i++) {  
 for(j=1; j<=i; j++) {  
 pat=pat+j;  
 pat=pat+"<br/>";  
 }
}

3  
`document.getElementById("res").innerHTML=pat;`

</script>  
</html>

d) 1

22  
333  
4444  
5555

```

<html>
<head>
    <title>Pattern </title>
</head>
<body>
    <h1>Pattern </h1>
    <p id="res"></p>
</body>
<script>
    let pat = "";
    for(i=1; i<=5; i++) {
        for(j=1; j<=i; j++)
            pat = pat + i;
        pat = pat + "<br>";
    }
    document.getElementById("res").innerHTML = pat;
</script>
</html>

```

e> 1  
0  
01  
1010  
10101

```

<html>
<head>
    <title>Pattern </title>
</head>
<body>
    <h1>Pattern </h1>
    <p id="res"></p>
</body>
<script>
    let pat = "";
    for(i=1; i<=5; i++) {
        for(j=1; j<=i; j++)
            if(j%2)
                pat = pat + "1";
            else
                pat = pat + "0";
        pat = pat + "<br>";
    }

```

```
document.getElementById("res").innerHTML = dat;
</script>
</html>
```

24. WAP to check whether a number is prime or not.

```
<html>
<head>
    <title> Check Prime or Not </title>
</head>
<body></body>
<script>
    let n = Number(prompt("Enter a Number"));
    let count = 0;
    for(i=2; i<n; i++)
        if(1.(n%i)) {
            count++;
            break;
        }
    let res = count ? "Not Prime Number" : "Prime Number";
    alert(res);
</script>
</html>
```

25. WAP to print prime numbers from 1 to 100.

```
<html>
<head>
    <title> Prime Numbers </title>
</head>
<body>
    <h1> Prime Number from 1 to 100 </h1>
    <p id="res"> </p>
</body>
<script>
    let prime = "";
    for(i=1; i<=100; i++) {
        count = 0;
        for(j=2; j<i; j++) {
            if(1.(i%j) == 0)
                count++;
        }
        if(count == 0)
            prime += i + "<br>";
    }
</script>
```

```

3
document.getElementById("res").innerHTML=prime;
</script>
</html>

```

26. WAP to show the use of ternary Operator.

```

<html>
<head>
    <title> Use of Ternary Operator </title>
</head>
<body> </body>
<script>
    let n = Number(prompt("Enter Your Age"));
    let res = n > 18 ? "Eligible for Voting." : "Not Eligible for Voting.";
    alert(res);
</script>
</html>

```

27. WAP to show the use of switch case Statement.

```

<html>
<head>
    <title> Switch Case </title>
</head>
<body> </body>
<script>
    let day = Number(prompt("Enter a Day?"));
    switch(day) {
        case 1:
            dayName = "Sunday";
            break;
        case 2:
            dayName = "Monday";
            break;
        case 3:
            dayName = "Tuesday";
            break;
        case 4:
            dayName = "Wednesday";
            break;
        case 5:
            dayName = "Thursday";
            break;
    }

```

```

        break;
    case 6:
        dayName = "Friday";
        break;
    case 7:
        dayName = "Saturday";
        break;
    default:
        dayName = "Error";
    }
    alert(dayName);
</script>
</html>

```

28. WAP to read a no. and find out if it is Armstrong no. or not.

```

<html>
    <head>
        <title> Armstrong or Not </title>
    </head>
    <body></body>
    <script>
        let n = Number(prompt("Enter a Number?"));
        let temp = n;
        let sum = 0;
        let digit = 0;
        while(n != 0) {
            digit = n % 10;
            sum = sum + (Math.pow(digit, 3));
            n = Math.floor(n / 10);
        }
        if(temp == sum)
            alert("Armstrong Number.");
        else
            alert("Not Armstrong Number.");
    </script>
</html>

```

29. WAP to generate Armstrong Number from 1 to 100.

```

<html>
<head>
    <title> Armstrong Number </title>
</head>
<body>
    <h2> Armstrong Number from 1 to 100 </h2>
    <h3 id="res"></h3>
</body>
<script>
    let result = "";
    for(i=1; i<=100; i++) {
        let n = i;
        let sum = 0;
        let digit = 0;
        while(n!=0) {
            digit = n%10;
            sum = sum + (Math.pow(digit, 3));
            n = Math.floor(n/10);
        }
        if(sum == i) {
            result = result + i + "<br/>";
        }
    }
    document.getElementById("res").innerHTML = result;
</script>
</html>

```

30. Write a program to display output like the following:-

N	$10^N$	$100^N$	$1000^N$
1	10	100	1000
2	20	200	2000
3	30	300	3000

You should ask the starting and ending value for N and the table should be displayed dynamically according to the value input by the user.

```

<html>
<head>
    <title> Table </title>
</head>
<body>
    Starting Value : <input type="number" value="1" id="sn"/> <br/>
    Ending Value : <input type="number" value="1" id="en"/> <br/>
    <button onclick="generate()> Generate </button>
    <div id="result"> </div>
</body>
<script>
    function generate() {
        let sn = Number(document.getElementById("sn").value);
        let en = Number(document.getElementById("en").value);
        let upper = "<table border='1'> <tr> <th> N </th> <th> 10 * N </th>
                    <th> 100 * N </th> <th> 1000 * N </th> </tr>";
        let middle = "";
        for(i=sn, i<=en; i++) {
            middle = middle + "<tr> <td> $" + i + " </td> <td> $" + (i * 10) + " </td> <td> $" + (i * 100) + " </td> <td> $" + (i * 1000) + " </td> </tr>";
        }
        let lower = "</table>";
        document.getElementById("result").innerHTML = upper + middle + lower;
    }
</script>
</html>

```

31. WAP to calculate Compound Interest for the given principle, no. of years and rate of interest.

```

<html>
<head>
    <title> Compound Interest </title>
</head>
<body>
    Principle : <input type="number" id="p"/> <br/>
    Years : <input type="number" id="y"/> <br/>

```

```
Rate : <input type="number" id="r"/> <br/>
<button onclick="calc()">Calculate </button>
<p>Interest = <span id="res"></span> </p>
</body>
<script>
function calc() {
    let p = document.querySelector("#p").value;
    let r = document.querySelector("#r").value;
    let y = document.querySelector("#y").value;
    let res = (p * (Math.pow(1+r/100), y) - 1).toFixed(2);
    document.getElementById("res").textContent = res;
}
</script>
</html>
```

## LABSHEET -2

1. Create HTML form with fields Full Name, Address, Telephone, Gender, Email, Country and Comments. Write Javascript program to validate that form so that User will only write correct values. Check for empty values, number, and email and focus them on receiving invalid values.

```

<html>
  <head> <title> Form </title> </head>
  <body>
    <style>
      p {
        color: red;
      }
    </style>
    <form name="form" onsubmit="return Validate()">
      <p class="nameerr"></p>
      Full Name: <input type="text" id="name"/> <br/>
      <p class="adderr"></p>
      Address: <input type="text" id="add"/> <br/>
      <p class="phonerr"></p>
      Telephone: <input type="tel" id="phone" pattern="[\d]{10}" /> <br/>
      <p class="gendererr"></p>
      <div>
        Gender: <input type="radio" name="gender" id="g" value="male"/>
        male <input type="radio" name="gender" id="g" value="female"/>
        Female <br/>
      </div>
      <p class="emailerr"></p>
      Email: <input type="email" id="email"/> <br/>
      <p class="countryerr"></p>
      Country: <input type="text" id="country"/> <br/>
      <p class="commenterr"></p>
      Comments: <textarea id="cmnt" cols="30" rows="10"></textarea> <br/>
      <button type="submit">Submit </button>
    </form>
  </body>
  <script>
    let flag = true;
    function Errr(selector, msg) {
      document.querySelector(`#${selector}`).textContent = msg;
    }
  </script>

```

```
flag=false,
if(!msg)
    flag=true;
```

3  
function Validate(){

```
let name=document.getElementById("name").value;
let add=document.querySelector("#add").value;
let phone=document.querySelector("#phone").value;
let gender=document.querySelector("form.gender").value;
let email=document.querySelector("#email").value;
let country=document.querySelector("#country").value;
let cont=document.querySelector("#cont").value;
if(!name){
    Err("nameerr","* Cannot Be Empty.");
}
else{
    Err("nameerr","");
}
if(!add){
    Err("adderr","* Cannot Be Empty.");
}
else{
    Err("adderr","");
}
if(!phone){
    Err("phonerr","* Cannot Be Empty.");
}
else{
    Err("phonerr","");
}
if(!gender){
    Err("gendererr","* Cannot Be Empty.");
}
else{
    Err("gendererr","");
}
if(!email){
    Err("emailerr","* Cannot Be Empty.");
}
else{
    Err("emailerr","");
}
if(!country){
    Err("countryerr","* Cannot Be Empty.");
}
```

```

    }else{
        Err("countryr","");
    }
    if(!cnt){
        Err("cnterr","* Cannot Be Empty");
    }else{
        Err("cnterr","");
    }
    return flag;
</script>
</html>

```

2. Write a Client Side program to display the continuous Time in the status bar of the browser. Time Should be updated every Second.

```

<html>
    <head>
        <title>Time </title>
    </head>
    <body>
        <h1><span id="hrs">00 :<span id="min">00 <span>:<span id="sec">
            00 </span> </h1>
        <br>
        <script>
            let hrs=document.getElementById("hrs");
            let min=document.getElementById("min");
            let sec=document.getElementById("sec");
            setInterval(()=>{
                const Date=new Date();
                hrs.textContent=date.getHours();
                min.textContent=date.getMinutes();
                sec.textContent=date.getSeconds();
            },1000);
        </script>
    </body>
</html>

```

- 3) Write a program which includes a function add(). It should take arbitrary number of parameters and return the result by adding all the parameters. Use Browser Message box to display the output.

```

<html>
  <head>
    <title>Addition </title>
  </head>
  <body> </body>
  <script>
    let data = prompt("Enter the Number You Want to Add (Use , to separate)");
    let dataarr = data.split(",");
    let arr = []
    for(let i of dataarr)
      arr.push(parseInt(i));
    alert("Sum of Numbers = "+add(...arr));
    function add(...parameters){
      let sum = 0
      for(let i of parameters)
        sum = sum + i;
      return sum;
    }
  </script>
</html>

```

4. Write a JavaScript program that will ask a value and store them in a cookie which need to be expire in an hour. After storing the value; upon clicking 'show' button alert the stored value.

```

<html>
  <head>
    <title>Cookie </title>
  </head>
  <body> <button id="btn">Show </button> </body>
  <script>
    let val = prompt("Enter a Value : ");
    document.cookie = val + "; expires=" + (new Date()).getTime() + 3600;
    let cookie = document.cookie.split(";");
  
```

```

document.getElementById('btn').addEventListener("click", () => {
    let cookies = "";
    for(let i = 0; i < cookie.length; i++) {
        cookies = cookies + cookie[i] + "\n";
    }
    alert(`Cookies are \n ${cookies}`);
})
</script>
</html>

```

5. Create a calculator type form. It should contain three input boxes. The first and third input boxes should let the numbers 0 to 9. The middle input box should let the following mathematical operators: +, -, \*, /. The user should be able to select the two numbers and the operation. Answer should be shown on submission of form.

```

<html>
    <head>
        <title> Calculate </title>
    </head>
    <body>
        First Number: <select id='n1'>
            <option value='0'> 0 </option>
            <option value='1'> 1 </option>
            <option value='2'> 2 </option>
            <option value='3'> 3 </option>
            <option value='4'> 4 </option>
            <option value='5'> 5 </option>
            <option value='6'> 6 </option>
            <option value='7'> 7 </option>
            <option value='8'> 8 </option>
            <option value='9'> 9 </option>
        </select> <br/>
        Operator: <select id='operator'>
            <option value='+'> + </option>
            <option value='-'> - </option>
            <option value='*'> * </option>
            <option value='/'> / </option>
        </select> <br/>
        Second Number: <select id='n2'>
            <option value='0'> 0 </option>
            <option value='1'> 1 </option>
        </select>
    </body>

```

```

<option value='2'> 2 </option>
<option value='3'> 3 </option>
<option value='4'> 4 </option>
<option value='5'> 5 </option>
<option value='6'> 6 </option>
<option value='7'> 7 </option>
<option value='8'> 8 </option>
<option value='9'> 9 </option> </Select> <br/>
<button id='submit'>Calculate </button>
</body>
<script>
document.getElementById("submit").addEventListener("click", () => {
    let a = Number(document.getElementById("n1").value);
    let op = document.getElementById("operator").value;
    let b = Number(document.getElementById("n2").value);
    let result;
    if (op == '+') {
        result = a + b;
    } else if (op == '-') {
        result = a - b;
    } else if (op == '*') {
        result = a * b;
    } else {
        result = a / b;
    }
    alert(`Result = ${result}`);
});
</script>
</html>

```

6. Create an HTML code and JavaScript that include a form with three input fields. The relationship of the fields in that Second field is twice the value of the first field. And the third field is square of the first field. First and Second field should be disable in nature.

```

<html>
<head>
    <title> HTML Code </title>
</head>

```

<body>

Field Field: <input type="number" value="0" id="n1" disabled><br/>  
Second Field: <input type="number" value="0" id="n2" disabled><br/>  
Third Field: <input type="number" value="0" id="n3"> <br/>

</body>

<script>

```
let n1El = document.getElementById("n1");
let n2El = document.getElementById("n2");
let n3El = document.getElementById("n3");
n3El.addEventListener("change", function() {
    let n1 = n1El.value;
    let n2 = n2El.value;
    let n3 = n3El.value;
    n1El.value = Math.sqrt(n3);
    n2El.value = 2 * (Math.sqrt(n3));
});
```

</script>

</html>

7. Write a program using JavaScript to find the sum of odd numbers from 0 to 200.

<html>

<head>

<title> Sum of Odd Numbers </title>

</head>

<body>

<h1> Sum of Odd Numbers from 0 to 200 </h1>

<h1> Result = <span id="res"></span> </h1>

</body>

<script>

```
let sum = 0;
for (i = 0; i <= 200; i++) {
    if (i % 2)
        sum += i;
```

document.getElementById("res").textContent = sum;

</script>

</html>

8. Write a program in JavaScript to display multiplication table as follows. Take the number input from the user. E.g. Input Number is 4.

Multiplicand	Multiplicator	Product
4	1	4
4	2	8
---	---	---

```

<html>
  <head>
    <title> Multiplication Table </title>
  </head>
  <body>
    <div id='res'></div>
    <script>
      let n=Number(prompt("Enter a Number : "));
      let table = "<table border='1'> <tr> <th> Multiplicand </th> <th> Multipli
      <th> <th> Product </th> </tr>";
      let row = "", res = "";
      for(i=0;i<=10;i++)
        row = row + "<tr> <td> $" + i + " <td> $" + i * n + " <td> $" + i * n + " <td> $" + i * n + " </td> </tr> ";
      res = table + row + "</table>";
      document.getElementById('res').innerHTML = res;
    </script>
  </body>
</html>

```

- g. Write a program that reads 10 words from user and outputs only those which have "b" in the beginning.

```

<html>
  <head>
    <title> Name of User </title>
  </head>
  <body>
    <script>
      let a=[];
      let name=[];
      let count=0
    
```

```

for(let i=0; i<10; i++) {
    a[i] = prompt("Enter a Word");
    if(a[i].startsWith("b")) {
        name[count] = a[i];
        count++;
    }
}
let nameList = "";
for(let i=0; i<name.length; i++)
    nameList = nameList + name[i] + "\n";
alert(nameList);
</script>
</html>

```

10. Write a program to display a number randomly. The Random number should be generated when you click upon a link 'click me'. If the number is less than 20 then show a alert box with a message "Hey (random Number) is less than 20", and if the random number is greater than 20 then show a alert box with a message "Your (random number) is greater than or equals to 20".

```

<html>
<head>
    <title> Random Number Generator </title>
</head>
<body>
    <button onclick="rand1()"> Click Me </button>
</body>
<script>
    let rand1 => {
        let rand = Math.floor(Math.random() * 100);
        if(rand < 20)
            alert(`Hey ${rand} is less than 20.`);
        else
            alert(`Your ${rand} is greater than or equals to 20.`);
    }
</script>
</html>

```

11. Write a program that displays the continuous time in the web page. The time should be in the format of HH:MM:SS.

```

<html>
  <head>
    <title> Display Time </title>
  </head>
  <body>
    <h1> Time </h1>
    <h2 id='res'></h2>
  </body>
<script>
  setInterval(() => {
    document.getElementById('res').text(DateFormat = (new Date).toLocaleTimeString());
  }, 1000);
</script>
</html>

```

12. Write a program that will change the background color in every 2 seconds. Use at least 6 colors.

```

<html>
  <head>
    <title> Change Background Color </title>
  </head>
  <body> </body>
<script>
  let body = document.getElementsByTagName("body");
  let color = ["red", "blue", "green", "yellow", "brown", "purple"];
  let count = 0;
  setInterval(() => {
    if (count == color.length)
      count = 0;
    body[0].style.background = color[count];
    count++;
  }, 2000);
</script>
</html>

```

13. Write a program which includes a function sum(). This function sum() should be designed to add an arbitrary list of parameters. (For e.g. if you call the function sum() as sum(2,3) it should return the result 5 and if again you call the function sum() as sum(2,3,4) it should return the result 9).

```

<html>
  <head>
    <title> Arbitrary Function </title>
  </head>
  <body> </body>
  <script>
    sum(1,2);
    sum(1,2,3);
    sum(1,5,6,2);
    sum(10,8,5,9,1),
    function sum(){
      let sum=0,
        for(let i=0 ; i<arguments.length ; i++)
          sum+=arguments[i];
      console.log("sum = "+sum);
    }
  </script>
</html>

```

14. Write a program to ask the background color with user and change the background of the page.

```

<html>
  <head>
    <title> Background Color </title>
  </head>
  <body> </body>
  <script>
    let color=prompt("Enter a color!"),
      document.getElementsByTagName("body")[0].style.backgroundColor=color,
  </script>
</html>

```

15. Write a program to create two text boxes and two buttons. If the user inputs the value in first textbox and click upon the button then the value entered into the first text box should be displayed into the second text box (in uppercase if the user have inputted in lowercase and vice versa), similarly for the second textbox similarly for the second text box.

```

<html>
<head>
    <title> Program </title>
</head>
<body>
    Enter a Text : <input type='text' id='t1' /> <br/>
    <button onclick="check1()"> Submit </button> <br/>
    Enter a Text : <input type='text' id='t2' /> <br/>
    <button onclick="check2()"> Submit </button> <br/>
</body>
<script>
    let txt1 = document.getElementById("t1");
    let txt2 = document.getElementById("t2");
    function check1() {
        let txtval = txt1.value;
        if (txtval == txtval.toLowerCase())
            txt2.value = txtval.toUpperCase();
        else
            txt2.value = txtval.toLowerCase();
    }
    function check2() {
        let txtval = txt2.value;
        if (txtval == txtval.toUpperCase())
            txt1.value = txtval.toLowerCase();
        else
            txt1.value = txtval.toUpperCase();
    }
</script>
</html>

```

16. Write a program that reads 5 words from user (use prompt for receiving input) and displays the word that has 'ha' continuous character in between the words.

```

<html>
<head>
    <title> Filter Word </title>
</head>

```

```

<body>
  <h1> words that has 'ha' </h1>
  <h2 id='res'></h2>
</body>
<script>
  let list = [];
  for(i=0; i<5; i++)
    list[i] = prompt("Enter a word");
  let res = "";
  for(i=0; i<list.length; i++)
    if(list[i].includes('ha'))
      result += list[i] + "<br/>";
  document.querySelector("#res").innerHTML = res;
</script>
</html>

```

17. Write a program that will ask height & width and change the size of the browser window.

```

<html>
  <head>
    <title> Changing Browser Window </title>
  </head>
  <body></body>
  <script>
    let w = Number(prompt("Enter a width :"));
    let h = Number(prompt("Enter a Height :"));
    window.resizeTo(w, h);
  </script>
</html>

```

18. Write a program to store 10 names in array and print the array elements by joining them.

```

<html>
  <head>
    <title> Joining Array </title>
  </head>
  <body></body>
  <script>
    let name = [], res = "";

```

```

for(let i=0; i<10; i++)
    name[i] = prompt("Enter a Name");
for(let i of name)
    Yes += i;
alert(Yes);
</script>
</html>

```

19. Write a program which display a button, clicking on that the browser window needs to be closed.

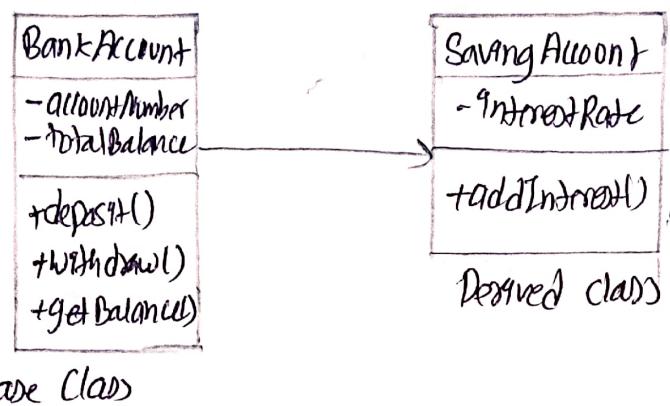
```

<html>
<head>
    <title> Close Window </title>
</head>
<body>
    <button onclick="CloseWindow()> Close Window </button>
</body>
<script>
    function CloseWindow()
        window.close();
</script>
</html>

```

## LABSHEET - 3

- 1- Write an Object-oriented PHP program to implement the concept of inheritance in considering the following class diagram.



&lt;?php

```

class BankAccount {
    private $accountNumber, $totalBalance;
    function deposit($amt, $ac) {
        $this->totalBalance += $amt;
        echo $amt. " is Deposited in ". $ac. " Account Number. <br/>";
    }
    function withdraw ($amt, $ac) {
        if ($this->totalBalance == 0 || $this->totalBalance < $amt)
            echo "Insufficient Balance! <br/>";
        else {
            $this->totalBalance -= $amt;
            echo $amt. " is Withdraw from ". $ac. " Account Number. <br/>";
        }
    }
    function getBalance() {
        return $this->totalBalance;
    }
}
  
```

```

class SavingAccount extends BankAccount {
    private $interestRate = 10;
    function addInterest ($ac) {
        $intrest = 0;
        $amt = BankAccount::getBalance();
        $intrest = $amt * ($this->interestRate / 100);
        BankAccount::deposit ($intrest, $ac);
    }
}
  
```

```

$S = new SavingAccount();
$S->deposit(100000, "BC1258641");
$S->addInterest("BC1258641");
$S->withdraw(50000, "BC1258641");
echo "Total Balance : ". $S->getBalance();
?>

```

- 20 Create a class named 'Member' having the following data members like name, age, phone, address, salary. It also has a method name 'setMemberDetails' which initialize all data members and another method 'printMemberDetails' which displays the member details. Second class 'Employee' and 'Manager' inherit the 'Member' class. The 'Employee' and 'Manager' classes have data members 'specialization' and 'printSpecialization' and 'Manager' class contains a method named 'setDepartment' and 'printDepartment'. Provide a main class and create object of 'Employee' and 'Manager', set the details and print them.

<3.php

```

class Member{
    private $name, $age, $phone, $address, $salary;
    function setMemberDetails($n, $a, $ph, $ad, $sal) {
        $this->name = $n;
        $this->age = $a;
        $this->phone = $ph;
        $this->address = $ad;
        $this->Salary = $sal;
    }
    function printMemberDetails() {
        echo "<br>Name : ". $this->name. "<br>Age : ". $this->age. "<br>Phone : ". $this->phone. "<br>Address : ". $this->address. "<br>Salary : ". $this->Salary;
    }
}

```

3

```

class Employee extends Member {
    private $specialization = "Data Science";
    function printSpecialization() {
        echo "<br>Specialization : ". $this->specialization;
    }
}

```

3

class Manager extends Member {

private \$specialization = "Resource Management", \$department;

function printSpecialization () {

echo "<br> Specialization : " . \$this->specialization;

}

function setDepartment (\$dep) {

\$this->department = \$dep;

}

function printDepartment () {

echo "<br> Department : " . \$this->department;

}

}

\$e = new Employee();

\$e->setMemberDetails ("Shyam", 25, 8000000, "Jhapa", 25000);

\$e->printMemberDetails();

\$e->printSpecialization();

\$m = new Manager();

\$m->setMemberDetails ("Hari", 23, 9816000000, "Bishamade", 50000);

\$m->printMemberDetails();

\$m->printSpecialization();

\$m->setDepartment ("IT");

\$m->printDepartment();

?

3.

Create an abstract class called 'Fmachine' having methods getdata() and putdata(). Derive a class 'Airplane' having instance variables code, name, capacity and methods getdata() and putdata() (that overrides Fmachine's getdata() and putdata()) to read and display the result. Create some instances of Airplane and call the required methods.

<?php

abstract class Fmachine {

function getdata() { }

function putdata (\$code, \$name, \$capacity) { }

}

class Airplane extends Fmachine {

private \$code, \$name, \$capacity;

function getdata() { }

```

echo "<br> Code: ". $this->code . "<br> Name: ". $this->name . "<br>
Capacity: ". $this->capacity;

3
function putData($code, $name, $capacity) {
    $this->code = $code;
    $this->name = $name;
    $this->capacity = $capacity;
}

3
$a = new Airplane();
$b = new Airplane();
$a->putData("AIK2584", "Buddha Air 101", 200);
$b->putData("BS2630", "Buddha Air 300", 250);
$a->getData();
$b->getData();

```

2)

4. Make a class "Rectangle" with attributes length and breadth. The class contains methods computeArea and displayArea. Write a program with main method that create two object of Rectangle class and find their areas and display area of larger rectangle.

&lt;?php

```

class Rectangle {
    private $length, $breadth;
    function computeArea ($length, $breadth) {
        $this->length = $length;
        $this->breadth = $breadth;
        return $length * $breadth;
    }

    function displayArea() {
        echo "<br> Area: ". $this->length * $this->breadth;
    }
}

function main() {
    $a = new Rectangle();
    $b = new Rectangle();
    if ($a->computeArea (50, 100) > $b->computeArea (50, 120))
        $a->displayArea();
    else

```

```

$ b->display();
}
main();
}

```

5. Make an interface named num with two method int add(int x, int y) and int diff(int n, int y). Then make a class that implements that interface num.

```

<?php
interface num {
    function add ($n, $y);
    function diff ($n, $y);
}

class Calc implements num {
    function add($n, $y) {
        echo "Addition: ".($n+$y);
    }

    function diff ($n, $y) {
        echo "Difference: ".($n-$y);
    }
}

$c = new calc();
$c->add(15, 10);
$c->diff(15, 10);
?

```

6. Create an interface called calculate which has method int add (int n, int y) and perform addition and subtraction of ~~passed~~ number passed as argument. Then define a class that implements interface calculate.

```

<?php
interface calculate {
    function add ($n, $y);
}

class Calc implements calculate {
    function add ($n, $y) {
        echo "Addition: ".($n+$y);
        echo "<br/> Subtraction: ".($n-$y);
    }
}

$c = new calc();
?
```

`$C->add(20,15);`

?>

- To Create a class Student with instance variable roll-no and two methods to read and display the roll-no. Then, create another class Test that inherits class Student, consisting of its own instance variable to hold the marks of two subjects and also methods to read and display the marks. Finally, create another class Result which inherits class Test. It also has its own instance variable total to hold the total two marks scored by the Student. Similarly, it has methods to calculate and display the total. Create some instances of above classes and demonstrate instance.

<?php

```

class Student {
    private $roll-no;
    function read($no) {
        $this->roll-no = $no;
    }
    function display() {
        echo "Roll No: ", $this->roll-no;
    }
}

class Test extends Student {
    public $sub1, $sub2;
    function read($sub1, $sub2) {
        $this->sub1 = $sub1;
        $this->sub2 = $sub2;
    }
    function display() {
        parent::display();
        echo "<br>Subject 1: ", $this->sub1, "<br>Subject 2: ", $this->sub2;
    }
}

class Result extends Test {
    private $total;
    function calculate() {
        $this->total = $this->sub1 + $this->sub2;
    }
    function display() {
        parent::display();
        echo "<br>Total: ", $this->total;
    }
}

```

```
$r = new Result();
$r->read1(20);
$r->read(60,70);
$r->calculator();
$r->display();
```

}

8.

Create an interface shape with has methods get\_data() and display\_area(). Create two classes Rectangle and Square which implements this interface. Define the instance variables of these class as per requirement in class itself. Create some instance of Rectangle and Square classes and demonstrate interface implementation by classes.

<?php

interface Shape{

```
function get_data();
function display_area();
```

3  
class Rectangle implements Shape{

private \$length, \$breadth;

```
function __construct($l,$b){  
    $this->length = $l;  
    $this->breadth = $b;
```

3

function get\_data(){

```
    return ("Length : ". $this->length. "<br/> Breadth : ". $this->breadth);
```

3  
function display\_area(){

```
    echo "<br/> Area : ". ($this->length * $this->breadth);
```

3

class Square implements Shape{

private \$length;

```
function __construct($l){  
    $this->length = $l;
```

3

function get\_data(){

```
    return ("Length : ". $this->length);
```

3

```
$r = new Rectangle(10,6);
```

echo \$r->get\_data();

```
$r->display_areal;
$S=new Square(10);
echo $S->get_data();
$S->display_areal();
```

?>

9. Create a class Number with three integer instance variables  $x, y$  and  $z$ . The class will have one constructor to initialize instance variable. The class also will contain method getMax() method that will return the larger number. Create a class NumberDemo with main method that will create an object of Number and will print the largest Number.

<?php

```
class Number {
    private $x, $y, $z;
    function __construct($x, $y, $z) {
        $this->x = $x;
        $this->y = $y;
        $this->z = $z;
```

```
    }
    function getMax() {
```

```
        $a = $this->x > $this->y ? $this->x : $this->y;
```

```
        $a = $a > $this->z ? $a : $this->z;
```

```
        return $a;
    }
```

}

```
class NumberDemo {
    function main()
```

```
        $n = new Number(40, 50, 30);
```

```
        echo "Largest Number: ". $n->getMax();
```

}

```
    $n = new Number();
    $n->main();
```

?>

10. Create a class Box with instance variable length, breadth and Height. Add one method getVolume() to compute the volume of box. Use suitable constructors. Create a subclass boxWeight that extends Box that add one variable weight. Add two methods setWeight() and getWeight() that sets and displays th.

Weight of box to this class. Add suitable constructor. Your class should use upper keyword to class super class constructor, then create a class BoxDemo with main() method that creates two objects of BoxWeight and display Volumes and Weight of box boxes.

<?php

class Box{

private \$length, \$breadth, \$height;

function \_\_construct(\$l, \$b, \$h){

\$this->length = \$l;

\$this->breadth = \$b;

\$this->height = \$h;

}  
function getVolume(){

}  
echo "<br> Volume : ".(\$this->length \* \$this->breadth \* \$this->height);

}  
class boxWeight extends Box{

private \$weight;

function \_\_construct(\$l, \$b, \$h){

Box::\_\_construct(\$l, \$b, \$h);

}  
function setWeight (\$w){

\$this->weight = \$w;

}  
function getWeight (){

}  
echo "<br> Weight : ".\$this->weight;

}

}  
class BoxDemo{

function main(){

\$b1 = new boxWeight(20, 15, 20);

\$b2 = new boxWeight(15, 7, 10);

\$b1->getVolume();

\$b1->setWeight(400);

\$b1->getWeight();

\$b2->getVolume();

\$b2->setWeight(800);

\$b2->getWeight();

}

}

```
$b = new BoxDemo();
$b->main();
?>
```

11. Create a class hierarchy for a Zoo. Define a base class Animal with data members for the name and age of an animal, and a method to make a sound. Create subclasses for different types of animals, such as Lion, Tiger, Giraffe, and Zebra, and override the makeSound() method for each subclass to make the appropriate sound.

<?php

```
class Animal {
    private $name, $age;
    function makeSound() {}}

class Lion extends Animal {
    function makeSound() {
        echo "<br/>Lion Roars.";}

class Tiger extends Animal {
    function makeSound() {
        echo "<br/>Tiger Purr.";}

class Dog extends Animal {
    function makeSound() {
        echo "<br/>Dog Barks.";}

class Giraffe extends Animal {
    function makeSound() {
        echo "<br/>Giraffe Hum.";}

$1 = new Lion();
$t = new Tiger();
$d = new Dog();
$g = new Giraffe();

$1->makeSound();
```

```
$t → makeSound();  
$d → makeSound();  
$g → makeSound();  
?>
```