1. Write a Simple JavaScript program for arithmetic expression.

```
<html>
<body>
<script>
var a,b,c;
a = parseInt(prompt("Enter No 1:",1));
b = parseInt(prompt("Enter No 2:",1));
c=a+b;
document.write("<br>Addition:"+c);
c=a-b;
document.write("<br>Substraction:"+c);
c=a*b;
document.write("<br>Multiplication:"+c);
c=a/b;
document.write("<br>Division:"+c);
</script>
</body>
</html>
```

2. Write a JavaScript program to find Area and Circumference of Circle using arithmetic expression.

```
<html>
<body>
<script>
var r;
r = parseInt(prompt("Enter radius of Circle:"));
var a = 3.14*r*r;
var c = 2*3.14*r;
document.write("<br>Area:"+a);
document.write("<br>Circumference:"+c);
</script>
</body>
</html>
```

3. Write a JavaScript program to find whether the given year is leap year or not using if-else

```
<html>
<body>
<script>
var year = parseInt(prompt("Enter Year"));
if ((year % 4 == 0) && (year % 100 != 0) || (year % 400 == 0))  {
    document.write(year + ' is a leap year');
  }
else {
    document.write(year + ' is not a leap year');
  }
</script>
</body>
</html>
```

4. Write a JavaScript program to print even number from the given array using loops.

```
<html>
<body>
<script>
let numbers = [10, 23, 12, 21];
let even = [];
for(let i = 0; i < numbers.length; i++) {
    if (numbers[i] % 2 == 0)
    even.push(numbers[i]);
document.write("Even numbers in an array are:" +even);
</script>
</body>
</html>
```

5. Write a JavaScript program to find the addition of array element using function.

```
<html>
<body>
<script>
let arr = [4, 8, 7, 13, 12]
let sum = 0;
for (let i = 0; i < arr.length; i++)
{
   sum += arr[i];
}
document.write("Sum is " + sum);
</script>
</body>
</html>
```

6. Write a JavaScript program to find the given element is present in an array or not.

```
<html>
<body>
<script>
var a = parseInt(prompt("Enter Element to Find:"));
const array1 = [13, 23, 33, 43, 53];
for (let i = 0; i < array1.length; i++) {
  if (array1[i] === a) {
     document.write(+a +" is present in array");
     break;
  }
}
</script>
</body>
</html>
```

7. Write a JavaScript program to find the factorial of given number using functions

```html
<html>
<body>
<script>
var f=1;
function factorial(n)
{
for(var i = 1;i<= n; i++)
{
f=f*i;
}
document.write(f);
}
var result = factorial(5);
document.write("Factorial of:" +n +"is " +result);
</script>
</body>
</html>
```

8. Write a JavaScript program to generate random number using functions

```html
<html>
<body>
<script>
const a = Math.random();
document.write(a);
</script>
</body>
</html>
```

9. Write a JavaScript program that capitalize the first letter of string.(string should be given as input)

```html
<html>
<body>
<script>
var s = prompt("Enter String:");
var sp = s[0].toUpperCase() + s.slice(1);
document.write(sp);
</script>
</body>
</html>
```

10. Write a JavaScript program to find whether the given string is palindrome or not.

```html
<html>
<body>
<script>
function checkPalindrome(string)
{
   const len = string.length;
   for (let i = 0; i < len / 2; i++)
   {
      if (string[i] !== string[len - 1 - i])
   {
         return 'It is not a palindrome';
      } }
   return 'It is a palindrome';
}
const string = prompt("Enter a string: ");
const value = checkPalindrome(string);
document.write(value);
</script>
</body>
</html>
```

11. Write a JavaScript to design a simple registration from using labels, buttons, textbox and display the message "Registered Successful" after click on button.

```html
<html>
<head><h1><center> Registration Form </center></h1></head>
<body>
<form name="f1">
<center>
<h2>
<br>First Name: <input type="text"><br>
Middle Name: <input type="text"><br>
Last Name: <input type="text"><br><br>
mobile:<input type="text"><br><br>
Email:<input type="text"><br><br>
address:<input type="textarea" cols ="50" rows ="5">
<br><br>
<input type="button"value="SUBMIT" onclick = "fun1()" >&nbsp &nbsp
</center>
</h2>
</body>
<script>
function fun1()
{
alert("Registered Successfully");
}
</script>
</html>
```

12. Write a JavaScript to design a from using Select Form Element where we can choose our favourite fruit and print the selected fruit.

```html
<html>
<body>
<form>
 Select your favorite fruit:
 <select id="mySelect" onmouseout="myFunction()">
   <option value="apple">Apple</option>
   <option value="orange">Orange</option>
   <option value="pineapple">Pineapple</option>
   <option value="banana">Banana</option>
 </select>
</form>
<script>
function myFunction()
{
 var v = document.getElementById("mySelect").value;
if(v === 'apple')
{
document.write("You selected Apple");
}
else if(v === 'orange')
{
document.write("You selected Orange");
}
else if(v === 'pineapple')
{
document.write("You selected Pineapple");
}
else if(v === 'banana')
{
document.write("You selected Banana");
}
}
</script>
</body>
</html>
```

13. Write a JavaScript program that changes web page color when the cursor is over on color name (color nameshould be print on web page {3 colors required} using mouse event functions.

```html
<html>
<body>
<p id="p1"></p>
<input type="button" value="Blue" id="b1" onmouseover="fun1()">
<input type="button" value="Grey" id="b2" onmouseover="fun2()">
<input type="button" value="Orange" id="b3" onmouseover="fun3()">
```

```
<script>
function fun1() {
 document.body.style.backgroundColor = "lightblue";
}
function fun2() {
 document.body.style.backgroundColor = "grey";
}
function fun3() {
 document.body.style.backgroundColor = "orange";
}
</script>
</body>
</html>
```

14. Write a JavaScript program that disables radio button after click on submit button.

```
<html>
<body>
<p id="p1"></p>
<input type="radio" id="r1">Male
<input type="radio" id="r2">Female
<input type="button" value="Submit" onclick="fun1()">
<script>
function fun1() {
 document.getElementById("r1").disabled = true;
 document.getElementById("r2").disabled = true;
}
</script>
</body>
</html>
```

15. Write a JavaScript program that enables readonly property on textbox after clicking on read only confirmation button.

```
<html>
<body>
<input type="textbox" id="t1">
<input type="button" value="ReadOnly" onclick="fun1()">
<script>
function fun1() {
 document.getElementById("t1").readOnly = true;

}
</script>
</body>
</html>
```

16. Write a JavaScript program to change background color of text field by using onfocus method

```
<html>
<body>
<input type="textbox" id="t1" onfocus="fun1()">
<script>
function fun1()
{
  document.getElementById("t1").style.backgroundColor = "lightblue";
}
</script>
</body>
</html>
```

17. Write a JavaScript program to develop using intrinsic JavaScript Function.

```
<html>
<body>
<form name="f1" action="" method="POST">
Enter Name:
<input type="text" name="t1" >
<br><br>Enter Roll No:
<input type="text" name="t2"><br><br>
<img src="C:\Users\Admin\OneDrive\Pictures\Saved Pictures\submit.jpg" height ="50"
width="130" onclick="javascript:document.forms.f1.submit()">
<img src="C:\Users\Admin\OneDrive\Pictures\Saved Pictures\reset.png" height ="50"
width="90" onclick="javascript:document.forms.f1.reset()">
</form>
</body>
</html>
```

18. Write a JavaScript program to change labels dynamically.

```
<html>
<script>
function selection(x)
{
with(document.forms.f1)
{
 if(x == 'flower')
 {
 b1.value='fruit'
b[0].value=1
b[0].text='Lotus'
b[1].value=2
b[1].text='Rose'
b[2].value=3
b[2].text='Sunflower'
 }
```

```
 if(x == 'fruit')
{
 b1.value='flower'
b[0].value=1
b[0].text='Apple'
b[1].value=2
b[1].text='Orange'
b[2].value=3
b[2].text='Mango'
}
}
}
</script>
<body>
<form name="f1"  action="" method="POST">
<Select name="b" size="3">
<option value="1">Apple</option>
<option value="2">Orange</option>
<option value="3">Mango</option>
</select>
<input type="button" name="b1" value="flower" type="reset" onclick=selection(this.value)>
</body>
</html>
```

19. Write a JavaScript program to create a Cookie.

```
<html>
<head>
<title>Cookie</title>
</head>
<body>
Enter Your Email : <input type="email" name="" id="Email"><br>
Enter Your Password : <input type="password" name="" id="Password"><br>
<input type="button" name="b1" value="Create" onclick="createCookie()">
<input type="button" name="b2" value="Display" onclick="ReadCookie()">
</body>
<script>
function createCookie()
{
alert("Cookie is Created ");
document.cookie = "Email = "+ document.getElementById("Email").value;
document.cookie = "Password = "+ document.getElementById("Password").value;
}
function ReadCookie()
{
if(!((document.cookie != "")))
alert("There's no cookies to display");
else
alert(document.cookie)
}
</script>
</html>
```

20. Write a JavaScript program to Set an Expiry date to Cookie.

```html
<html>
<head>
<title>Cookie</title>
</head>
<body>
Enter Your Email : <input type="email" name="" id="Email"><br>
Enter Your Password : <input type="password" name="" id="Password"><br>
<input type="button" name="b1" value="Create" onclick="createCookie()">
<input type="button" name="b2" value="Display" onclick="ReadCookie()">
<input type="button" name="b3" value="Expire" onclick="expireCookie()">
</body>
<script>
function createCookie()
{
alert("Cookie is Created ");
document.cookie = "Email = "+ document.getElementById("Email").value;
document.cookie = "Password = "+ document.getElementById("Password").value;
}
function ReadCookie()
{
if(!((document.cookie != "")))
alert("There's no cookies to display");
else
alert(document.cookie)
}
function expireCookie()
{
document.cookie = "Email = "+ document.getElementById("Email").value +";expires=Mon,
06 Nov 2022 12:00:00 UTC";
document.cookie = "Password = "+ document.getElementById("Password").value
+";expires=Mon, 06 Nov 2022 12:00:00 UTC";
alert("Cookie has been Expired !!");
}
</script>
</html>
```

21. Write a JavaScript program to Open New Window.

```html
<html>
<body>
<script>
function openWindow()
{
window.open('https://www.google.com',"","width=200,height=100");
}
</script>
<button onclick="openWindow()"> Open Window </button>
</body>
</html>
```

22. Write a JavaScript program to Open Multiple Window.

```html
<html>
<script>
function openMultipleWindows()
{
for (let i = 0; i < 3; i++)
{
window.open('https://www.google.com', '', 'width=400,height=300');
}}
</script>
<body>
<button onclick="openMultipleWindows()">Open Multiple Windows</button>
</body>
</html>
```

23. Write a JavaScript program to replace text from given statement.

```html
<html>
<head>
<title>Replace Text</title>
</head>
<body>
<p id="para">Hello</p>
</body>
<script>
var user = prompt ("Enter the data", "");
var Para = document. getElementById("para"). innerHTML;
var result = paraData.replaceAll(Para , user );
document. getElementById("para"). innerHTML = result;
</script>
</html>
```

24. Write a JavaScript program to validate Email and Password.

```html
<html>
<body>
Enter email:
<input type="text" id="e" onblur="email()">
Enter PassWord:
<input type="text" id="p" onblur="pass()">
</body>
<script>
function email()
{
em=/^[a-z A-Z 0-9 _\-\.]+[@gmail.com]+$/g
s=e.value;
if(!(em.test(s)))
{
alert("email not valid")
}
}
function pass()
{
sp= /^[A-Z a-z 0-9]+$/g
```

```
s=p.value;
if(!(sp.test(s)))
{
alert("password strong enter")
}
}
</script>
</html>
```

25. Write a JavaScript program to Create Image Rollover.

```
<html>
<body>
<a>
<img src="java.jpg" onmouseover="src='c.jpg'" onmouseout="src='cplus.jpg'">
</a>
</body>
</html>
```

26. Write a JavaScript program to Create text Rollover that change the font color of text.

```
<html>
<body>
<center>
<h1 id="sp" onmouseover="red()" onmouseout="blue()">
Hello
</h1>
</center>
</body>
<script>
function red()
{
var s= document.getElementById("sp");
s.style.color = 'red';
}
function blue()
{
var s= document.getElementById("sp");
s.style.color = 'blue';
}
</script>
</html>
```

27. Develop a webpage for implementing menus.

```
<html>
<body>
<label>Select Language</label>
<select name="subject" id="options">
<option value="c">C</option>
<option value="c++">C++</option>
<option value="java">Java</option>
</select>
<input type="button" value="Click" onclick="selected()">
```

```
<script>
function selected()
{
var element=document.getElementById("options");
var value=element.options[element.selectedIndex].text;
alert("You Have Selected: "+value);
}
</script>
</body>
</html>
```

28. Write a JavaScript program to change the menus dynamically.

```
<html>
<body>
<label>Select Branch</label><br><br>
<select name="branch" id="options" onmouseout="changeMenu()">
<option value="IF">IF</option>
<option value="CM">CM</option>
</select>
<select name="class" id="classes">
<option value="FY" id="FY">FY</option>
<option value="SY" id="SY">SY</option>
<option value="TY" id="TY">TY</option>
</select>
</body>
<script>
function changeMenu() {
var branch = document.getElementById("options");
var value = branch.options[branch.selectedIndex].value;
if (value === "CM") {
document.getElementById("FY").innerText= 'FYCM';
document.getElementById("SY").innerText = 'SYCM';
document.getElementById("TY").innerText = 'TYCM';
}
else if(value === "IF") {
document.getElementById("FY").innerText ='FYIF';
document.getElementById("SY").innerText = 'SYIF';
document.getElementById("TY").innerText = 'TYIF';
}}
</script>
</html>
```

29. Write a JavaScript program for moving the message along the status Bar.
30. Write a JavaScript program to protect the webpage by disabling Right Mouse Button.

```
<html>
<head>
 <script>
  // Disable right-click context menu
  document.addEventListener('contextmenu', function (e) {
   e.preventDefault();
```

```
    });
  </script>
 </head>
 <body>
  <h1>Right-Click Disabled</h1>
  <p>This is a protected webpage.</p>
 </body>
 </html>
```

31. Write a JavaScript program to creating rotating banner ads.

```
<html>
<head>
<script>
 var banner_arr = ['lily.jpg', 'lotus.jpg', 'c.jpg'];
 var banner = 0;
 function display() {
 if (document.images) {
 document.changebanner.src = banner_arr[banner];
 banner = banner + 1;
 if (banner === banner_arr.length) {
 banner = 0;
 }
 setTimeout(display, 3000);
 }
 }
</script>
</head>
<body onload="display()">
 <img src="lotus.jpg" width="40%" height="55%" name="changebanner">
</body>
</html>
```

32. Write a JavaScript program to create Slideshow

```
<html>
<center>
<body>
<img src="lily.jpg" width="40%" height="55%" name ="slide">
<input type="button" name="b1" value="Next" onclick="display(1)">
<input type="button" name="b2" value="Previous" onclick="display(-1)" >
</body>
<script>
img_arr = ['lily.jpg','lotus.jpg', 'lily.jpg','lotus.jpg']
img = 0;
function display(n)
{
 img =img + n;
 if(img > 3)
 {
 img=0;
 }
```

```
if(img < 0)
{
 img=4;
}
 document.slide.src = img_arr[img];
}
</script>
</html>
```