

Solutions For Mathematical Logical Questions

Q-1.

Solution :

Using For Loop :

```
<script type = "text/javascript">
function fibonacci(num)
{
    var num1=0;
    var num2=1;
    var sum;
    var i=0;
    for (i = 0; i < num; i++)
    {
        sum=num1+num2;
        num1=num2;
        num2=sum;
    }
    return num2;}
document.write("Fibonacci(5): "+fibonacci(5)+"<br>");
document.write("Fibonacci(8): "+fibonacci(8)+"<br>");
</script>
```

Using While Loop :

```
<script type = "text/javascript">
function fibonacci(num)
{
    if(num==1)
        return 0;
    if(num==2)
        return 1;
    var num1=0;
    var num2=1;
    var sum;
    var i=2;
    while (i<num)
    {
        sum=num1+num2;
        num1=num2;
        num2=sum;
        i+=1;
    }
    return num2;
}
```

```
    }  
    document.write("Fibonacci(5): "+fibonacci(5)+"<br>");  
    document.write("Fibonacci(8): "+fibonacci(8)+"<br>");  
</script>
```

Using Recursion :

```
<script type = "text/javascript">  
function fibonacci(num)  
{  
    if(num==1)  
        return 0;  
    if(num==2)  
        return 1;  
    var num1=0;  
    var num2=1;  
    var sum;  
    var i=2;  
    while (i<num)  
    {  
        sum=num1+num2;  
        num1=num2;  
        num2=sum;  
        i+=1;  
    }  
    return num2;  
}  
document.write("Fibonacci(5): "+fibonacci(5)+"<br>");  
document.write("Fibonacci(8): "+fibonacci(8)+"<br>");  
</script>
```

Q-2.

Solution :

```
<script type="text/javascript">  
  
// Function to check prime number  
function p() {  
  
    var n, i, flag = true;  
  
    // Getting the value form text  
    // field using DOM  
    n = document.myform.n.value;  
    n = parseInt(n)
```

```

for(i = 2; i <= n - 1; i++)
if (n % i == 0) {
flag = false;
break;
}

// Check and display alert message
if (flag == true)
alert(n + " is prime");
else
alert(n + " is not prime");
}
</script>

```

Q-3.

Solution :

```

<script>
    var up = document.getElementById('GFG_UP');
    var down = document.getElementById('GFG_DOWN');
    var n = 5;
    up.innerHTML = "Click on the button to calculate"
        + " the factorial of n.<br>n = " + n;

    function Factorial(n) {
        var ans=1;

        for (var i = 2; i <= n; i++)
            ans = ans * i;
        return ans;
    }

    function GFG_Fun() {
        down.innerHTML = Factorial(n);
    }
</script>

```

Q-4.

Solution :

```

<script>
function checkPalindrome(n)
{
    let reverse = 0;
    let temp = n;
    while (temp != 0) {

```

```

        reverse = (reverse * 10) + (temp % 10);
        temp = Math.floor(temp / 10);
    }
    return (reverse == n); // if it is true then it
will return 1;
                        // else if false it will return 0;
}
// driver code
let n = 7007;
if (checkPalindrome(n) == 1) {
    document.write("Yes", "</br>");
}
else {
    document.write("No", "</br>");
}
</script>

```

Q-5.

Solution :

```

<script>
let MAX = 100;
// function for calculating frequency
function freq(ar,m,n) {
    let even = 0, odd = 0;
    for (let i = 0; i < m; ++i)
    {
        for (let j = 0; j < n; ++j)
        {
            // even and odd
            if ((ar[i][j] % 2) == 0)
                ++even;
            else
                ++odd;
        }
    }
    // print Frequency of numbers
    document.write(" Frequency of odd number = " +
                    odd + " <br>");
    document.write(" Frequency of even number = " +
                    even + "<br>");
}
// Driver code
let m = 3, n = 3;
let array = [[1, 2, 3], [4, 5, 6], [7, 8, 9]];
freq(array, m, n);

```

</script>