4) Design a HTML having a text box and four buttons viz Factorial, Fibonacci, Prime, and Palindrome. When a button is pressed an appropriate javascript function should be called to display
a. Factorial of that number
b. Fibonacci series up to that number
c. Prime numbers up to that number
d. Is it palindrome or not

Program:

```
<html>

<head>

<title>functions</title>

<style>

</style>

</head>

<body>

Enter a number : <input type="number" name="num" id="num"><br><br>

<button type="button" onclick="fact()">Factorial</button> &nbsp

<button type="button" onclick="fib()">Fibonacci</button> &nbsp

<button type="button" onclick="prime()">Prime</button> &nbsp

<button type="button" onclick="palin()">Palindrome</button> &nbsp <br>

<p id="res"></p>

<script>

function fact(){

let n = document.getElementById("num").value;

let f=1;

for (let i = 1; i <= n; i++) {

 f *= i;

}

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

}

function fib(){
```

```
let n = document.getElementById("num").value;

let f0 = 0;

let f1 = 1;

let fn = f0+f1;

let str = "0 1"

while(fn<=n){

str += " "+fn;

f0 = f1;

f1= fn;

fn = f0+f1;

}

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

}

function prime(){

let n = document.getElementById("num").value;

let str = "";

for(let m=2;m<=n;m++){

let c=0;

for (let i=2; i<=m/2; i++){

if ( m % i == 0){

c+=1;

}

}

if (c==0){

str += m+" ";

}

}

document.getElementById("res").innerHTML = str;
```

```
}
function palin(){
let n = document.getElementById("num").value;
let t = n;
let s=0;
let r=0;
while(n>0)
{
r=n%10;
s=(s*10)+r;
n=(n/10)>>0;
}
if(s==t)
{
document.getElementById("res").innerHTML = "True";
}
else{
document.getElementById("res").innerHTML = "False";
}
}
</script>
</body>
</html>
```

<u>Output:</u>

Enter a number : 11

[Factorial] [Fibonacci] [Prime] [Palindrome]

2 3 5 7 11