

CT2207	Lab: Web Technology
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### Practical No 4.

**Aim:** Program to demonstrate the use of JavaScript using While and For Loop.(any example)

**Reference :-**W3school

**THEORY:**

### While and For Loop :

**Syntax - While Loop :**

```

Initialization statement
while (condition statement) {
    // code block to be executed
    increment/decrement statement
}

```

Or

```

while (condition) {
    // code block to be executed
}

```

**Example :**

```

while (i < 10) {
    text += "The number is " + i;
    i++;
}

```

**Syntax - For Loop :**

```

for (statement 1; statement 2; statement 3) {
    // code block to be executed
}

```

**Statement 1** is executed (one time) before the execution of the code block.

**Statement 2** defines the condition for executing the code block.

**Statement 3** is executed (every time) after the code block has been executed.

Or

```
for (initialization statement ; condition statement ; increment/decrement statement) {  
    // code block to be executed  
}
```

Example :

```
for (let i = 0; i < 5; i++) {  
    text += "The number is " + i + "<br>";  
}
```

**Write JavaScript Program for Fibonacci Series using While and For Loop(or any example).**

Fibonacci Series using For Loop:

**Program:**

```
var n = parseInt(prompt('Enter the number of terms: '));  
var a=0, b=1, c;  
  
console.log("Fibonacci Series : ")  
for(let i=1; i<=n; i++){  
    console.log(a);  
    c=a+b;  
    a=b;  
    b=c;  
}
```

**Output:**

```
Enter value of n: 5  
Fibonacci Series :  
0  
1  
1  
2  
3
```

Fibonacci Series using while Loop:

**Program:**

```
var n = parseInt(prompt('Enter the number of terms: '));  
var a=0, b=1, c;  
  
console.log("Fibonacci Series : ")  
var i=1; //Initialization  
while(i<=n){ //Condition Statement  
    console.log(a);  
    c=a+b;  
    a=b;  
    b=c;  
    i++; //Increment Statement  
}
```

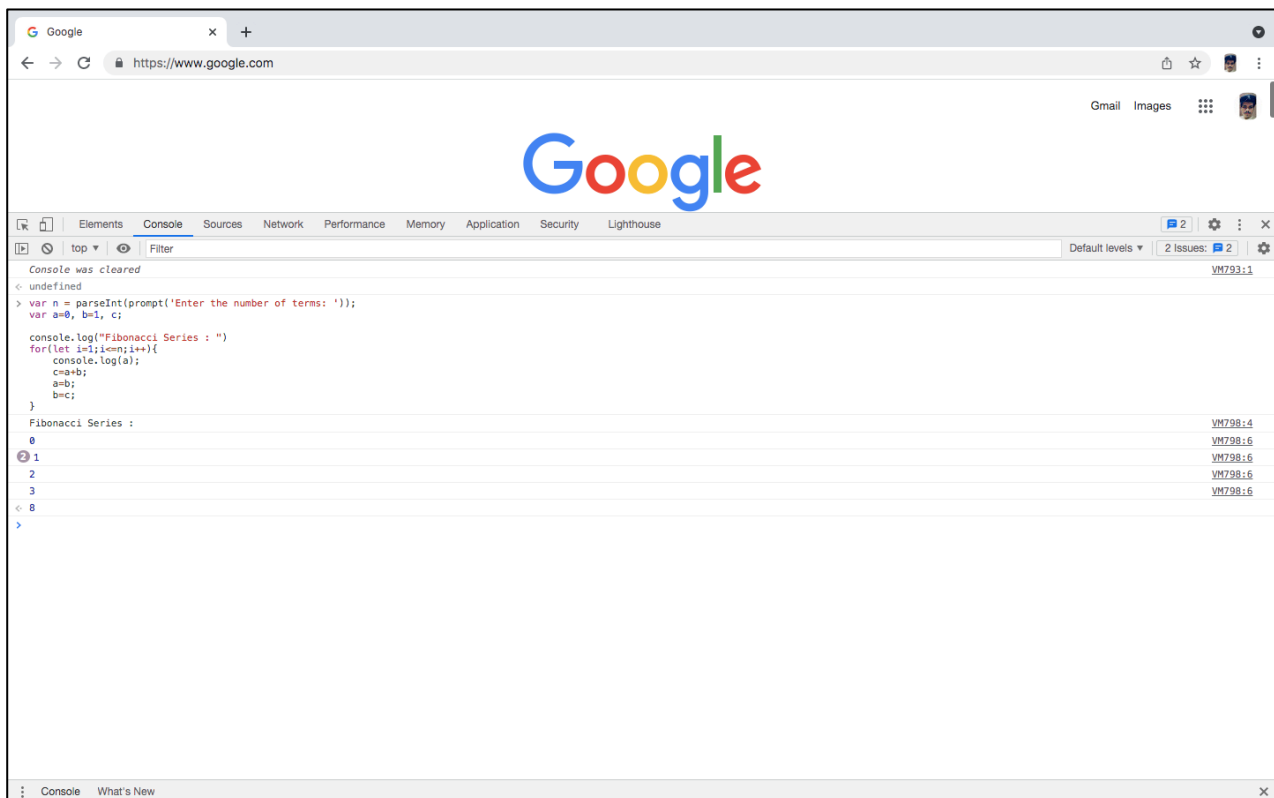
## Output:

Enter value of n: 5  
Fibonacci Series :  
0  
1  
1  
2  
3

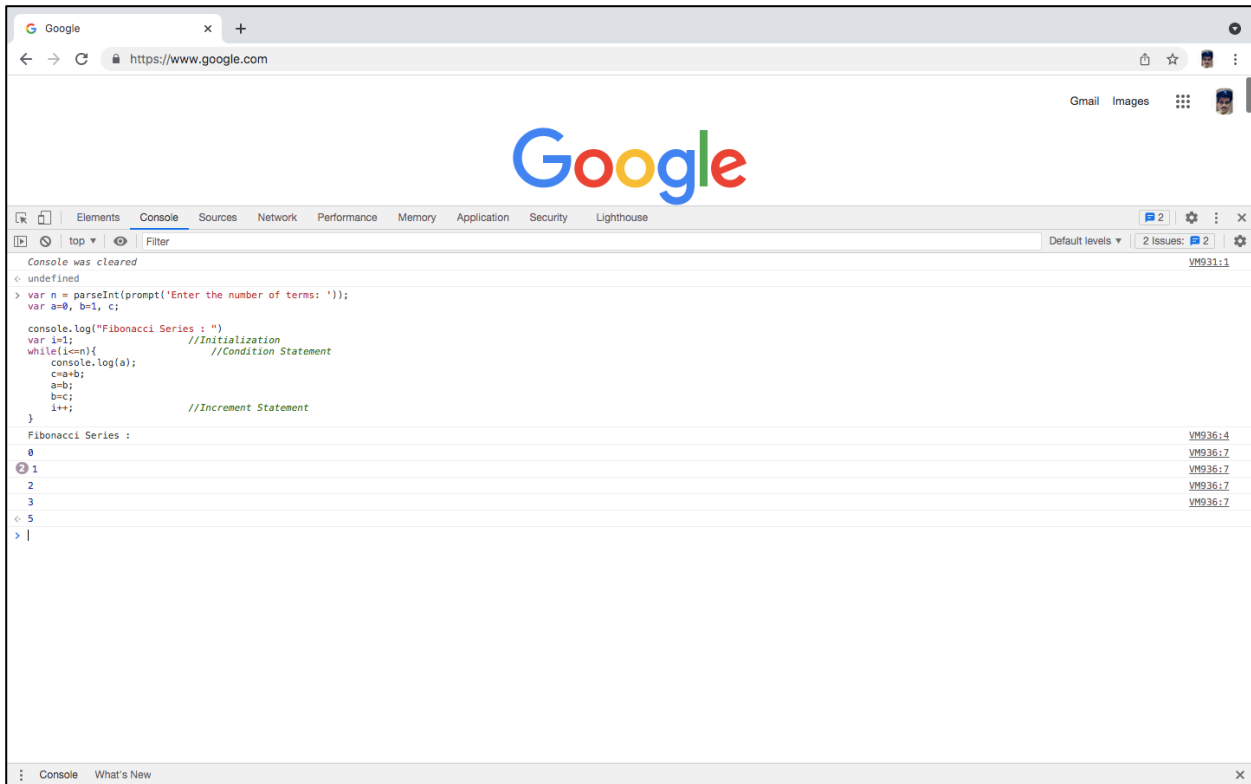
## Output RESULT :

## SCREEN SHOTS

### Fibonacci Series using For Loop:



## Fibonacci Series using while Loop:



The screenshot shows a Google Chrome browser window with the address bar displaying `https://www.google.com`. The Google logo is centered on the page. Below the browser window, the Chrome DevTools Console is open, showing the following JavaScript code and its output:

```
Console was cleared
< undefined
> var n = parseInt(prompt('Enter the number of terms: '));
var a=0, b=1, c;

console.log("Fibonacci Series : ");
var i=1; //Initialization
while(i<=n){ //Condition Statement
  console.log(a);
  c=a+b;
  a=b;
  b=c;
  i++; //Increment Statement
}

Fibonacci Series :
0
1
2
3
< 5
> |
```

The console output shows the Fibonacci series for the first 5 terms: 0, 1, 2, 3. The prompt 'Enter the number of terms: ' is visible in the console input area.

**RESULT:** I have successfully performed practical 4 with reference of w3school.com and successfully ran programs on Browser's(Chrome's) Console.