Loops and decisions: Navachethan.M 1NT18IS099

Loops_decision.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <style>
        table, th, td {
          border: 1px solid black;
          border-collapse: collapse;
        }
        #design {
  font-family: Arial, Helvetica, sans-serif;
  border-collapse: collapse;
  width: 100%;
}

#design td, #design th {
  border: 1px solid #ddd;
  padding: 8px;
}

#design tr:nth-child(even){background-color: #f2f2f2;}

#design tr:hover {background-color: #ddd;}

#design td {
  padding-top: 12px;
  padding-bottom: 12px;
  text-align: left;
  background-color: #4CAF50;
  color: white;
}
        </style>
</head>
```

```
<body>

    <table  style="width:80%" id="design">
        <tr>
            <td><h1>Loops and decisions</h1></td>
            <td>run to check</td>
            <td>solution</td>
        </tr>
    <tr>
        <th><p><b>1.Factorial of a number using for loop</b></p></th>
    <th><button onclick="factorial()">factorial</button></th>
    <th></th>
    </tr>
    <tr>
        <th>
    <p><b>Fibonacci numbers</b></p></th>
   <th> <button onclick="fibonacci()">fibonacci</button></th>
    <th><p>fibonacci series</p>
    <p id="ans"></p> </th>
    </tr>
    <tr>
    <th><p><b>2. to check number >0</b></p> </th>
   <th> <button onclick="positive()">num > 0</button> </th>
   <th></th>
    </tr>
    <tr>
    <th><p><b>3. to check even odd</b></p></th>
    <th><button onclick="eveodd()">even or odd</button></th>
    <th></th>
    </tr>
    <tr>
    <th><p><b>4. to check number is +/-</b></p></th>
    <th><button onclick="checksign()">check sign</button></th>
    <th></th>
    </tr>
    <tr>
    <th><p><b>5. to check grade and comment</b></p></th>
    <th><button onclick="switchgrade()">check grade</button></th>
    <th></th>
    </tr>
```

```
<tr>
<th><p><b>6. factorial using while loop</b></p></th>
<th><button onclick="fact()">fact</button></th>
<th></th>
</tr>
<tr>
<th><p><b>7. usage of for in loop</b></p></th>
<th><button onclick="forinloop()">forinloop</button></th>
<th><p id="ans2"></p></th>
</tr>
<tr>
<th><p><b>8. usage of for of loop</b></p></th>
<th><button onclick="forofloop()">forofloop</button></th>
<th></th>
</tr>
<tr>
<th><p><b>9. usage of do-while loop</b></p></th>
<th><button onclick="dowhil()">dowhile</button></th>
<th></th>
</tr>
<tr>
    <th><p><b>10. usage of break</b></p></th>
    <th><button onclick="brk()">break</button></th>
    <th></th>
    </tr>
    <tr>
        <th><p><b>11. usage of continue</b></p></th>
        <th><button onclick="cnt()">continue</button></th>
        <th></th>
        </tr>
        <tr>
            <th><p><b>12. usage of continue with label</b></p></th>
            <th><button onclick="test()">continue</button></th>
            <th><p id="an1"></p><br><p id="an2"></p></th>
            </tr>
            <tr>
                <th><p><b>13. usage of break with label</b></p></th>
                <th><button onclick="testlabel()">break</button></th>
                <th><p id="an3"></p><br><p id="an4"></p></th>
                </tr>
```

```
    </table>
    <script src="loops_decision.js"></script>
</body>
</html>
```

Loops_decisions.js

```
function factorial(){
var num = parseInt(prompt("enter the number"));
var factorial=1;
for( let i = num ; i >= 1; i-- ) {  // for loop
factorial *= i ;
}
alert(factorial);
}

function fibonacci(){
    let num11 = Number(prompt("Enter num"));       // for loop
    var res = "";
for(let temp, i = 0, j = 1; j<num11; temp = i, i = j, j = i + temp)
{
    res += "" + j + "<br>";
}
document.getElementById("ans").innerHTML = res;
}

function positive(){
let num1 = Number(prompt("entern num"));
if (num1>0) {
alert("number is positive");   // if
}
}

function eveodd(){
let num2 = parseInt(prompt("enter value"));
if (num2 % 2 == 0) {   //if-else
alert("Even");
} else {
alert("Odd");
```

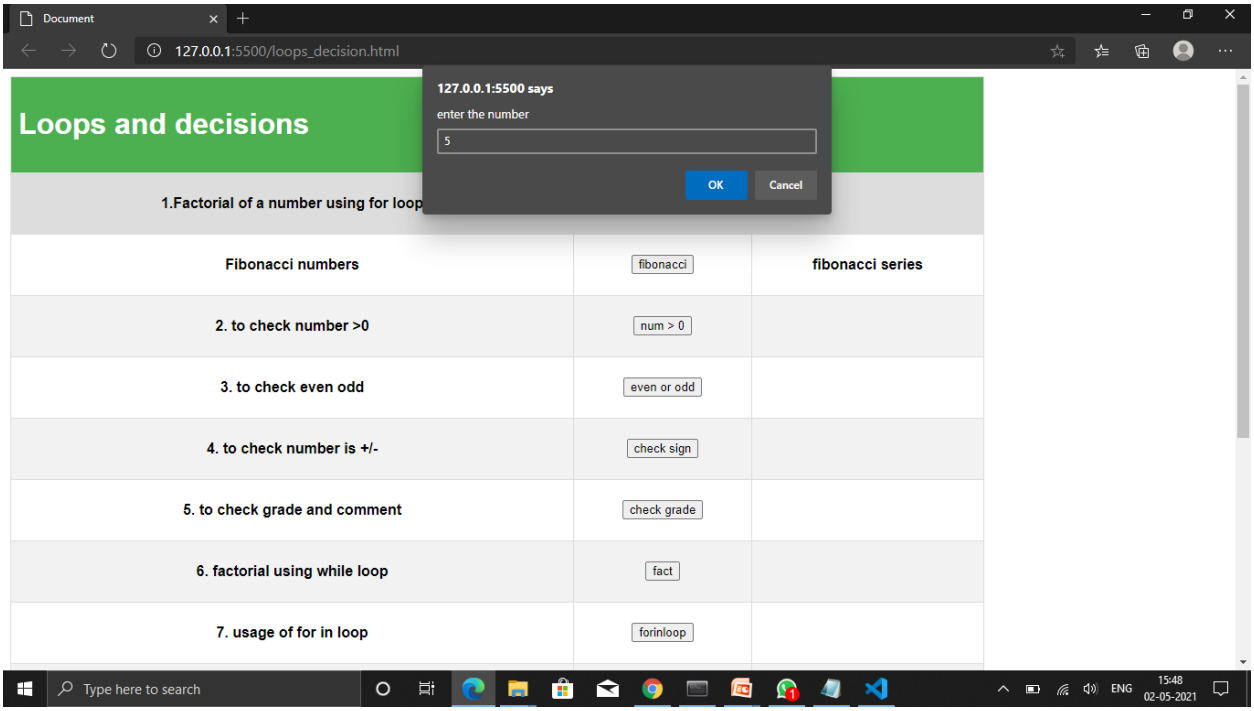
```
}
}

function checksign(){
let num3=parseInt(prompt("enter num"));
if(num3 > 0) {
alert(num3+" is positive")  //if,else-if,esle
} else if(num3 < 0) {
alert(num3+" is negative")
} else {
alert(num3+" is neither positive nor negative")
}
}

function switchgrade(){
let grade=prompt("Enter value from A-Z");
switch(grade) {   //switch-case
case "A": {
alert("Excellent");
break;
}
case "B": {
alert("Good");
break;
}
case "C": {
alert("Fair");
break;
}
case "D": {
alert("Poor");
break;
}
default: {
alert("Invalid choice");
break;
}
}
}
```

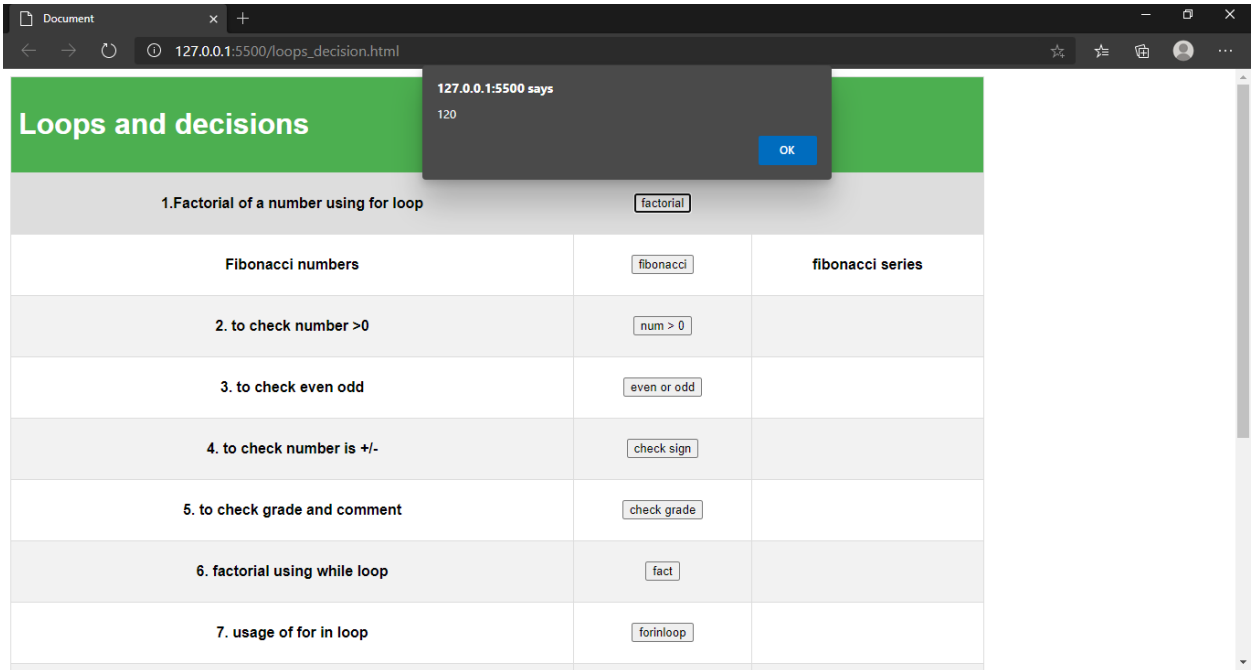
```
function fact(){
let num6 = Number(prompt("Enter num"));   //while loop
let factorial1 = 1;
while(num6 >=1) {
factorial1 = factorial1 * num6;
num6--;
}
alert("The factorial is "+factorial1);
}
function forinloop(){
let obj = {a:1, b:2, c:3};
let txt="";
for (let prop in obj) {
  txt += ""+obj[prop]+ "";
}
//document.getElementById("ans2").innerHTML = txt;
alert(txt);
}

function forofloop(){
    var output = "";     // for-of loop
for (let val of[12 , 13 , 123]){
    output += ""+val+ "";

    }
    alert(output);
}
function dowhil(){
let n1 = Number(prompt("enter num"));
let num = "";
do {
num += ""+n1+"";
n1--;
} while(n1>=0);
alert(num);
}

function brk(){
let i = 1;
let j = "";
```

```
let num12 = Number(prompt("enter num"));
while(i<=100) {
if (i % num12 == 0) {
  j += ""+i+ "";
break; //exit the loop if the first multiple is found
}
i++;
}
alert(i+ "is the first multiple of "+num12);
}

function cnt(){
let count = 0;
let num5 = parseInt(prompt("enter num"));
for(let num2 = 0;num2<=num5;num2++) {
if (num2 % 2 == 0) {
continue;
}
count++;
}
alert(" The count of odd values between 0 and "+num5+" is: "+count)
}

function test() {
  var txt = "";
  var txt1 = "";
  outer: for (var i = 0; i < 3; i++) {
    //console.log("i=" + i);
    txt += "i="+i+"<br>";
    for (var j = 0; j < 3; j++) {
      if (j === i) {
        continue outer;
      }
      //console.log("j=" + j);
      txt1 += "j="+j+ "<br>";
    }
  }
  document.getElementById("an1").innerHTML = txt;
  document.getElementById("an2").innerHTML = txt1;
}
```

```
function testlabel(){
  let txt = "";
  let txt1 = "";
outerloop: // This is the label name
for (let i = 0; i < 5; i++) {
  txt += "i="+i+"<br>";
//console.log("Outerloop: " + i); 1
innerloop:
for (let j = 0; j < 5; j++){
if (j > 3 ) break ; // Quit the innermost loop
if (i == 2) break innerloop; // Do the same thing
if (i == 4) break outerloop; // Quit the outer loop
//console.log("Innerloop: " + j);
txt1 += "j="+j+"<br>";
      }
  }
  document.getElementById("an3").innerHTML = txt;
  document.getElementById("an4").innerHTML = txt1;
}
```

Output:


Document
127.0.0.1:5500/loops_decision.html
127.0.0.1:5500 says
enter the number
5
OK
Cancel
Loops and decisions
1.Factorial of a number using for loop
Fibonacci numbers
fibonacci
fibonacci series
2. to check number >0
num > 0
3. to check even odd
even or odd
4. to check number is +/-
check sign
5. to check grade and comment
check grade
6. factorial using while loop
fact
7. usage of for in loop
forinloop
Type here to search
ENG
15:48
02-05-2021


Document
127.0.0.1:5500/loops_decision.html
127.0.0.1:5500 says
120
OK
Loops and decisions
1.Factorial of a number using for loop
factorial
Fibonacci numbers
fibonacci
fibonacci series
2. to check number >0
num > 0
3. to check even odd
even or odd
4. to check number is +/-
check sign
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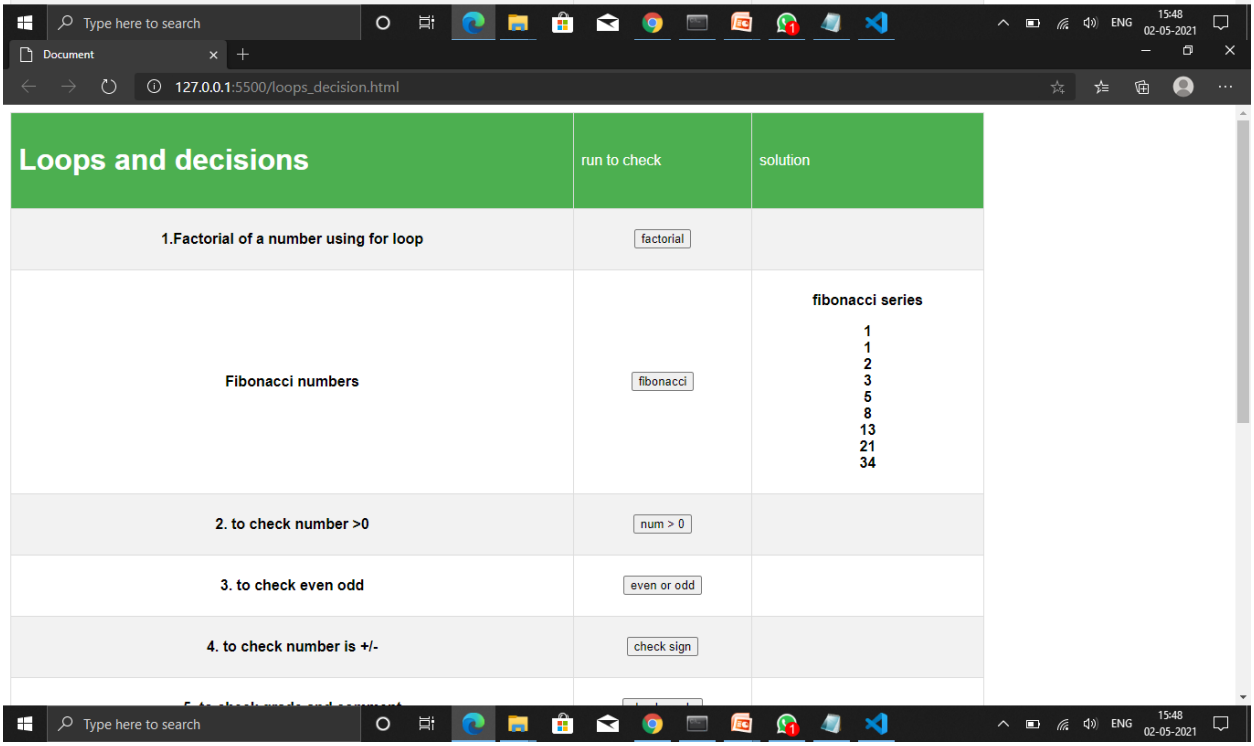
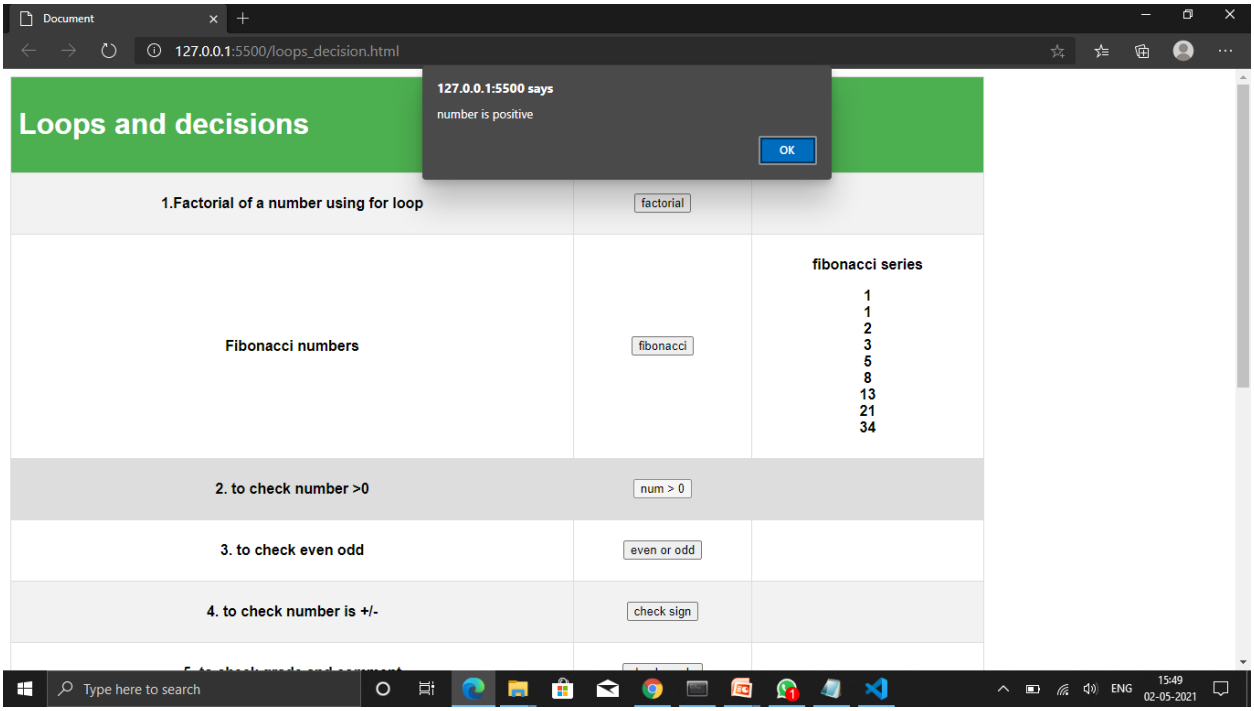
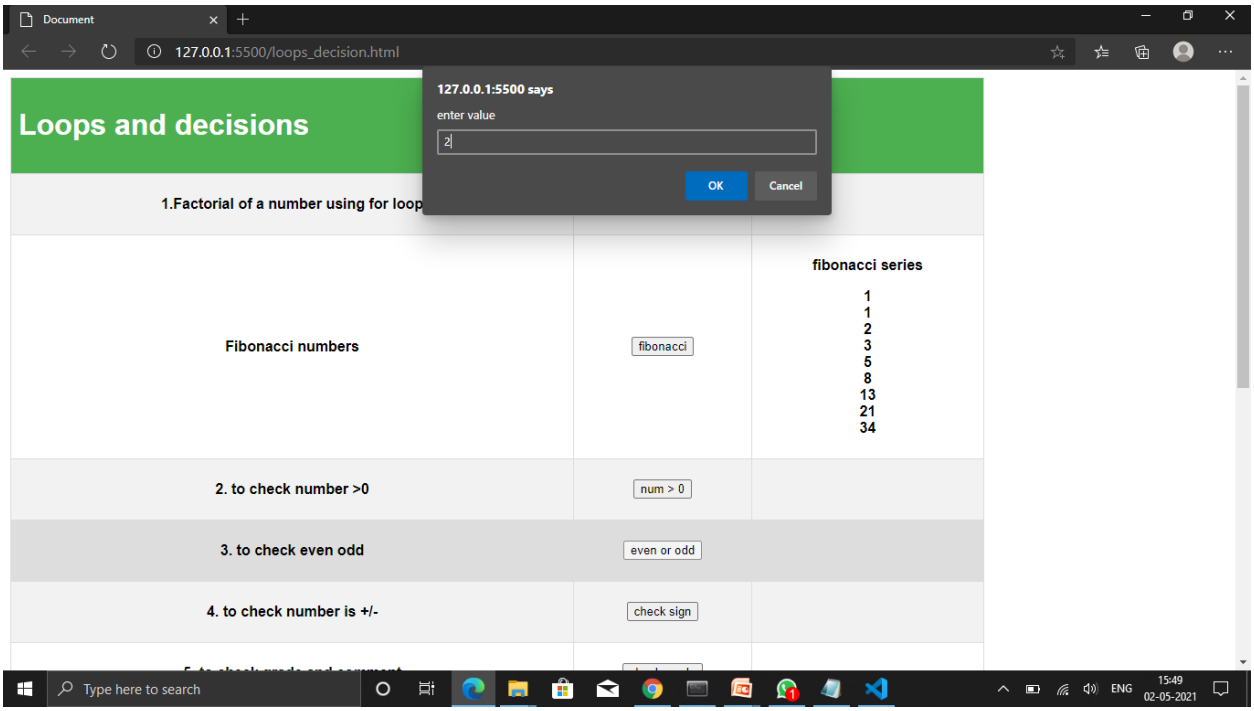
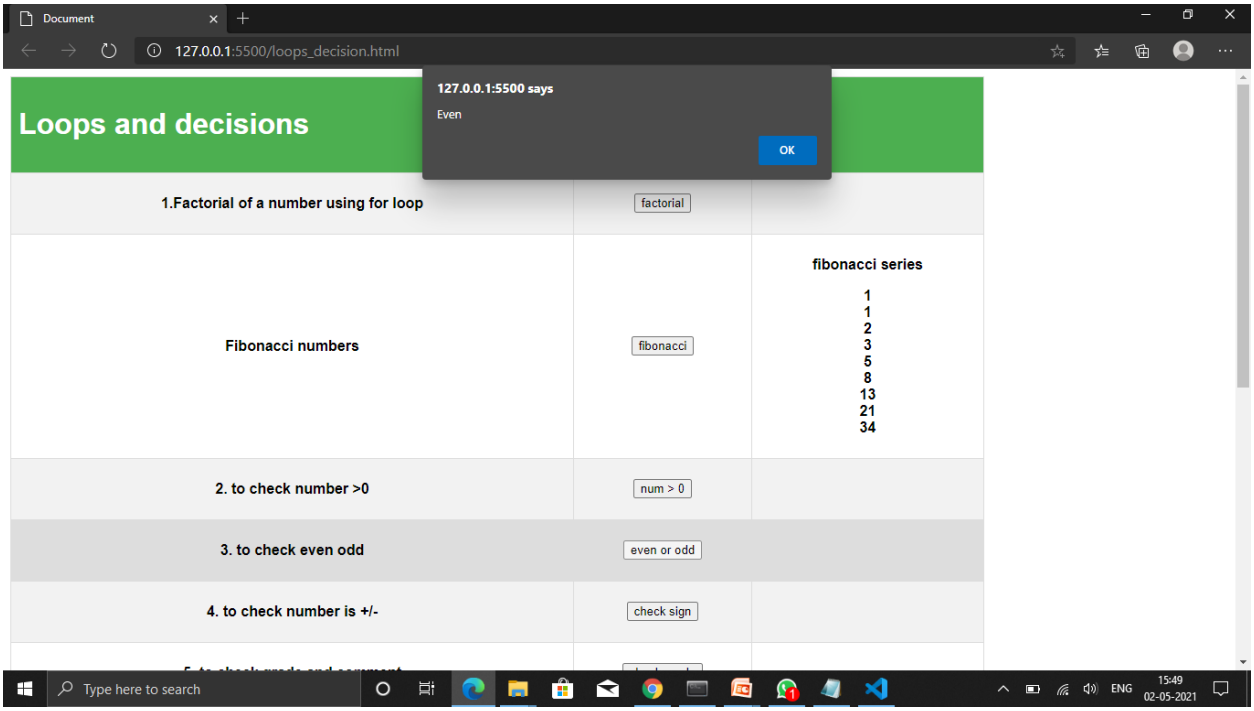
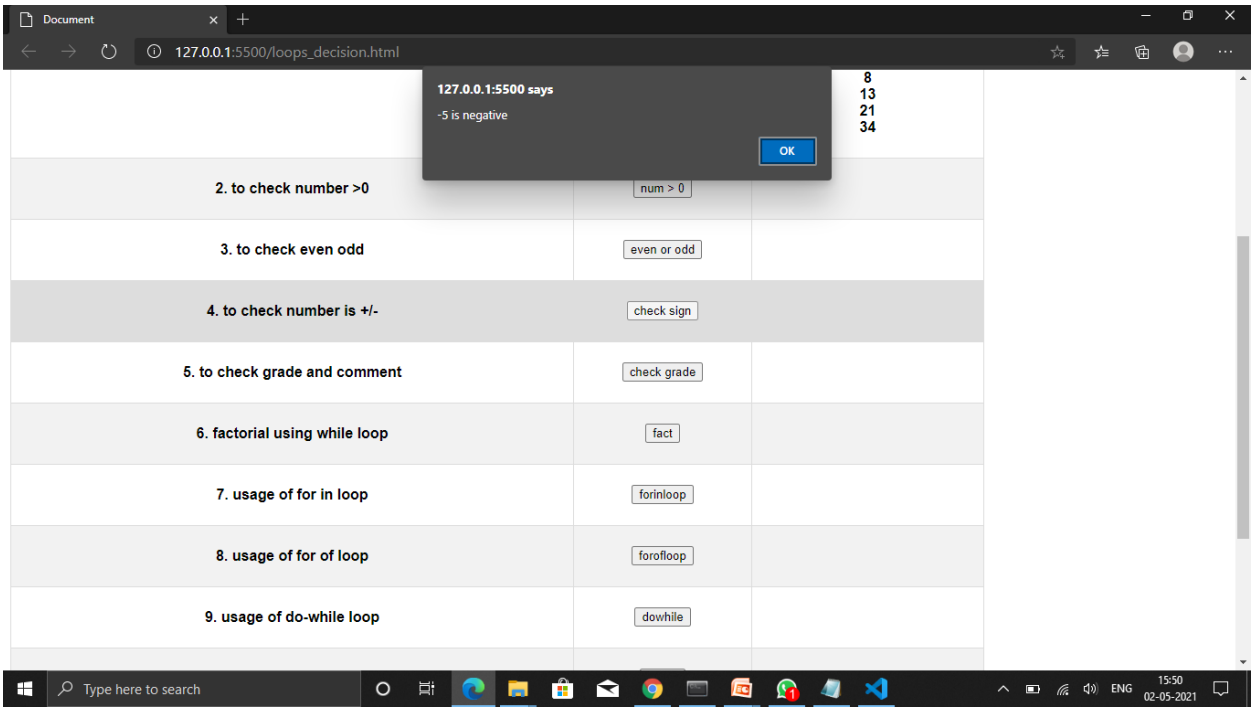
check grade
6. factorial using while loop
fact
7. usage of for in loop
forinloop

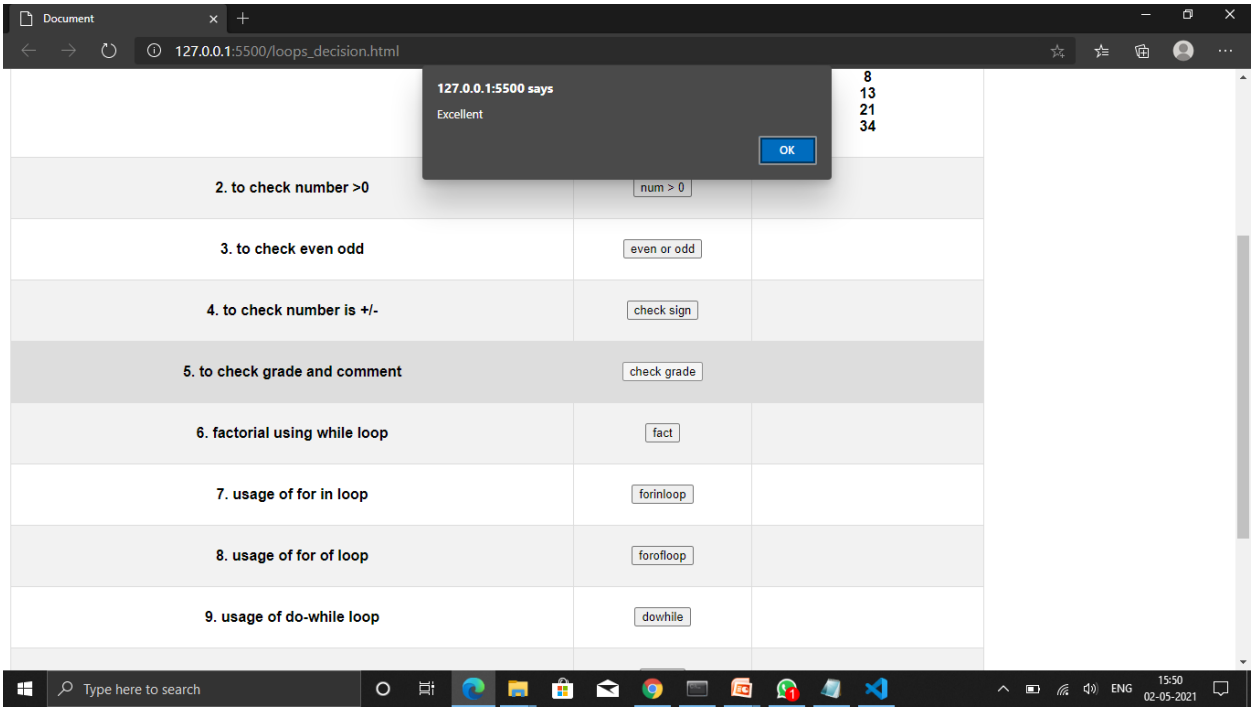

Document
127.0.0.1:5500/loops_decision.html
Loops and decisions
run to check
solution
1.Factorial of a number using for loop
factorial
Fibonacci numbers
fibonacci
fibonacci series
1
1
2
3
5
8
13
21
34
2. to check number >0
num > 0
3. to check even odd
even or odd
4. to check number is +/-
check sign

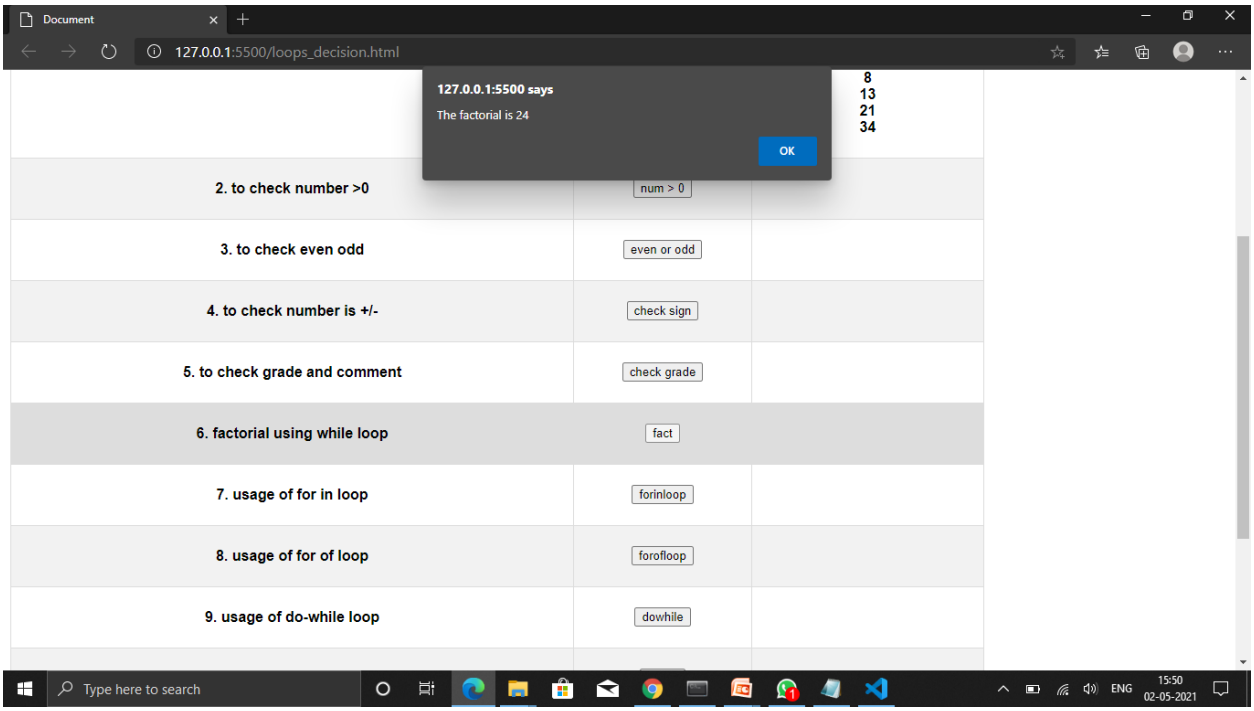

Document
127.0.0.1:5500/loops_decision.html
127.0.0.1:5500 says
number is positive
OK
Loops and decisions
1.Factorial of a number using for loop
factorial
Fibonacci numbers
fibonacci
fibonacci series
1
1
2
3
5
8
13
21
34
2. to check number >0
num > 0
3. to check even odd
even or odd
4. to check number is +/-
check sign
Type here to search
ENG
15:49
02-05-2021

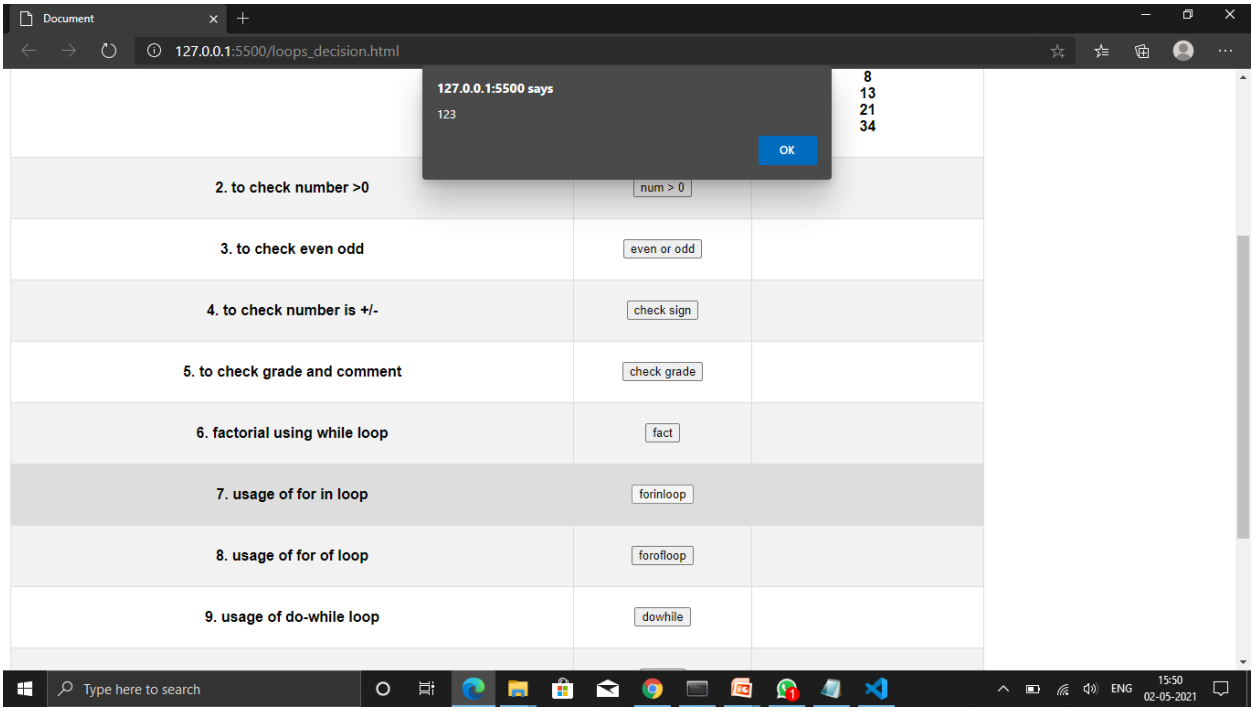

Document
127.0.0.1:5500/loops_decision.html
127.0.0.1:5500 says
enter value
2
OK
Cancel
Loops and decisions
1.Factorial of a number using for loop
Fibonacci numbers
fibonacci
fibonacci series
1
1
2
3
5
8
13
21
34
2. to check number >0
num > 0
3. to check even odd
even or odd
4. to check number is +/-
check sign
Type here to search
ENG
15:49
02-05-2021

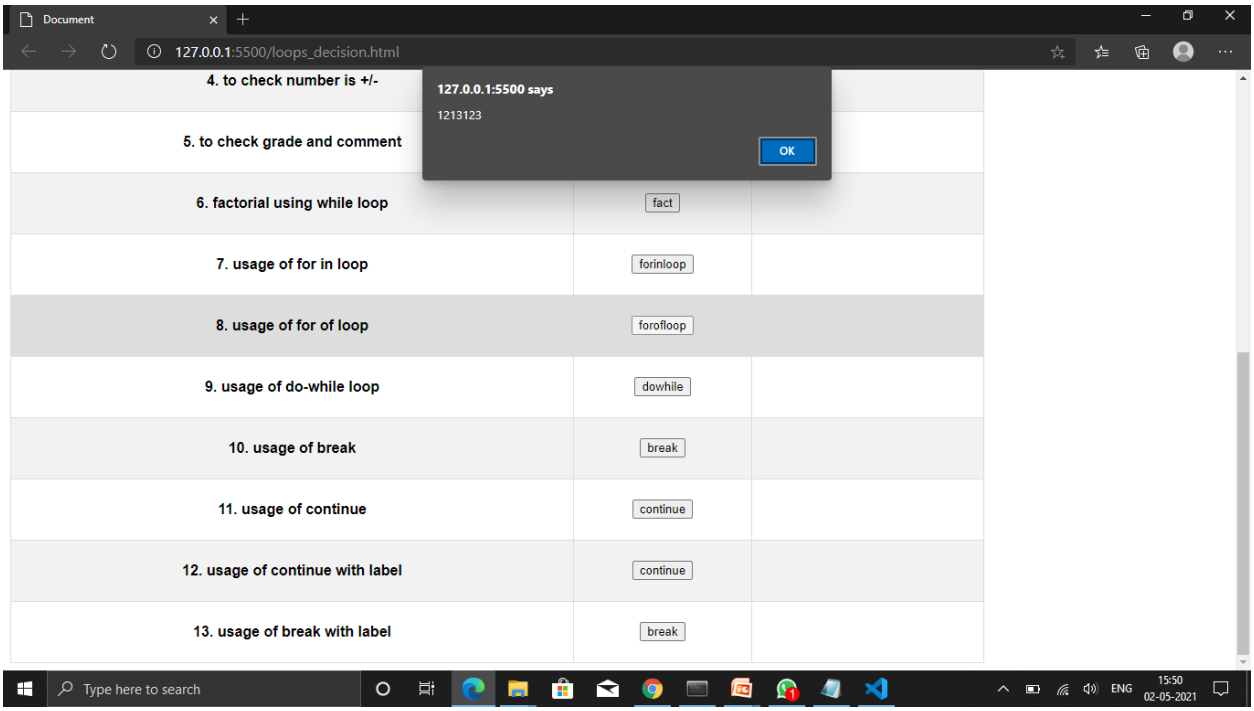

Document
127.0.0.1:5500/loops_decision.html
127.0.0.1:5500 says
Even
OK
Loops and decisions
1.Factorial of a number using for loop
factorial
Fibonacci numbers
fibonacci
fibonacci series
1
1
2
3
5
8
13
21
34
2. to check number >0
num > 0
3. to check even odd
even or odd
4. to check number is +/-
check sign
Type here to search
ENG
15:49
02-05-2021

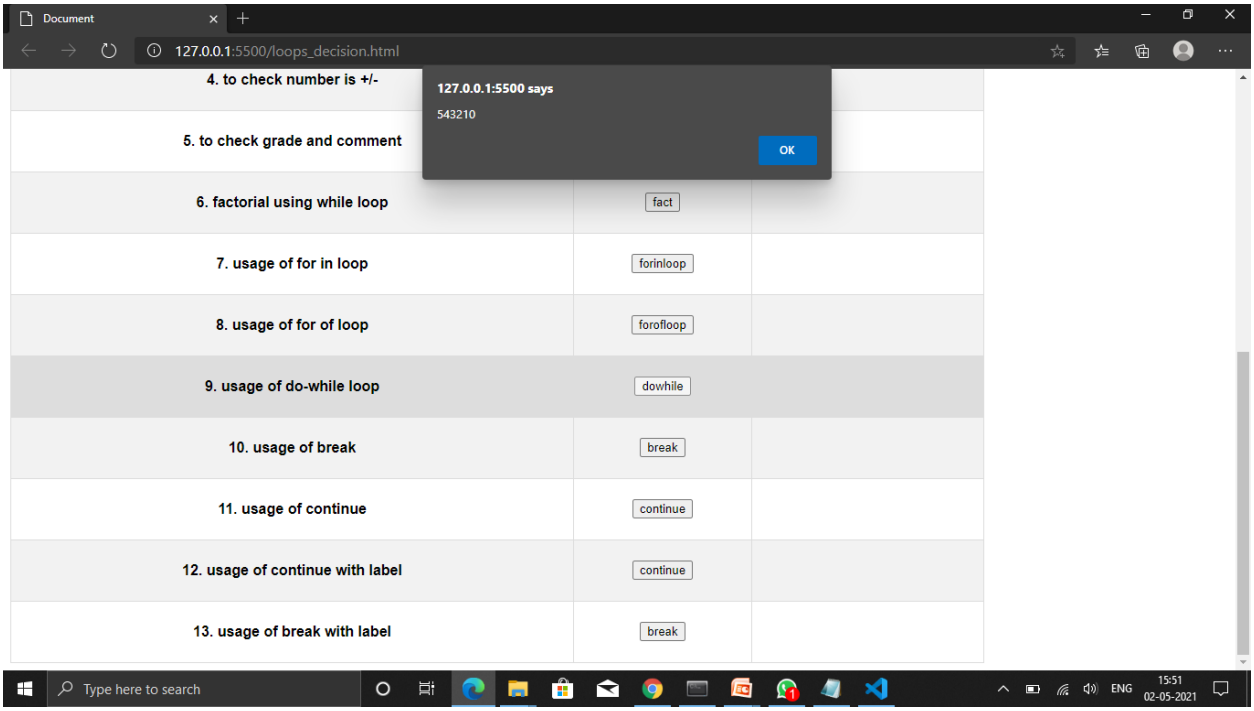

Document
127.0.0.1:5500/loops_decision.html
127.0.0.1:5500 says
-5 is negative
OK
8
13
21
34
2. to check number >0
num > 0
3. to check even odd
even or odd
4. to check number is +/-
check sign
5. to check grade and comment
check grade
6. factorial using while loop
fact
7. usage of for in loop
forinloop
8. usage of for of loop
forofloop
9. usage of do-while loop
dowhile
Type here to search
ENG
15:50
02-05-2021

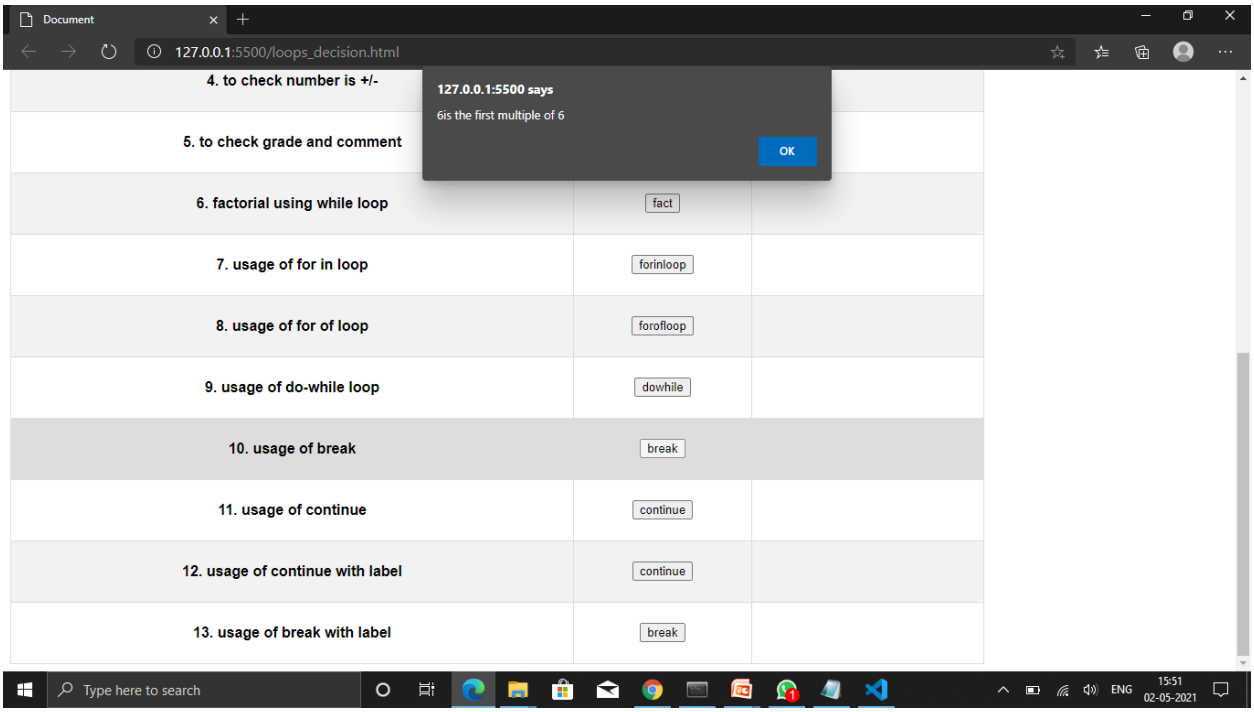

Document
127.0.0.1:5500/loops_decision.html
127.0.0.1:5500 says
Excellent
OK
8
13
21
34
2. to check number >0
num > 0
3. to check even odd
even or odd
4. to check number is +/-
check sign
5. to check grade and comment
check grade
6. factorial using while loop
fact
7. usage of for in loop
forinloop
8. usage of for of loop
forofloop
9. usage of do-while loop
dowhile
Type here to search
ENG
15:50
02-05-2021

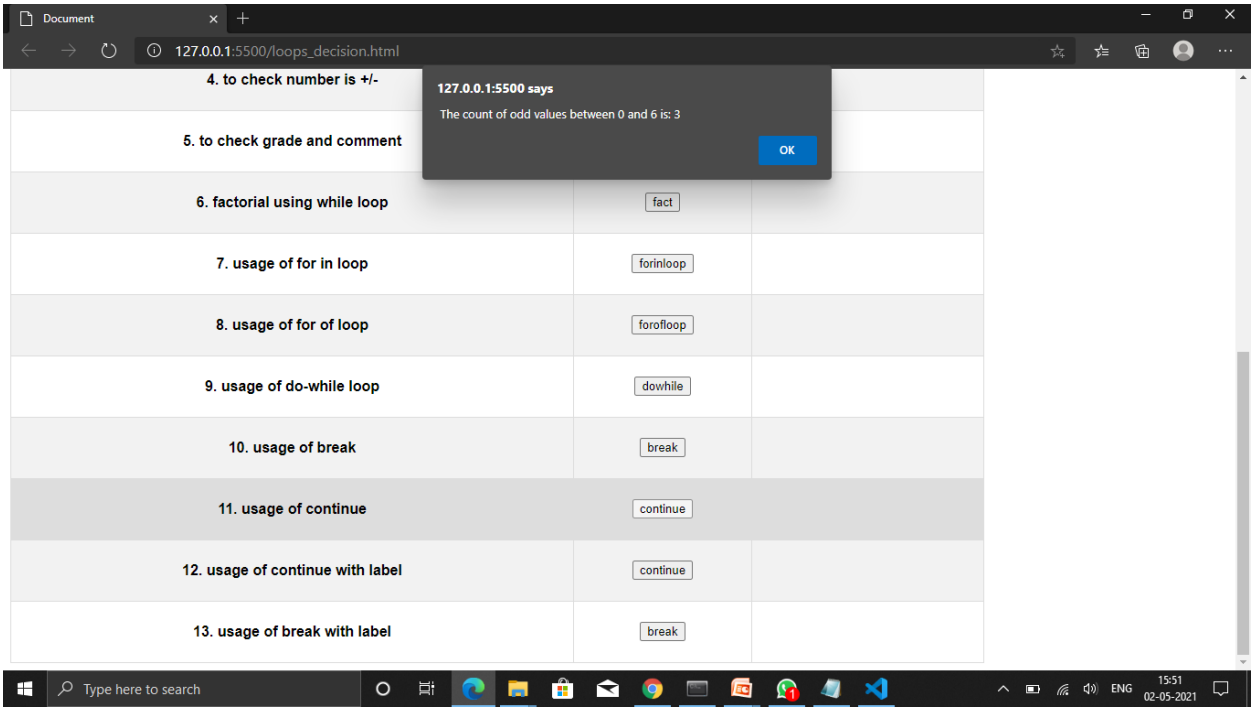

Document
127.0.0.1:5500/loops_decision.html
127.0.0.1:5500 says
The factorial is 24
OK
8
13
21
34
2. to check number >0
num > 0
3. to check even odd
even or odd
4. to check number is +/-
check sign
5. to check grade and comment
check grade
6. factorial using while loop
fact
7. usage of for in loop
forinloop
8. usage of for of loop
forofloop
9. usage of do-while loop
dowhile
Type here to search
ENG
15:50
02-05-2021

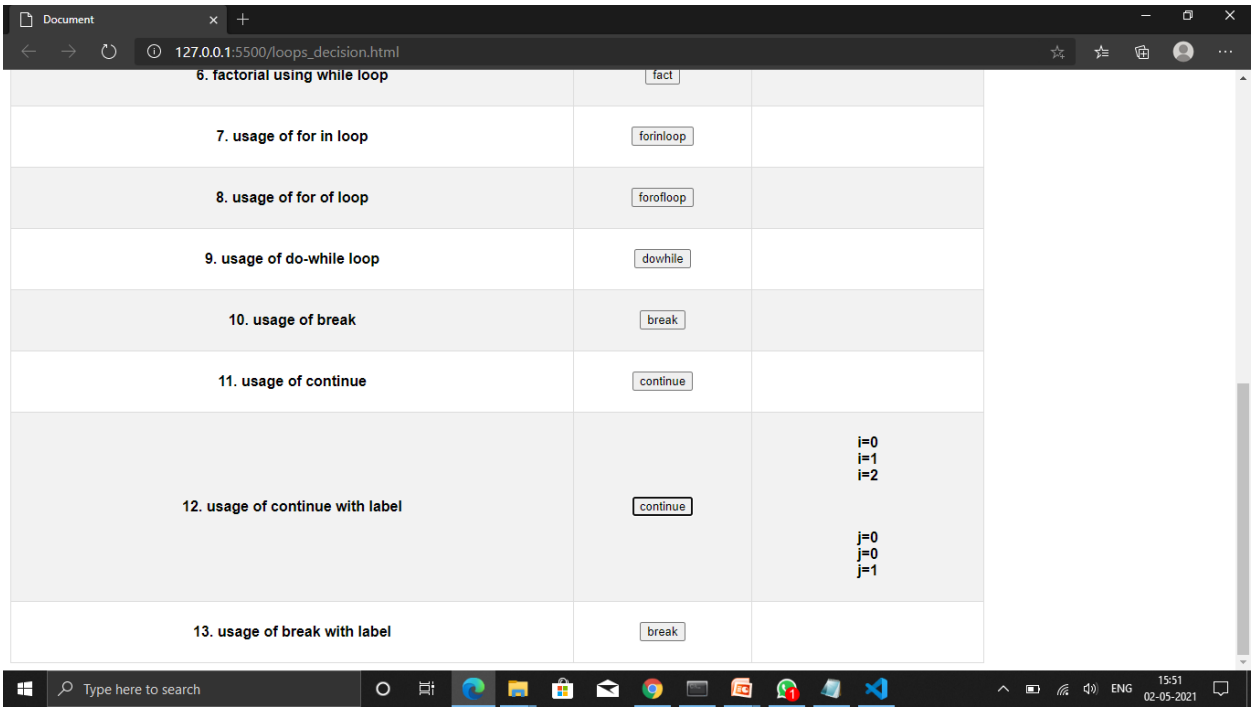

Document
127.0.0.1:5500/loops_decision.html
127.0.0.1:5500 says
123
OK
8
13
21
34
2. to check number >0
num > 0
3. to check even odd
even or odd
4. to check number is +/-
check sign
5. to check grade and comment
check grade
6. factorial using while loop
fact
7. usage of for in loop
forinloop
8. usage of for of loop
forofloop
9. usage of do-while loop
dowhile
Type here to search
ENG
15:50
02-05-2021

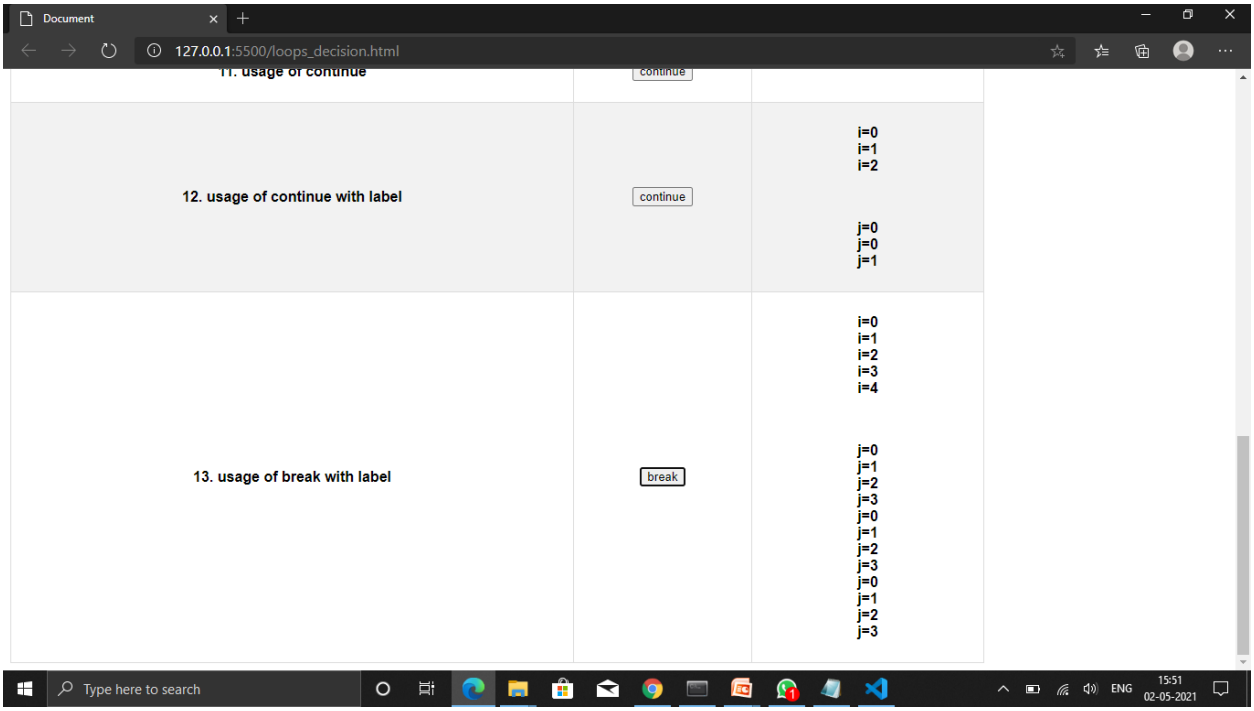

Document
127.0.0.1:5500/loops_decision.html
4. to check number is +/-
127.0.0.1:5500 says
1213123
OK
5. to check grade and comment
6. factorial using while loop
fact
7. usage of for in loop
forinloop
8. usage of for of loop
forofloop
9. usage of do-while loop
dowhile
10. usage of break
break
11. usage of continue
continue
12. usage of continue with label
continue
13. usage of break with label
break
Type here to search
ENG
15:50
02-05-2021

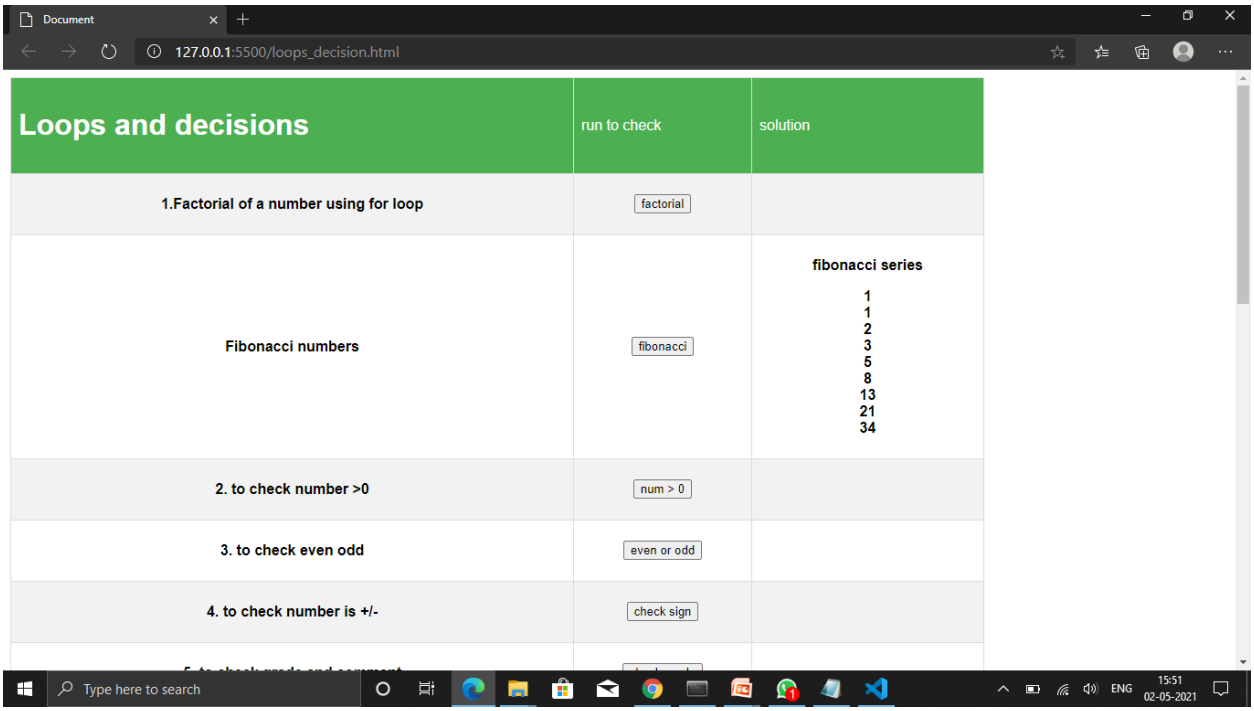

Document
127.0.0.1:5500/loops_decision.html
127.0.0.1:5500 says
543210
OK
4. to check number is +/-
5. to check grade and comment
6. factorial using while loop
fact
7. usage of for in loop
forinloop
8. usage of for of loop
forofloop
9. usage of do-while loop
dowhile
10. usage of break
break
11. usage of continue
continue
12. usage of continue with label
continue
13. usage of break with label
break
Type here to search
ENG
15:51
02-05-2021


Document
127.0.0.1:5500/loops_decision.html
127.0.0.1:5500 says
6is the first multiple of 6
OK
4. to check number is +/-
5. to check grade and comment
6. factorial using while loop
fact
7. usage of for in loop
forinloop
8. usage of for of loop
forofloop
9. usage of do-while loop
dowhile
10. usage of break
break
11. usage of continue
continue
12. usage of continue with label
continue
13. usage of break with label
break
Type here to search
ENG
15:51
02-05-2021


Document
127.0.0.1:5500/loops_decision.html
127.0.0.1:5500 says
The count of odd values between 0 and 6 is: 3
OK
4. to check number is +/-
5. to check grade and comment
6. factorial using while loop
fact
7. usage of for in loop
forinloop
8. usage of for of loop
forofloop
9. usage of do-while loop
dowhile
10. usage of break
break
11. usage of continue
continue
12. usage of continue with label
continue
13. usage of break with label
break
Type here to search
ENG
15:51
02-05-2021


Document
127.0.0.1:5500/loops_decision.html
6. factorial using while loop
fact
7. usage of for in loop
forinloop
8. usage of for of loop
forofloop
9. usage of do-while loop
dowhile
10. usage of break
break
11. usage of continue
continue
12. usage of continue with label
continue
i=0
i=1
i=2
j=0
j=0
j=1
13. usage of break with label
break
Type here to search
ENG
15:51
02-05-2021


Document
127.0.0.1:5500/loops_decision.html
11. usage of continue
continue
12. usage of continue with label
continue
i=0
i=1
i=2
j=0
j=0
j=1
13. usage of break with label
break
i=0
i=1
i=2
i=3
i=4
j=0
j=1
j=2
j=3
j=0
j=1
j=2
j=3
j=0
j=1
j=2
j=3
Type here to search
ENG
15:51
02-05-2021


Document
127.0.0.1:5500/loops_decision.html
Loops and decisions
run to check
solution
1.Factorial of a number using for loop
factorial
Fibonacci numbers
fibonacci
fibonacci series
1
1
2
3
5
8
13
21
34
2. to check number >0
num > 0
3. to check even odd
even or odd
4. to check number is +/-
check sign
Type here to search
ENG
15:51
02-05-2021