IWP LAB – 7
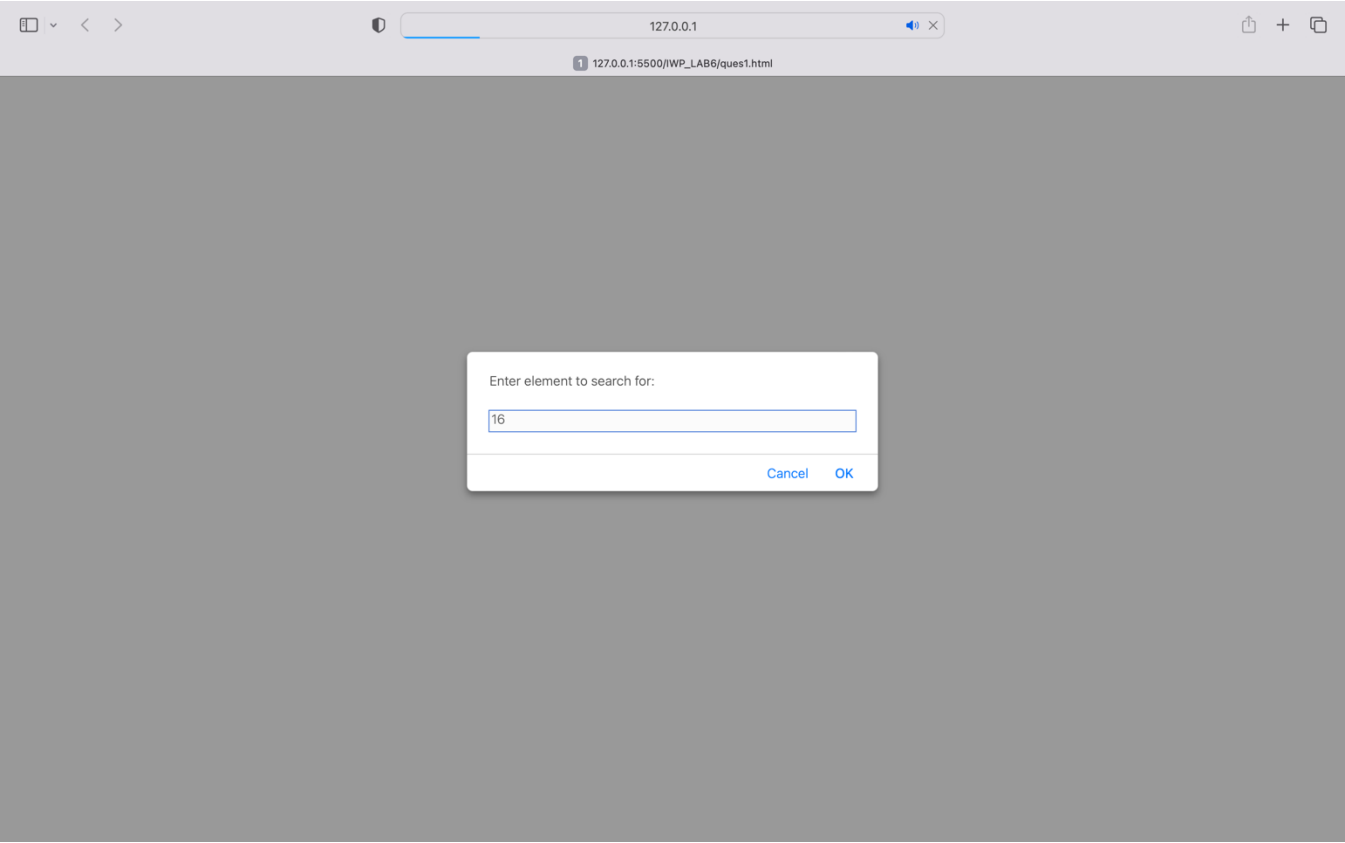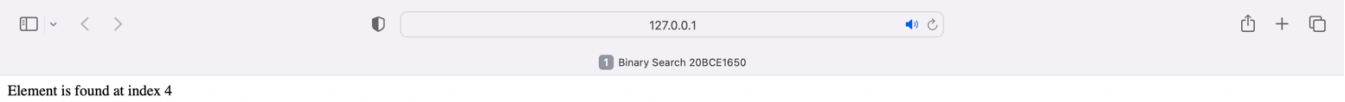## Faculty: Sandhya P

QUES1

```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>Binary Search 20BCE1650</title>
    <script>
        function binarySearch(amritansh,x,low,high){
            if(high>=low){
                var mid=low+(high-low)/2;
                if(amritansh[mid]==x)
                    return mid;
                if(amritansh[mid]>x)
                    return binarySearch(amritansh,x,low,mid-1);
            return binarySearch(amritansh,x,mid+1,high);
            }
        return -1;
        }
        var amritansh = [3, 4, 5, 6, 7, 8, 9];
        var n = 7;
        var x = prompt("Enter element to search for: ");
        var result = binarySearch(amritansh,x,0,n-1);
        if (result == -1)
        document.write("Not found");
        else
        document.write("Element is found at index "+result);
    </script>
</head>
<body>
</body>
</html>
```
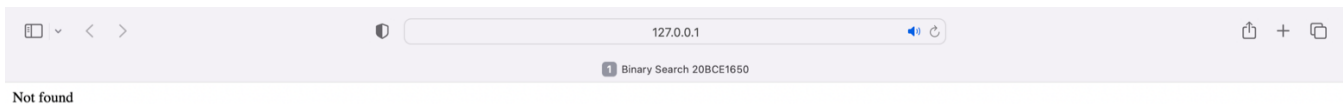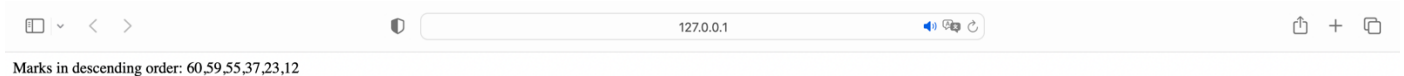
Enter element to search for:

7

Cancel   OK

Element is found at index 4

Enter element to search for:

16

Cancel   OK
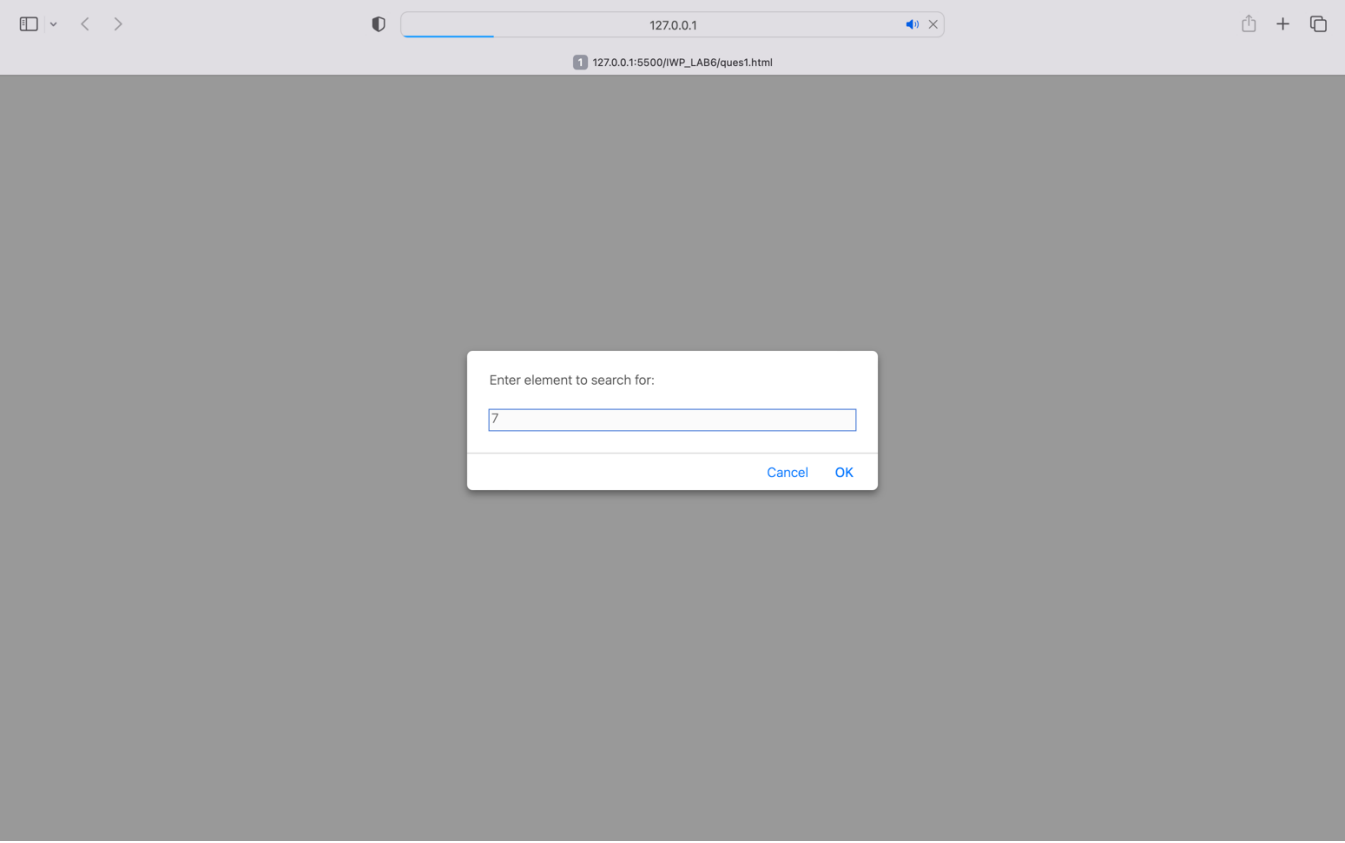
QUES2

```html
<!DOCTBE 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>Marks Sort 20BCE1650</title>
    <script>
        function swap(amritansh,A,B){
            var temp = amritansh[A];
            amritansh[A] = amritansh[B];
            amritansh[B] = temp;
        }
        function Sort(amritansh,n){
            var i,j;
            for(i=0;i<n-1;i++){
                for(j=0;j<n-i-1;j++){
                    if(amritansh[j]<amritansh[j+1]){
                        swap(amritansh,j,j+1);
                    }
                }
            }
        }
        var amritansh=[55,59,37,60,12,23];
        var n=7;
        Sort(amritansh,n);
        document.write("Marks in descending order: "+amritansh);
    </script>
</head>
<body>
</body>
</html>
```

Marks in descending order: 60,59,55,37,23,12

QUES3

```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>Diagonal Sum 20BCE1650</title>
    <script>
        function max(i,j){
            if(i>j){
                return i;
            }
            else if(i<j){
                return j;
            }
        }
        function sumnmax(amrit,n){
            var sumup=0,sumlow=0;
            for(var i=0;i<n;i++){
                for(var j=0;j<n;j++){
                    if(i<j){
                        sumup=parseInt(sumup)+parseInt(amrit[i][j]);
                    }
                    else if(i>j){
                        sumlow=parseInt(sumlow)+parseInt(amrit[i][j]);
                    }
                }
            }
            return max(sumup,sumlow);
        }
        var n=prompt("Enter the dimension of matrix: ");
        var amrit=new Array(n);
        for(var i=0;i<n;i++){
            amrit[i]=new Array();
        }
        for(var i=0;i<n;i++){
            for(var j=0;j<n;j++){
                var x=prompt("Enter element at ("+i+","+j+"): ");
                amrit[i][j]=x;
            }
        }
        document.write("Entered Matrix:<br/>");
        for(var i=0;i<n;i++){
            for(var j=0;j<n;j++){
                document.write(amrit[i][j]+" ");
            }
```
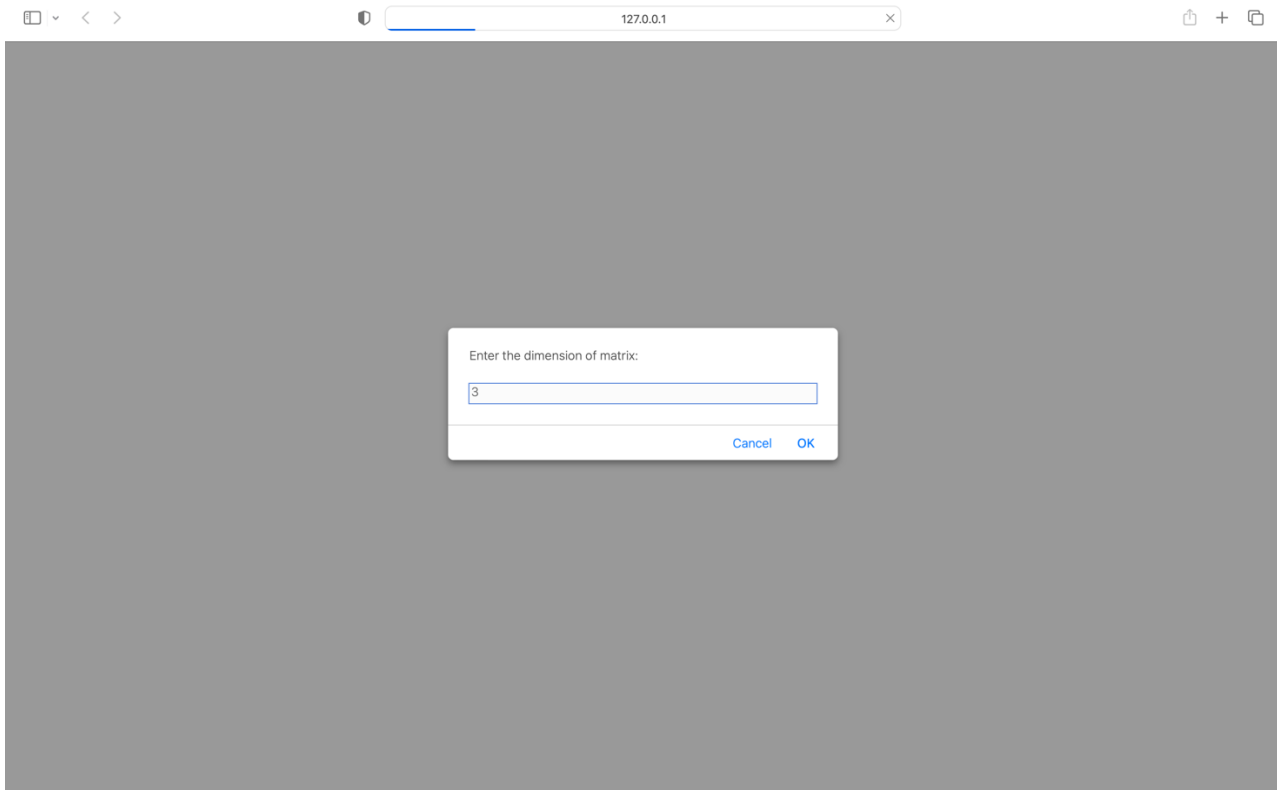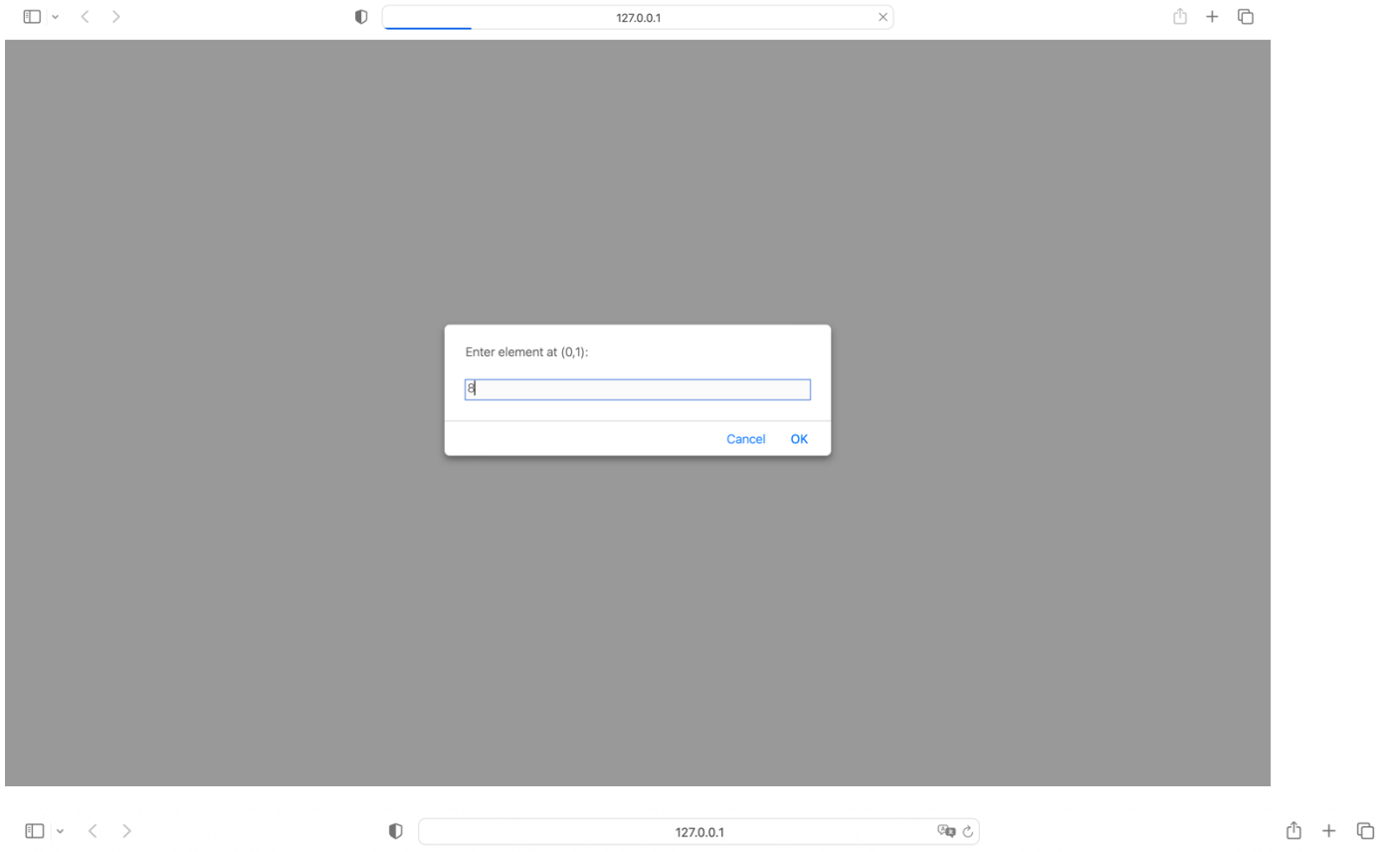
```
            document.write("<br/>");
        }
        document.write("<br/>Bigger of upper and lower sum is:
"+sumnmax(amrit,n));
    </script>
</head>
<body>
</body>
</html>
```

Enter element at (0,1):

8

Cancel   OK
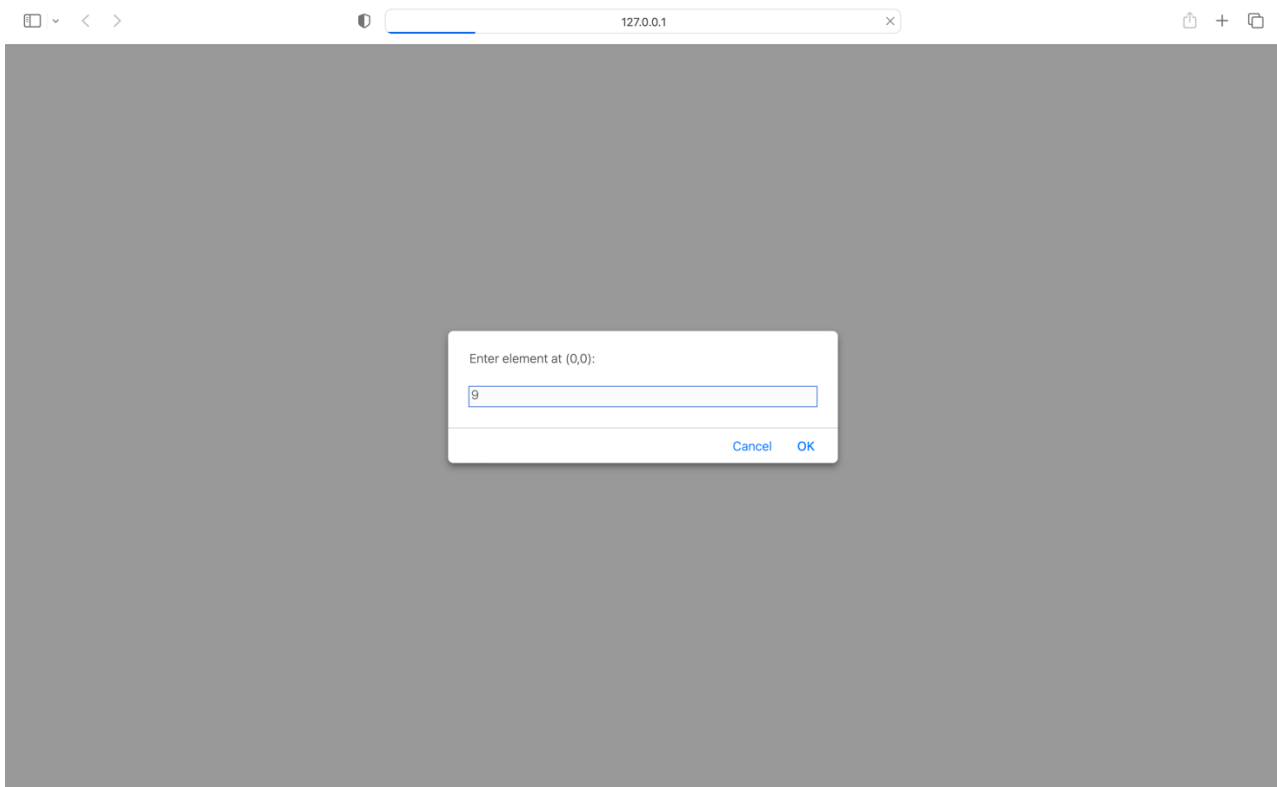
Entered Matrix:
9 8 7
6 5 4
3 2 1

Bigger of upper and lower sum is: 19

QUES4

```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>
    <script>
        var flag=0;
        var n=prompt("Enter dimension of board:");
        var size = 2; //max possible size of battleship
        //generating x & y coordinate of ship
        do{
            var battleship = new Array();
            var guess=new Array();
            for(var i=0;i<2*size;i++){
                var xy = Math.floor(Math.random()*n);
                battleship.push(xy);
            }
            var j=1;
```
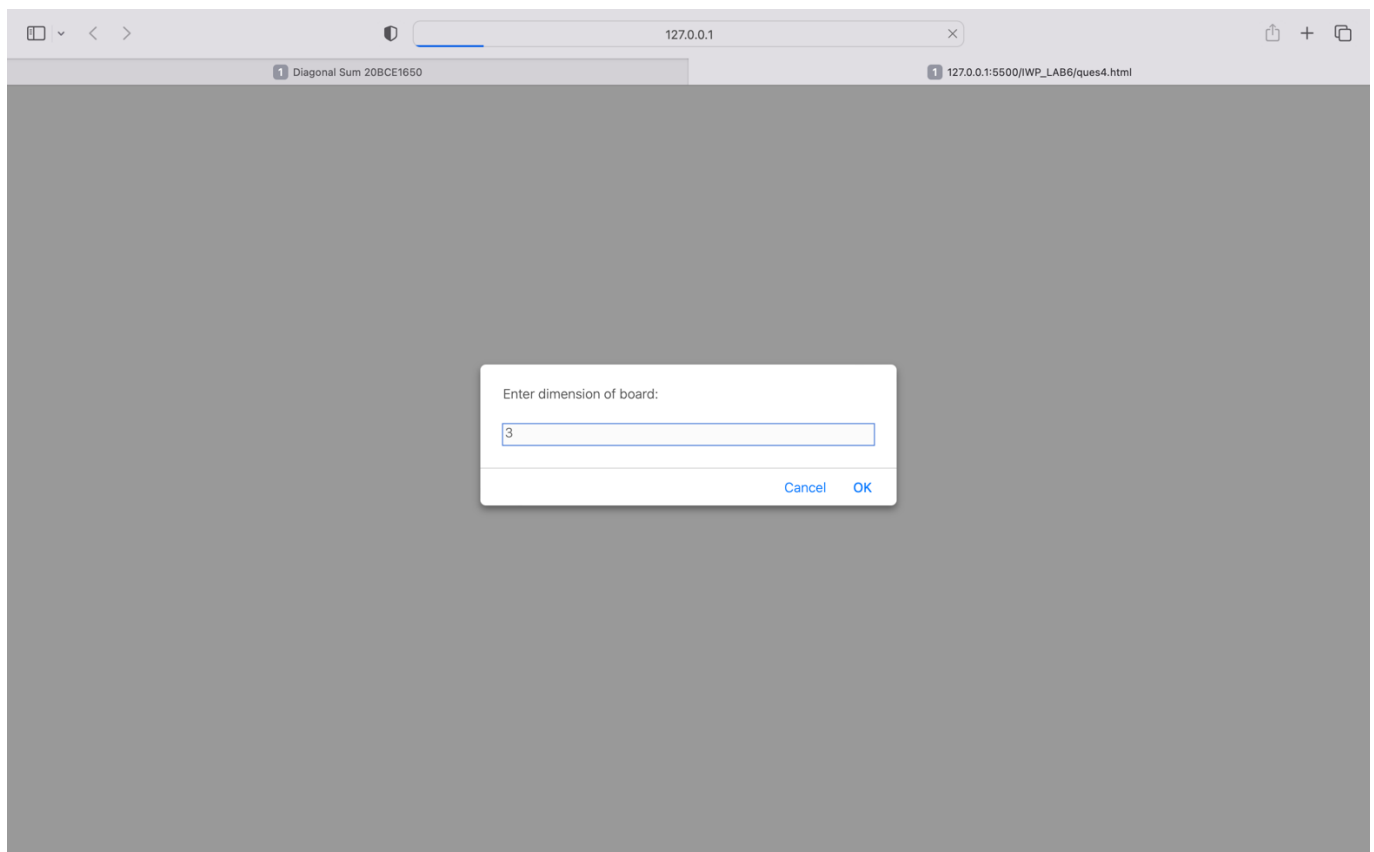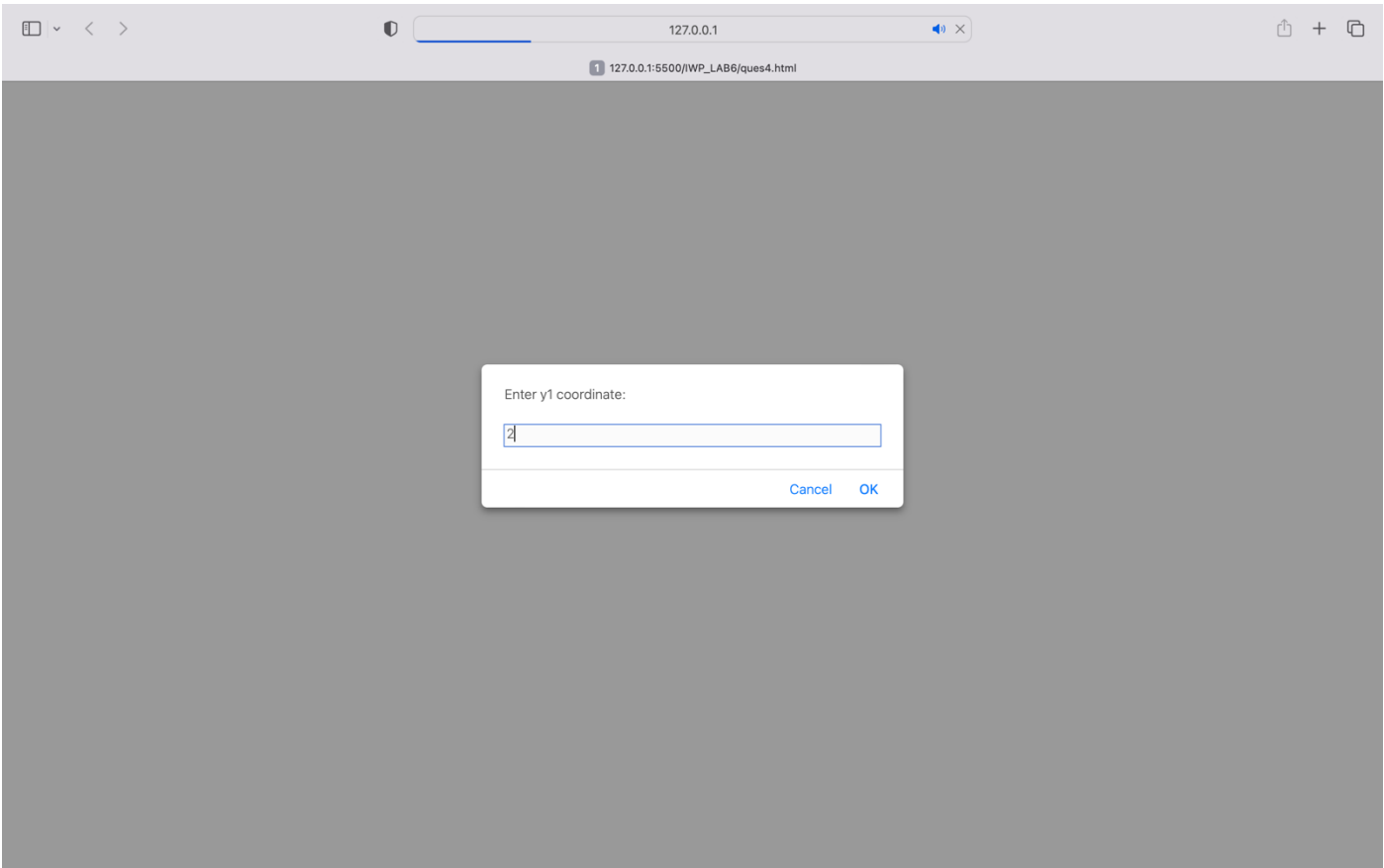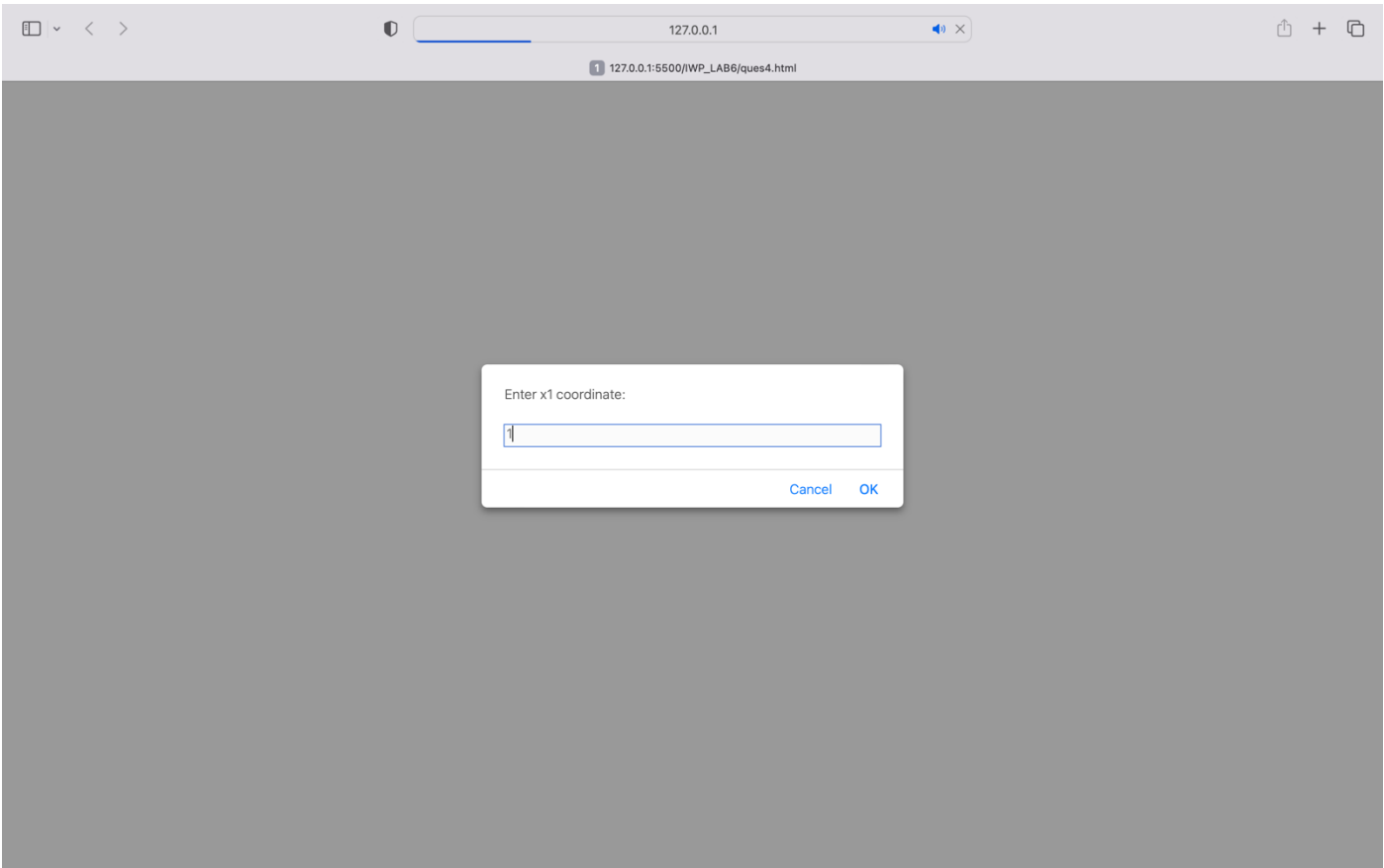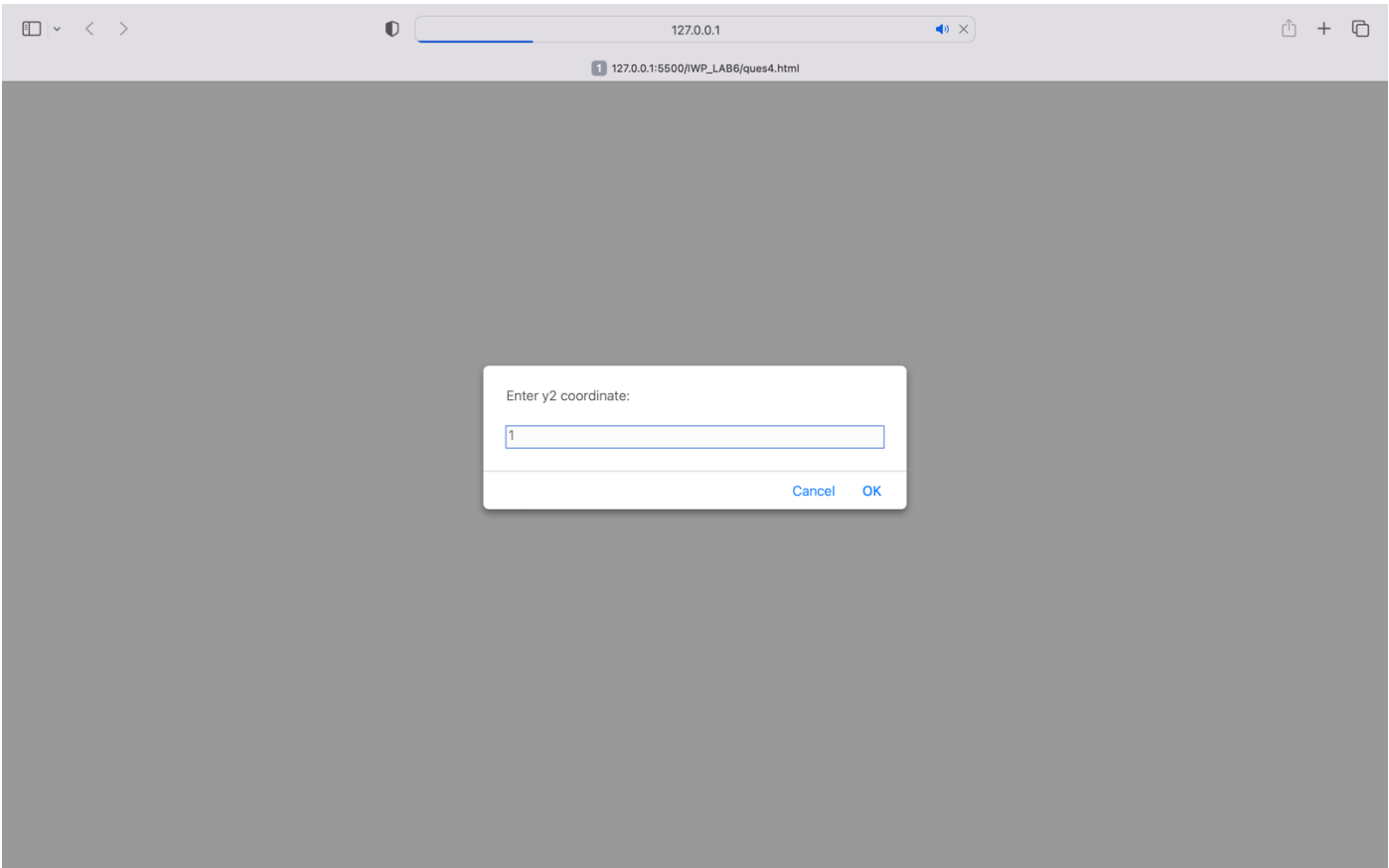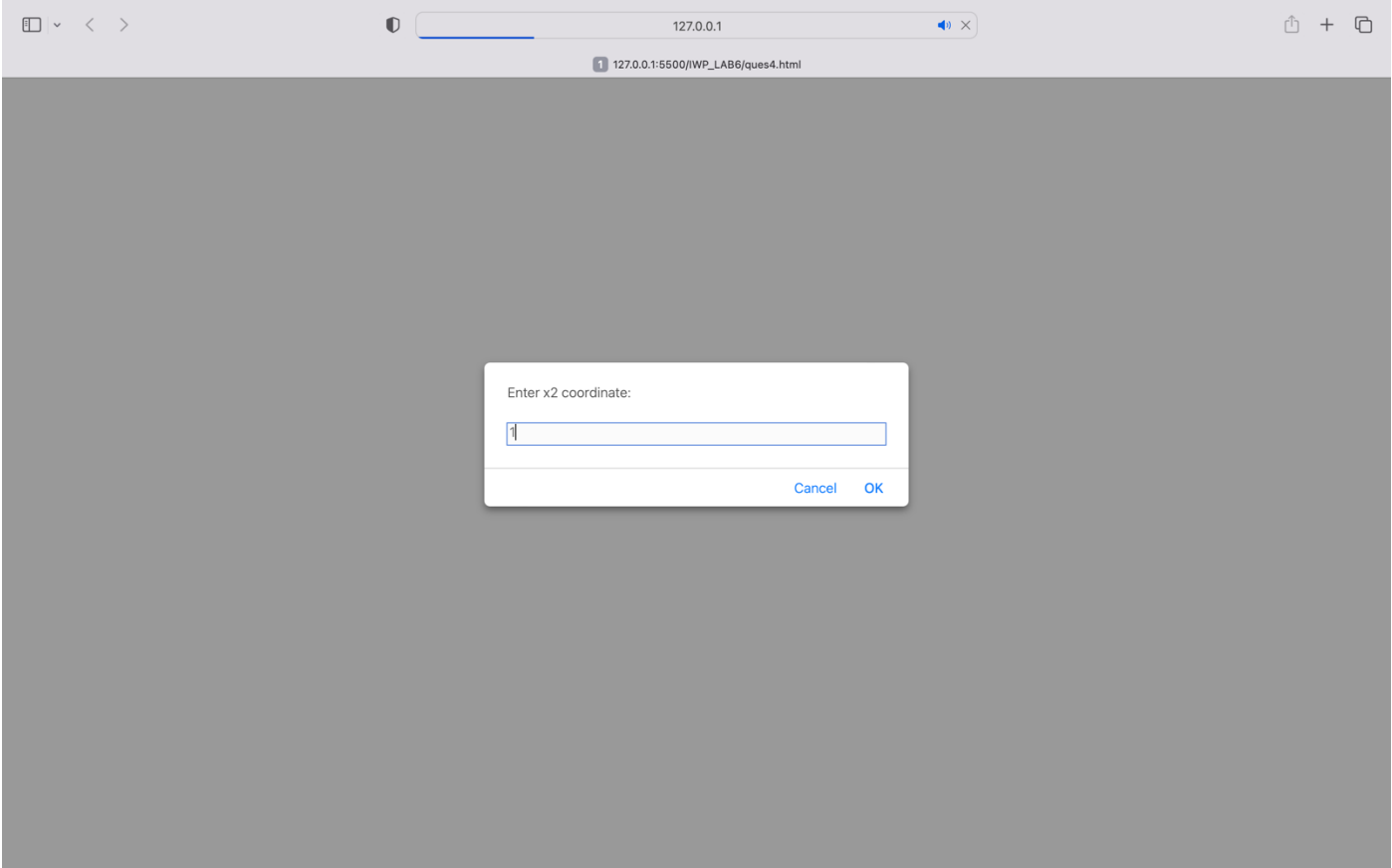
```
            for(var i=0;i<2*size;i++){
                if(i%2==0)
                    var ab=prompt("Enter x"+j+" coordinate:");
                else{
                    var ab=prompt("Enter y"+j+" coordinate:");
                    j++;
                }
                guess.push(ab);
            }
            if(battleship.join()==guess.join()){
                alert("You guessed it!!!");
                break;
            }
            else{
                alert("Wrong guess!! Chances left "+(3-(flag+1)));
                flag++;
            }
        }while(flag<3);
        if(flag==3){
            document.write("Better luck next time!!<br/>");
        }
        document.write("Correct coordinates are: ");
        document.write(battleship);
    </script>
</head>
<body>
</body>
</html>
```
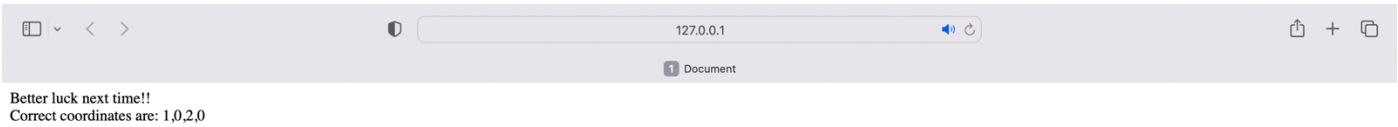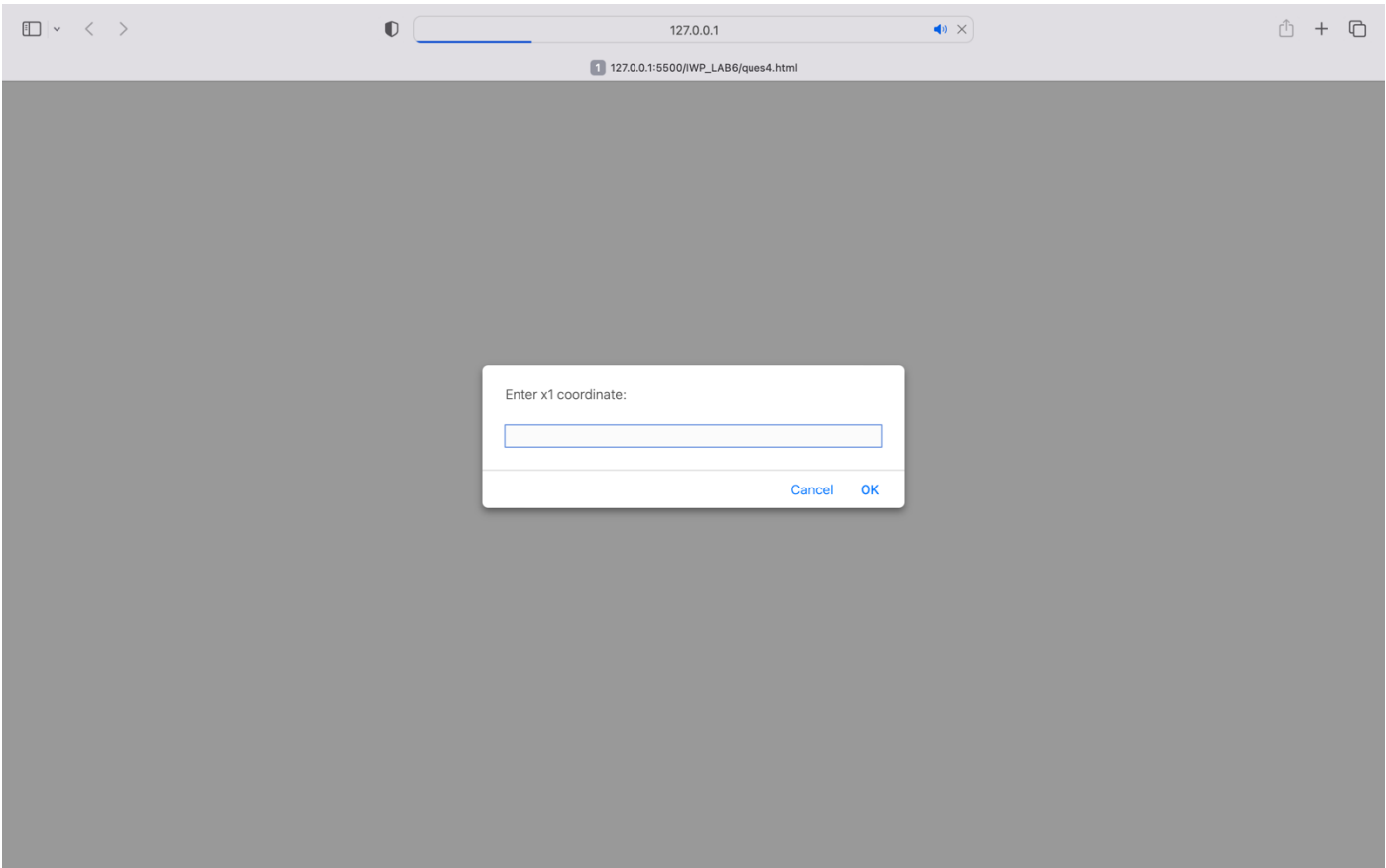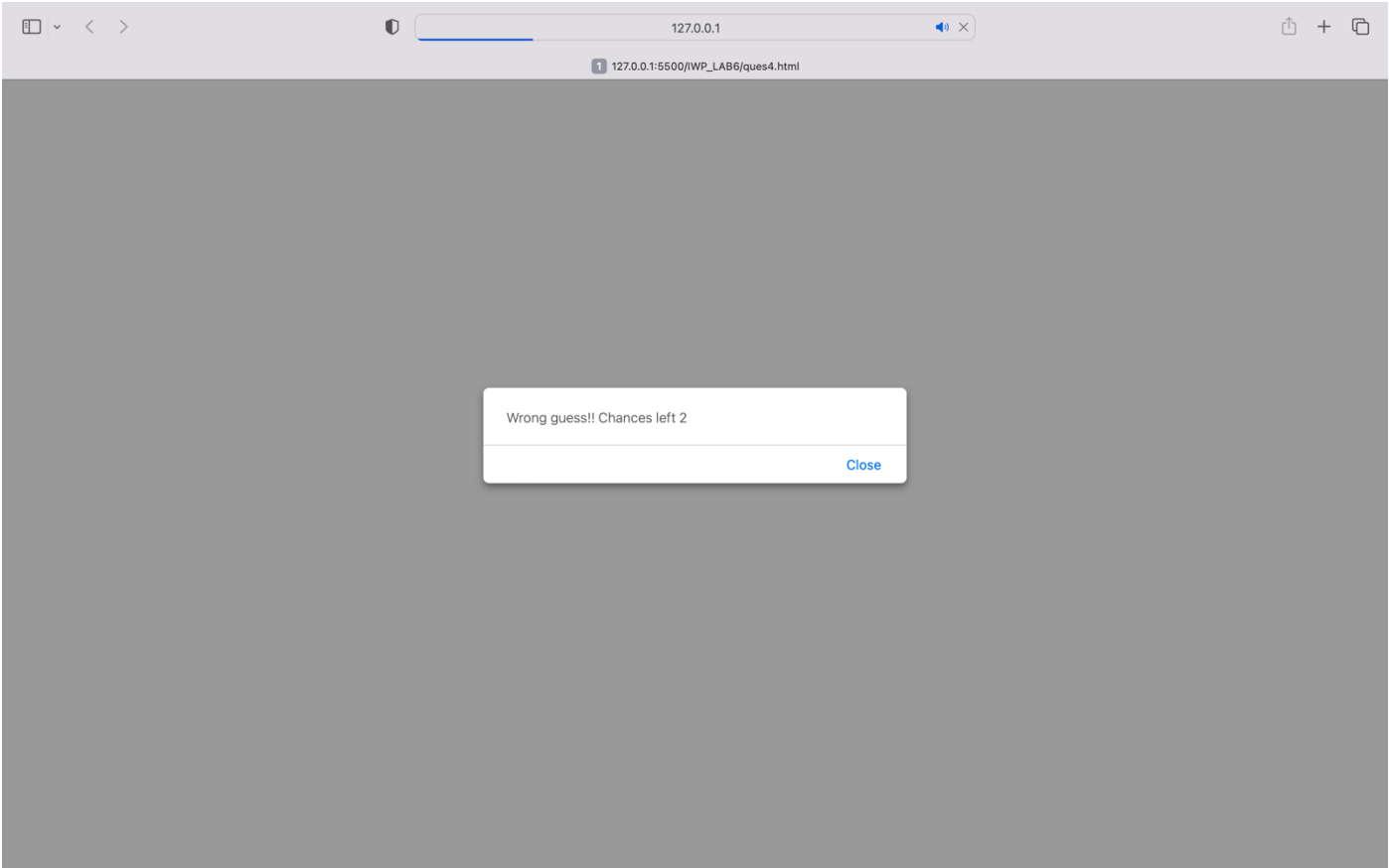

Enter dimension of board:

3

Cancel   OK

Enter x1 coordinate:

1

Cancel   OK

Enter y1 coordinate:

2

Cancel   OK

Enter x2 coordinate:

1

Cancel   OK

Enter y2 coordinate:

1

Cancel   OK

Wrong guess!! Chances left 2

Close

Enter x1 coordinate:

Cancel   OK

Better luck next time!!
Correct coordinates are: 1,0,2,0

QUES5

```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>
    <script>
        var pp={"A":"Dear Maam , this is the participant certificate for the
conference held in 2021.",
        "B":"Dear Sir , this is the participant certificate for the conference
held in 2021.",
        "C":"Dear Maam , this is the participant certificate for the
conference held in 2021.",
        "D":"Dear Maam , this is the participant certificate for the
conference held in 2021.",
        "E":"Dear Sir , this is the participant certificate for the conference
held in 2021.",
        "F":"Dear Maam , this is the participant certificate for the
conference held in 2021.",
        "G":"Dear Sir , this is the participant certificate for the conference
held in 2021.",
        "H":"Dear Sir , this is the participant certificate for the conference
held in 2021."}
        var male = new Array();
        var female = new Array();
        for(key in pp){
            var arr = pp[key].split(" ");
            if(arr[1]==="Maam"){
                female.push(" Mrs."+key);
            }
            else if(arr[1]==="Sir"){
                male.push(" Mr."+key);
            }
        }
        document.write("Male participants: "+male+"<br/>Female participants:
"+female);
    </script>
</head>
<body>

</body>
</html>
```

Male participants: Mr.B, Mr.E, Mr.G, Mr.H
Female participants: Mrs.A, Mrs.C, Mrs.D, Mrs.F

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