Assignment 5

Question 1

Write a JavaScript function to chop a string into chunks of a given length
Test Data :

```
    console.log(string_chop('welcome'));
    console.log(string_chop('welcome',2));
    console.log(string_chop('welcome',3));
```
Output:
```
    ["welcome"]
    ["we", "lc", "om", "e"]
    ["wel", "com", "e"]
```

Code

```
<!DOCTYPE html>
<html lang="en">

<head>
    <title>1</title>
    <script>
        function string_chop(str, n) {
            if (n == undefined) return [str];
            const a = [];
            for (i = n; i < str.length; i += n) {
                a.push(str.substring(i - n, i));
            }
            if (i >= str.length) a.push(str.substring(i - n));
            return a;
        }
        console.log(string_chop('welcome'))
        console.log(string_chop('welcome', 1))
        console.log(string_chop('welcome', 2))
        console.log(string_chop('welcome', 3))
    </script>
</head>

<body>

</body>

</html>
```

Output

```
> console.log(string_chop('welcome'))
  ▶ ['welcome']
< undefined
> console.log(string_chop('welcome', 1))
  ▶ (7) ['w', 'e', 'l', 'c', 'o', 'm', 'e']
< undefined
> console.log(string_chop('welcome', 2))
  ▶ (4) ['we', 'lc', 'om', 'e']
< undefined
> console.log(string_chop('welcome', 3))
  ▶ (3) ['wel', 'com', 'e']
< undefined
> |
```

Question 2

Write a JavaScript function to convert a string to title case.
Test Data :

```
    console.log(sentenceCase('hoW aRe YOU'));
Output:
    "How Are You"
```

Code

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <title>2</title>
    <script>
        function helper(str) {
            if (str=='') return str;
            return str[0].toUpperCase() + str.substring(1).toLowerCase();
        }
        function sentenceCase(str) {
            return str.split(' ').map(helper).join(' ');
        }
        console.log(sentenceCase("hOW aRe YOU"));
    </script>
</head>

<body>

</body>

</html>
```

Output

```
  How Are You
> console.log(sentenceCase("hOW aRe YOU"))
  How Are You
<· undefined
> |
```

Question 3

An Evil number is a positive whole number which has even number of 1's in it's binary equivalent.
Example: 9 - 1001, contains even no of 1's. Thus 9 is evil number. Design a program to accept a positive whole number n where $n > 2$ and $n < 100$, and find if the number is evil or not.

Code

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <title>3</title>
    <script>
        function isEvil(n) {
            c = 0;
            t = 1;
            while (n) {
                if (n & 1) c++;
                n = n >> 1;
            }
            if (c & 1) return false;
            else return true;
        }
        function evil() {
            n = Number(document.getElementById('input1').value);
            if (isNaN(n)) {
                alert("Enter a valid number")
                return;
            }
            if (n <= 2 || n >= 100) {
                document.getElementById('output').innerHTML = "Number out of Range";
                return;
            }
            if (isEvil(n)) {
                document.getElementById('output').innerHTML = "Evil Number";
            } else {
                document.getElementById('output').innerHTML = "Not and Evil number";
            }
        }
    </script>
</head>

<body>
    Input: <input id="input1" type="text"> <br>
    Output: <label id="output"></label> <br>
    <input type="button" value="Check" onclick="evil()">
</body>

</html>
```

Output

Input: 15

Output: Evil Number

Check