understanding strings problem done by nandiswar:
1. **Reverse a String:**
   Write a function that takes a string as input and returns the string reversed.

ans:

```
var n = "nandiswar";

function reverse(n)
{
a = n.length;
 var temp = "";
for(var i=a-1;i>=0;i--)
{
    temp = temp + n[i];
}
return temp ;
}
console.log(reverse(n));
```

o/p:

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2. **Palindrome Check:**
   Write a function that checks whether a given string is a palindrome (reads the same forwards and backward). Ignore spaces, punctuation, and capitalization.

```
var n = "madam";

function reverse(n)
{
a = n.toLowerCase().length;
var temp = "";
for(var i=a-1;i>=0;i--)
{
    temp = temp + n[i];
}

return temp==n?" temp+"string is palindrome":temp+"string is not palindrome";
}
console.log(reverse(n));
```

o/p:
sting is palindrome

3.**Anagram Detection:**
   Write a function that checks if two words are anagrams of each other. Anagrams are words or phrases formed by rearranging the letters of another.

ans:

```
var a = "listen";
var b= "silent";
function Anagram(a,b)
{
var c = a.split("").sort().toString();
var d = b.split("").sort().toString();
return c === d ? "given strings are anagrams": "is not a anagrams";
}
console.log(Anagram(a,b));
```

o/p:
given strings are anagrams

4. **Count Vowels and Consonants:**
   Write a function that counts the number of vowels and consonants in a given string.

```
a="i am ram "
var vowels=0;
var consonants=0;
var gap=0;
for(var i of a)
{

    if(i == "a"||i == "e"||i == "i"||i == "o"||i == "u")
    {
      vowels++
    }
    else if(i == " "){
           gap++;
         }

    else{
        consonants++;
    }
}
console.log(vowels + " vowels " + consonants + " consonants ")
```

o/p:

3 vowels 3 consonants

5. **Capitalize the First Letter of Each Word:**
   Write a function that capitalizes the first letter of each word in a given sentence.
ans:

```
n="i am  a good boy"
function camelcase(n){
var a=n.split(" ");
var temp = "";
for (var i of a)
{
    var x = i.substr(0,1).toUpperCase() + i.substr(1);
    temp = temp+x+" ";
}
return temp;
}
console.log(camelcase(n));
```

o/p:

```
I Am  A Good Boy
```

6.**String Compression:**
   Implement a function to perform basic string compression using the counts of repeated characters. For example, "aabccccccaaa" becomes "a2b1c5a3".

7.**Find the Longest Word:**
   Write a function that finds the longest word in a sentence. If two or more words have the same length, return the first one.
ans:

```
var n = "nandiswar is a good boy";
function LongestWord(n)
{
    var a=n.split(" ")
    var temp = 0;
    var temp2 = 0;
for(i=0;i<a.length;i++)
{
    if(a[i].length > temp)
    {
        temp = a[i].length;
        temp2=a[i];
    }
}
```

```
return temp2 + " longest word in given sentence";

}
console.log(LongestWord(n));
```

o/p:

```
nandiswar longest word in given sentence
```

8. **Title Case a Sentence:**
   Write a function that converts a sentence to title case, where the first letter of each word is capitalized.

ans:

```
n="i am  a good boy"
function camelcase(n){
var a=n.split(" ");
var temp = "";
for (var i of a)
{
    var x = i.substr(0,1).toUpperCase() + i.substr(1);
    temp = temp+x+" ";
}
return temp;
}
console.log(camelcase(n));
```

o/p:

```
I Am  A Good Boy
```

9.

10. **String Rotation:**
    Write a function that checks if one string is a rotation of another. For example, "waterbottle" is a rotation of "erbottlewat."

```
var a="waterbottle";
var b = a.slice(3)+a.slice(0,3);
var c = a.substr(3)+a.substr(0,3);
var d = a.substring(3)+a.substring(0,3);
console.log(b);
console.log(c);
console.log(d);
```

o/p:

```
erbottlewat
erbottlewat
erbottlewat
```