Programming Construct: Intro to Recursion and Problem Solving on Recursion

Assignment Solutions

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1. Take an array of size 10. Calculate sum of all array elements using tail recursion.

Solution: Link to Code - https://jsfiddle.net/okc17Lu6/

Code:

```
function arraySum(array, size,sum)
{
 if (size == 0)
     return sum;
 else{
     sum+=array[size-1];
     return arraySum(array,size-1,sum);
 }
}

var array = [1,2,3,4,5,6,7,8,9,10];
var size = array.length;
let sum=0;
document.write( "Sum of array: "+arraySum(array, size,sum));
```

Output:
55

2. Write a function that takes a string and returns if string is a palindrome.

Solution: Link to Code - https://jsfiddle.net/1a2nhfeo/

Code:

```
function isPalStr(str, s, length) {
  if (s == length)
 return true;
  if ((str.charAt(s)) != (str.charAt(length)))
 return false;
  if (s < length + 1)
 return isPalStr(str, s + 1, length - 1);
  return true;
}
var str = "geegogeeg"
var length = str.length
```

```
if (isPalStr(str, 0, length - 1))
  document.write("YES");
else
  document.write("NO");
```

Output:
YES

```
if (isPalStr(str, 0, length - 1))
  document.write("YES");
else
  document.write("NO");
```