Activities

Javascript - Day -5 : Functions

04/03/2023 - Saturday - 10:00 AM : 1:00 PM

Questions:

1.Do the below programs in anonymous function & IIFE

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2. Print odd numbers in an array
3. Convert all the strings to title caps in a string array
4. Sum of all numbers in an array
5. Return all the prime numbers in an array
6. Return all the palindromes in an array
7. Return median of two sorted arrays of the same size.
8. Remove duplicates from an array
9. Rotate an array by k times

1. Print odd numbers in an array

Anonymous function

```
let array=[1,2,3,4,5];
let odd=function()
{
   return array.filter(num => num%2 != 0)
}
console.log(odd(array));
```

IIFE

```
let array=[1,2,3,4,5];
(function(array)
{
   console.log(array.filter(num => num%2 != 0));
})(array);
```

2. Convert all the strings to title caps in a string array

Anonymous function

```
let arrayString=["subaash","vicky","mukesh","praveen"];
let titlecaps =function(x){
for(let i=0;i<x.length;i++)
{
x[i]=x[i][0].toUpperCase()+x[i].slice(1);
}
return x;
}
console.log(titlecaps(arrayString));
```

IIFE

```
let arrayString=["subaash","vicky","mukesh","praveen"];

(function(arrayString){
for(let i=0;i<arrayString.length;i++)
{
  arrayString[i]=arrayString[i][0].toUpperCase()+arrayString[i].slice(1);
}
console.log(arrayString);

})(arrayString);
```

3. Sum of all numbers in an array

Anonymous function

```
let array=[1,5,6,4,7,8,7,7,78,56,7894,65654,16314,9791,665979];
let sumArray= function(array){
let sum=0;
  for(let i=0;i<array.length;i++)
  {
     sum += array[i];
  }
  return sum;
}
console.log(sumArray(array));
```

IIFE

```
let array=[1,5,6,4,7,8,7,7,78,56,7894,65654,16314,9791,665979];
(function(array){
let sum=0;
  for(let i=0;i<array.length;i++)
  {
     sum += array[i];
  }
 console.log(sum);
})(array);
```

4. Return all the prime numbers in an array

Anonymous function

```
let primearray=[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20];
let prime = function(primearray){
  primearray = primearray.filter((number) => {
  for(var i=2;i<=Math.sqrt(number);i++)
  {
    if(number%i===0)
    {
      return false;
    }
  }
    return true;
});
return primearray;
}
console.log(prime(primearray));
```

IIFE

```
let primearray=[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20];
(function(primearray){
  primearray = primearray.filter((number) => {
  for(var i=2;i<=Math.sqrt(number);i++)
  {
    if(number%i===0)
```

```
    {
      return false;
    }
  }
    return true;
});
console.log(primearray);
})(primearray);
```

5. Return all the palindromes in an array

Anonymous function

```
let array = [121,565,689,999,589,111];
let palindromes =function(array){
  array=array.filter((number) => {
    let rem,sum=0;
     let temp=number;
      while(temp>0)
      {
        rem=temp%10;
        sum=sum*10+rem;
        temp=parseInt(temp/10);
       }
      if(number === sum)
      {
      return true;
```

```
    }
    else
    return false;
   });
return array;
}
console.log(palindromes(array));
```

IIFE

```
let array = [121,565,689,999,589,111];
(function(array){
  array=array.filter((number) => {
    let rem,sum=0;
        let temp=number;
    while(temp>0)
    {
      rem=temp%10;
      sum=sum*10+rem;
      temp=parseInt(temp/10);
     }
    if(number === sum)
    {
    return true;
    }
    else
```

```
      return false;
    });
console.log(array);
})(array);
```

6. Return median of two sorted arrays of the same size.

Anonymous function

```
let  arr1=[1,3,5,7,9];
let  arr2=[0,2,4,6,8];

let medium=function(arr1,arr2){

  let arr=arr1.concat(arr2).sort((a,b) => a-b);
  let middleIndex=Math.floor(arr.length/2);

  if(arr.length%2===0)
  {
    return (arr[middleIndex-1]+arr[middleIndex])/2;
  }
  else
  {
    return arr[middleIndex];
  }


}
console.log(medium(arr1,arr2));
```

IIFE

```
let  arr1=[1,3,5,7,9];
let  arr2=[0,2,4,6,8];

let median=(function(arr1,arr2){

  let arr=arr1.concat(arr2).sort((a,b) => a-b);
  let middleIndex=Math.floor(arr.length/2);

  if(arr.length%2===0)
  {
    return(arr[middleIndex-1]+arr[middleIndex])/2;
  }
  else
  {
    return( arr[middleIndex]);
  }



})(arr1,arr2);

console.log(median);
```

7. Remove duplicates from an array

Anonymous function

```
let array=[5,8,9,6,6,5,4,7,1,2,3];

let duplicate = function(array){
    return [...new Set(array)];
}
 console.log(duplicate(array));
```

IIFE

```
let array=[5,8,9,6,6,5,4,7,1,2,3];

(function(array){
    console.log([...new Set(array)]);
})(array);
```

8. Rotate an array by k times

Anonymous function

```
let  array = [1, 2, 3, 4, 5];
let  k = 2;
let rotateArray=function(array, k) {
    const n = array.length;
    k = k % n;
    array = array.slice(n - k).concat(array.slice(0, n - k));
    return array;
  }
console.log(rotateArray(array,k));
```

IIFE

```
let  array = [1, 2, 3, 4, 5];
let  k = 3;

let rotateArray=(function(array, k) {
    const n = array.length;
    k = k % n;
    array = array.slice(n - k).concat(array.slice(0, n - k));
    return array;
  })(array,k);

console.log(rotateArray);
```

2. Do the below programs in arrow functions.

a. Print odd numbers in an array
b. Convert all the strings to title caps in a string array
c. Sum of all numbers in an array
d. Return all the prime numbers in an array
e. Return all the palindromes in an array

a. Print odd numbers in an array

Code:

```
// Print odd numbers in an array


const printOddNumbers = arr => arr.forEach(num => {
  if (num % 2 !== 0) {
    console.log(num);
  }
});


const arr = [1, 2, 3, 4, 5, 6, 7, 8, 9];
printOddNumbers(arr); // Output: 1, 3, 5, 7, 9
```

b. Convert all the strings to title caps in a string array

Code:

```
const convertToTitleCaps = arr => arr.map(str => str.split(' ').map(word => word.charAt(0).toUpperCase() + word.slice(1).toLowerCase()).join(' '));
const arr = ['subaash', 'mukesh', 'praveen'];
const titleCapsArr = convertToTitleCaps(arr);
console.log(titleCapsArr); // Output: [ 'Subaash', 'Mukesh', 'Praveen' ]
```

c. Sum of all numbers in an array

Code:

```
const sumArray = arr => arr.reduce((total, num) => total + num);
const arr = [1, 2, 3, 4, 5];
const sum = sumArray(arr);
console.log(sum); // Output: 15
```

d. Return all the prime numbers in an array

Code:

```
const isPrime = num => {
  if (num <= 1) return false;
  for (let i = 2; i <= Math.sqrt(num); i++) {
    if (num % i === 0) return false;
  }
  return true;
};
const getPrimeNumbers = arr => arr.filter(num => isPrime(num));
const arr = [2, 3, 4, 5, 6, 7, 8, 9];
const primeArr = getPrimeNumbers(arr);
console.log(primeArr); // Output: [2, 3, 5, 7]
```

e. Return all the palindromes in an array

Code:

```
const isPalindrome = str => str.split('').reverse().join('') === str;
const getPalindromes = arr => arr.filter(str => isPalindrome(str));
const arr = ['racecar', 'hello', 'level', 'world'];
const palindromeArr = getPalindromes(arr);
console.log(palindromeArr); // Output: ["racecar", "level"]
```