Do the below programs in anonymous function & IIFE

1. Print odd numbers in an array

Anonymous : let a = [1,2,3,4,5,6]

 let oddNumbers = (array)=>{

    let odd = []

    for(let i of array)

    {

        if(i%2!==0)

            odd.push(i)

    }

    return odd

};

console.log(oddNumbers(a))

IIFE : let oddnum = ((array)=>{

      let odd = []

      for(let i of array) {

      if(i % 2 !== 0)

        odd.push(i)

      }

      return odd

  })([1,2,3,4,5,6])

  console.log(oddnum)

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

Anonymous : let tiltecase = (str)=> {

str = str.toLowerCase().split(' ');

for (i in str) {

str[i] = str[i].charAt(0).toUpperCase() + str[i].slice(1);

}

return str.join(' ');

}

let string = “MY NAME IS SATHISH”

console.log(titlecase(string));

IIFE : titleCase = ((str) => {

    str = str.toLowerCase().split(' ');

    for (i in str) {

      str[i] = str[i].charAt(0).toUpperCase() + str[i].slice(1);

    }

    return str.join(' ');

  })("MY NAME IS SATHISH")

  console.log(titleCase)

**c.**Sum of all numbers in an array

Anonymous : let sum = (array)=>{

  var sum = 0;

for( i of array ){

 sum = sum + i;

}

return sum;

}

let a = [1,2,3,4,5]

console.log(sum(a));

IIFE : let sum = ((array)=>{

     var sum=0;

     for(i of array)

     {

      sum = sum + i;

     }

      return sum;

  })([1,2,3,4,5])

  console.log(sum);

**d.** Return all the prime numbers in an array

Anonymous : let array = [1,2,3,4,5,6,7];

let isPrime = (num) => {

  for (let i = 2; i < num; i++) {

    if (num % i === 0) return false;

  }

  return num !== 1;

};

let Primenum = array.filter(element => isPrime(element));

console.log(Primenum);

IIFE : (  function(primenum){

     primenum = primenum.filter((number) => {

       for (var i = 2; i <= Math.sqrt(number); i++) {

         if (number % i === 0){

return false;

        }}

       return true;

     });

     console.log(primenum);

 })([1,2,3,4,5,6,7])

**e.** Return all the palindromes in an array

Anonymous : let arr = [ "abc", "car", "ada", "racecar", "cool" ];

let isPalindrome = (s)=>{

  let a = s;

  s = s.split('').reverse().join('');

  return s == a;

}

let palindrome = (arr)=>{

  let ans = [];

  arr.forEach((value,i) => {

    if (isPalindrome(arr[i])) {

      ans.push(arr[i]);

    }

  })

  return ans;

}

console.log(palindrome(arr));

IIFE : let arr = [ "abc", "car", "ada", "racecar", "cool" ];

let isPalindrome = (s)=>{

  let a = s;

s = s.split('').reverse().join('');

  return s == a;

}

let palindrome = ((arr)=>{

  let ans = [];

  arr.forEach((value,i) => {

    if (isPalindrome(arr[i])) {

      ans.push(arr[i]);

    }

  })

  return ans;

})(arr)

console.log(palindrome);

**f.** Return median of two sorted arrays of the same size.

Anonymous : let Median = (ar1, ar2, n)=>{

  var i = 0;

  var j = 0;

  var count;

  var m1 = -1, m2 = -1;

  for (count = 0; count <= n; count++)

  {

    if (i == n)

    {

      m1 = m2;

      m2 = ar2[0];

      break;

    }

    else if (j == n)

    {

      m1 = m2;

      m2 = ar1[0];

      break;

    }

    if (ar1[i] <= ar2[j])

    {

      m1 = m2;

      m2 = ar1[i];

      i++;

    }

    else

    {

      m1 = m2;

      m2 = ar2[j];

      j++;

    }

  }

  return (m1 + m2)/2;

}

var ar1 = [1, 12, 15, 26, 38];

var ar2 = [2, 13, 17, 30, 45];

var n1 = ar1.length;

var n2 = ar2.length;

if (n1 == n2)

  console.log("Median is "+ Median(ar1, ar2, n1));

else

  console.log("arrays are unequal size");

IIFE : var ar1 = [1, 12, 15, 26, 38];

var ar2 = [2, 13, 17, 30, 45];

var n1 = ar1.length;

var n2 = ar2.length;

let median = ((ar1, ar2, n)=>

{

  var i = 0;

  var j = 0;

  var count;

  var m1 = -1, m2 = -1;

  for (count = 0; count <= n; count++)

  {

    if (i == n)

    {

      m1 = m2;

      m2 = ar2[0];

      break;

    }

    else if (j == n)

    {

      m1 = m2;

      m2 = ar1[0];

      break;

    }

    if (ar1[i] <= ar2[j])

    {

      m1 = m2;

      m2 = ar1[i];

      i++;

    }

    else

    {

      m1 = m2;

      m2 = ar2[j];

      j++;

    }

  }

  return (m1 + m2)/2;

})(ar1,ar2,n1)

if (n1 == n2)

  console.log("Median is "+ median);

else

  console.log("Doesn't work for arrays of unequal size");

**g.** Remove duplicates from an array

Anonymous : let duplicate = (array)=>{

  let dup = [...new Set(array)];

    return dup;

  }

 let n = [1,1,2,3,4,5]

 console.log(duplicate(n))

IIFE : let duplicate = ((array)=>{

  let dup = [...new Set(array)];

    return dup;

  })([1,1,2,3,4,5])

  console.log(duplicate)

**h.** Rotate an array by k times

Anonymous : let rightRotate = (arr, k)=> {

  var n = arr.length;

  k = k % n;

  let rot = [];

  for (let i = 0; i < n; i++) {

      if (i < k) {

rot.push(arr[n + i - k] + " ");

      }

else {

          rot.push(arr[i - k] + " ");

      }

  }

   return rot

}

var Array = [1, 2, 3, 4, 5];

var k = 3;

console.log(rightRotate(Array,k));

IFEE : var Array = [1, 2, 3, 4, 5];

var k = 3;

let rightRotate = ((arr, k)=> {

  var n = arr.length;

  k = k % n;

  let rot = [];

  for (let i = 0; i < n; i++) {

      if (i < k) {

  rot.push(arr[n + i - k] + " ");

      }

else {

          rot.push(arr[i - k] + " ");

      }

  }

   return rot

})(Array,k)

console.log(rightRotate);

1. **Do the below programs in arrow functions.**
2. Print odd numbers in an array

let a = [1,2,3,4,5,6]

 let oddNumbers = (array)=>{

    let odd = []

    for(let i of array)

    {

        if(i%2!==0)

            odd.push(i)

    }

    return odd

};

console.log(oddNumbers(a))

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

let tiltecase = (str)=> {

str = str.toLowerCase().split(' ');

for (i in str) {

str[i] = str[i].charAt(0).toUpperCase() + str[i].slice(1);

}

return str.join(' ');

}

let string = “MY NAME IS SATHISH”

console.log(titlecase(string));

1. Sum of all numbers in an array

let sum = (array)=>{

  var sum = 0;

for( i of array ){

 sum = sum + i;

}

return sum;

}

let a = [1,2,3,4,5]

console.log(sum(a));

1. Return all the prime numbers in an array

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

let isPrime = (num) => {

  for (let i = 2; i < num; i++) {

    if (num % i === 0) return false;

  }

  return num !== 1;

};

let Primenum = array.filter(element => isPrime(element));

console.log(Primenum);

**e.** Return all the palindromes in an array

let arr = [ "abc", "car", "ada", "racecar", "cool" ];

let isPalindrome = (s)=>{

  let a = s;

  s = s.split('').reverse().join('');

  return s == a;

}

let palindrome = (arr)=>{

  let ans = [];

  arr.forEach((value,i) => {

    if (isPalindrome(arr[i])) {

      ans.push(arr[i]);

    }

  })

  return ans;

}

console.log(palindrome(arr));