Javascript - Day -5 : Functions

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

//a) Print odd numbers in an array:

|  |  |
| --- | --- |
| (function (arr)  {  let odd = [];  for (let i in arr) {  if (arr[i] % 2 !== 0) {  odd.push(arr[i]);  }  }  console.log(odd);})  ([1, 2, 3, 4, 5, 6,7,8]); | **Output:**  [ 1, 3, 5, 7 ] |

//b) Convert all the strings to title caps in a string array:

|  |  |
| --- | --- |
| let caps = function (str) {  return str[0].toUpperCase() + str.slice(1);  };  console.log(caps(“javascript")); | Output: Javascript |

//c) Sum of all numbers in an array

|  |  |
| --- | --- |
| var arr = [11, 12, 13, 14,15];  var total = 0;  for (var i in arr) {  total += arr[i];  }  console.log(total); | **Output:**  65 |

//d) Return all the prime numbers in an array

|  |  |
| --- | --- |
| let prime = function (arr) {  return arr.filter((n) => {  for (let i = 2; i < n; i++) {  if (n % i === 0) return false;  }  return n > 1;  });  };  console.log(prime([2,3,7,9,13,19,21,35])); | Output: [ 2, 3, 7, 13, 19 ] |

//e) Return all the palindromes in an array

|  |  |
| --- | --- |
| var words = ['amma', 'racecar', 'apple', 'porcupine', 'appa','live', 'level'];  var arr = [];  var str = words.slice(0);  var palndrm = str.toString().split("").reverse().join("").split(",");  console.log(palndrm);  for (let i = 0; i < words.length; i++) {  for (let z = 0; z < palndrm.length; z++) {  if (words[i] == palndrm[z]) {  arr.push(words[i])  }  }  } console.log(arr); | Output: [ 'level', 'evil', 'appa', 'enipucrop', 'elppa', 'racecar', 'amma' ]  [ 'amma', 'racecar', 'appa', 'level' ] |

//f) Return median of two sorted arrays of same size:

|  |  |
| --- | --- |
| function getMedian(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 = [3, 5, 7, 12, 13, 14, 21];  var ar2 = [23, 23, 23, 23, 29, 40, 56];  var n1 = ar1.length;  var n2 = ar2.length;  if (n1 == n2)  console.log("Median is "+ getMedian(ar1, ar2, n1));  else  console.log("Doesn't work for arrays of unequal size"); | Output: Median is 22 |

//g) Remove duplicates from an array

|  |  |
| --- | --- |
| (function (rpt) {  let arr1 = [];  for (let i in rpt) {  if (arr1.indexOf(rpt[i]) === -1)  {  arr1.push(rpt[i]);  }  }  console.log(arr1);  })  ([3, 5, 7, 12, 14, 14, 21, 23, 23, 23, 23]); | Output: [ 3, 5, 7, 12, 14, 21, 23 ] |

//h) Rotate an array by k times

|  |  |
| --- | --- |
| let rotated = function (arr, k) {  for (let i = 0; i < k; i++) {  arr.unshift(arr.pop());  }  return arr;  };  console.log(rotated([1, 3, 4], 2)); | Output: [ 3, 4, 1 ] |

1. 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

|  |  |
| --- | --- |
| const odd = (arr) => {  let arr1 = [];  for (let i in arr) {  if (arr[i] % 2 !== 0) {  arr1.push(arr[i]);  }  }  return arr1;  };  console.log(odd([2,4,9,7,10,22,17])); | Output: [ 9, 7, 17 ] |

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

|  |  |
| --- | --- |
| const capital1 = (str) => {  var arr = str.split(" ");  console.log(arr);  var res = [];  for (var i in arr) {  res.push((arr[i] = arr[i][0].toUpperCase() + arr[i].slice(1)));  }  return res.join(" ");  };  console.log(capital1("my name is swathi.")); | Output: [ 'my', 'name', 'is', 'swathi.' ]  My Name Is Swathi. |

//c) Sum of all numbers in an array

|  |  |
| --- | --- |
| var total = (arr) => {  var sum = 0;  for (var i in arr) {  sum += arr[i];  }  console.log(sum);  };  total([2, 3, 10]); | Output: 15 |

//d) Return all the prime numbers in an array

|  |  |
| --- | --- |
| var prime = (arr) => {  return arr.filter((num) => {  for (var i = 2; i < num; i++) {  if (num % i === 0) {  return false;  }  }  return num > 1;  });  };  console.log(prime([1, 2, 3, 12, 25, 37, 99])); | Output: [ 2, 3, 37 ] |

//e) Return all the palindromes in an array

|  |  |
| --- | --- |
| var palndrm = (arr) => {  var arr1 = [];  for (var i in arr) {  if (arr[i].split("").reverse().join("") === arr[i]) {  arr1.push(arr[i]);  }  }  return arr1;  };  console.log(palndrm(['amma', 'racecar', 'apple', 'porcupine', 'appa','live', 'level'])); | Output: [ 'amma', 'racecar', 'appa', 'level' ] |

//2) <https://medium.com/@reach2arunprakash/guvi-zen-class-javascript-warm-up-programming-problems-15973c74b87f>

GUVI : Zen Code-Sprints :— JavaScript Functions — Warmup Pbms(arunsir )

2. Write the following functions:

//a) Write a function called “addFive”.Given a number, “addFive” returns 5 added to that number.

|  |  |
| --- | --- |
| var num = 5;  function addFive(num) {  return num + 5;  }  var result = addFive(num);  console.log(result); | **Output:**  10 |

//b)Write a function called “getOpposite”.Given a number, return its opposite (sign):

|  |  |
| --- | --- |
| function getOpposite(num)  {    if (typeof num == "number")  {  return -num;  } else {  return -1;  }  }  var result = getOpposite(5)  console.log(result); | Output: -5 |

//c) Fill in your code that takes an number minutes and converts it to seconds.

Examples:

//toSeconds(5) ➞ 300

//toSeconds(3) ➞ 180

//toSeconds(2) ➞ 120

|  |  |
| --- | --- |
| function toSeconds(min) {  return min \* 60;  }  var secs = toSeconds(5)  console.log(secs) | Output: 300 |

//d)Create a function that takes a string and returns it as an integer.

Examples  
toInteger(“6”) ➞ 6

toInteger(“1000”) ➞ 1000

toInteger(“12”) ➞ 12

|  |  |
| --- | --- |
| var mystr = "1000";  function toInteger(mystr) {  return parseInt(mystr);  }  var myint = toInteger(mystr);  console.log(myint); | Output: 1000 |

//e) Create a function that takes a number as an argument, increments the number by +1 and returns the result.

//Examples

//nextNumber(0) ➞ 1

//nextNumber(9) ➞ 10

//nextNumber(-3) ➞ -2

|  |  |
| --- | --- |
| var myint = 0;  function nextNumber(myint) {  return myint + 1;  }  var myNextint = nextNumber(myint);  console.log(myNextint); | Output: 1 |

//f) Create a function that takes an array and returns the first element.

//Examples

//getFirstElement([1, 2, 3]) ➞ 1

//getFirstElement([80, 5, 100]) ➞ 80

//getFirstElement([-500, 0, 50]) ➞ -500

|  |  |
| --- | --- |
| var arr = [1, 2, 3];  function getFirstElement(arr) {  return arr[0];  }  var data = getFirstElement(arr)  console.log(data); | Output: 1 |

//g) Convert Hours into Seconds.Write a function that converts hours into seconds.

Examples  
hourToSeconds(2) ➞ 7200

hourToSeconds(10) ➞ 36000

hourToSeconds(24) ➞ 86400

|  |  |
| --- | --- |
| function hourToSeconds(arr) {  return arr \* 60 \* 60;  }  var data = hourToSeconds(2)  console.log(data); | Output: 7200 |

//h) Find the Perimeter of a Rectangle

Create a function that takes height and width and finds the perimeter of a rectangle.

Examples

findPerimeter(6, 7) ➞ 26

findPerimeter(20, 10) ➞ 60

findPerimeter(2, 9) ➞ 22

|  |  |
| --- | --- |
| function findPerimeter(num1,num2) {  return 2 \* (num1 + num2);  }  var perimeter = findPerimeter(6,7);  console.log(perimeter); | Output:  26 |

//i) Less Than 100?Given two numbers, return true if the sum of both numbers is less than 100. Otherwise return false.

Examples

lessThan100(22, 15) ➞ true

// 22 + 15 = 37

lessThan100(83, 34) ➞ false

// 83 + 34 = 117

|  |  |
| --- | --- |
| function lessThan100(num1,num2) {  let sum = num1 + num2;  if (sum < 100) {  return true;  } else return false;  }  var res = lessThan100(22,15);  console.log(res);  //---------------------------------  function lessThan100(num1,num2) {  let sum = num1 + num2;  if (sum < 100) {  return true;  } else return false;  }  var res = lessThan100(83, 34);  console.log(res); | Output:  true  Output:  false |

//j) There is a single operator in JavaScript, capable of providing the remainder of a division operation. Two numbers are passed as parameters. The first parameter divided by the second parameter will have a remainder, possibly zero. Return that value.

Examples

remainder(1, 3) ➞ 1

remainder(3, 4) ➞ 3

remainder(-9, 45) ➞ -9

remainder(5, 5) ➞ 0

|  |  |
| --- | --- |
| function remainder(num1,num2) {  return (num1 % num2);  }  var res = remainder(-9,45);  console.log(res); | Output:  -9 |