**1.Prime Number: Anonymous Function**

var numArray = [2, 3, 4, 5, 6, 7, 8, 9, 10]

var numArray = numArray.filter(function (number) {

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

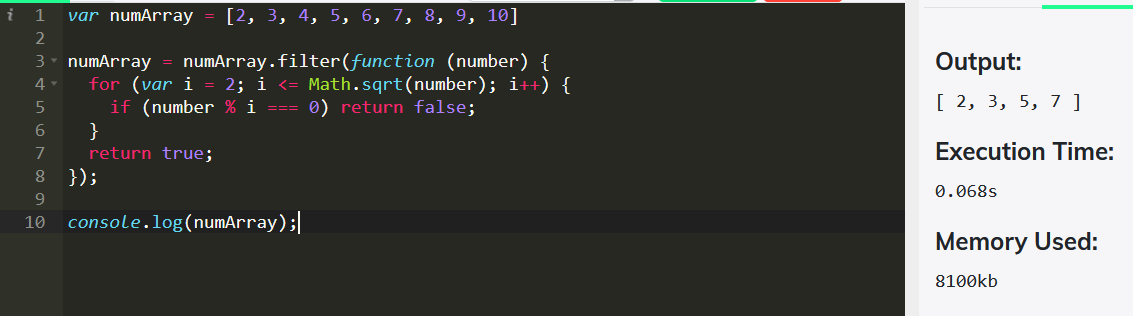
if (number % i === 0) return false;

}

return true;

});

console.log(numArray);



**Arrow Function:**

let isprime = (num) => {

if(num<2){

return false; // if number is 0 or 1 it returns false

}

for(i=2;i<num; i++){

if(num%i===0){

return false;

}

}

return true;

}

console.log(isprime(8));

console.log(isprime(7));

console.log(isprime(5));

console.log(isprime(4));



**2.Odd Number : Anonymous Function**

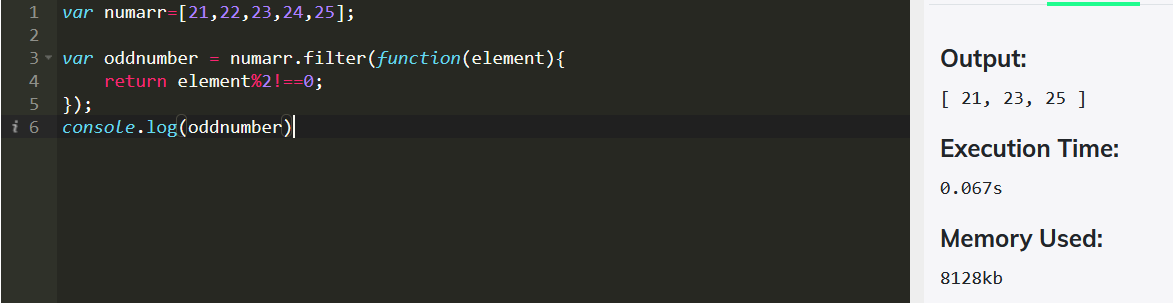
var numarr=[21,22,23,24,25];

var oddnumber = numarr.filter(function(element){

return element%2!==0;

});

console.log(oddnumber)

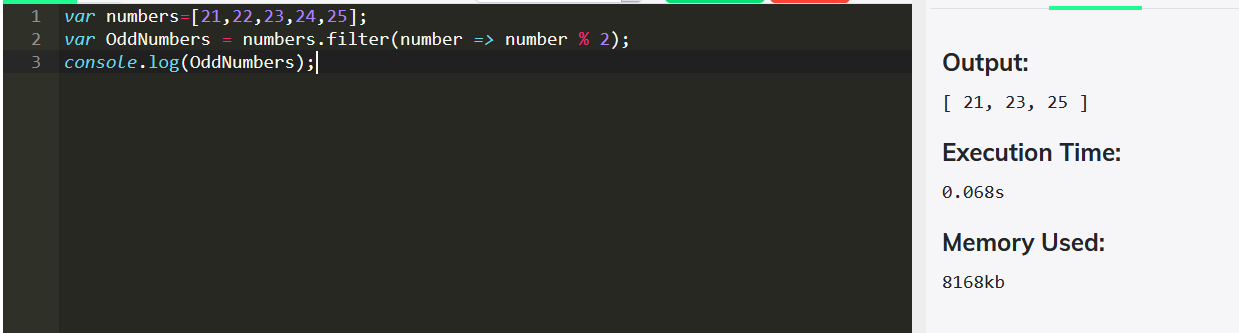


**Arrow Function :**

var numbers=[21,22,23,24,25];

var OddNumbers = numbers.filter(number => number % 2);

console.log(OddNumbers);

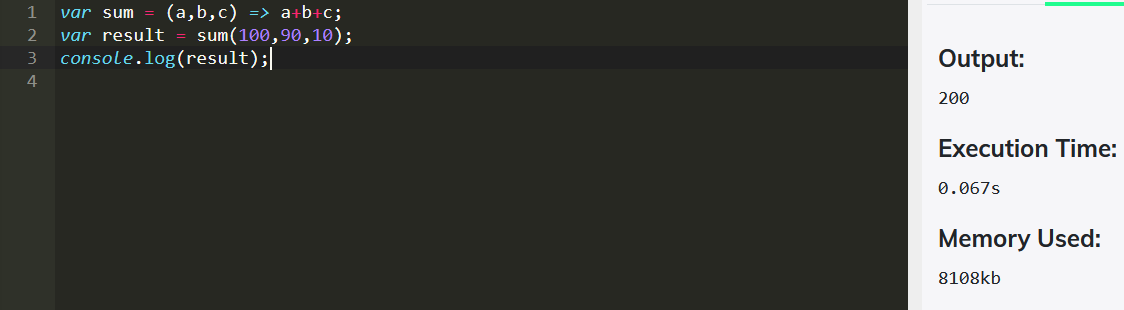


**3. Add Number : Arrow Function**

var sum = (a,b,c) => a+b+c;

var result = sum(100,90,10);

console.log(result);



**Anonymous Function :**

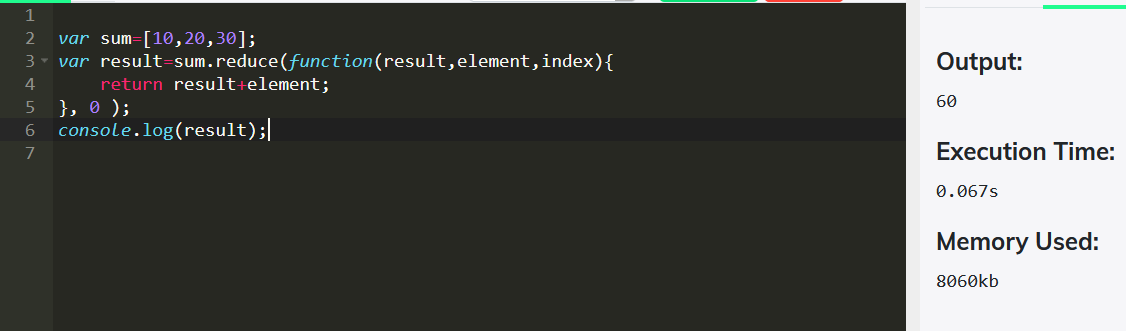
var sum=[10,20,30]

var result=sum.reduce(function(element,index){

return result+index;

}, 0 );

console.log(result)



**4.Palindrome or not : Arrow function**

var word =(str) => {

console.log(str.split('').reverse().join(''));

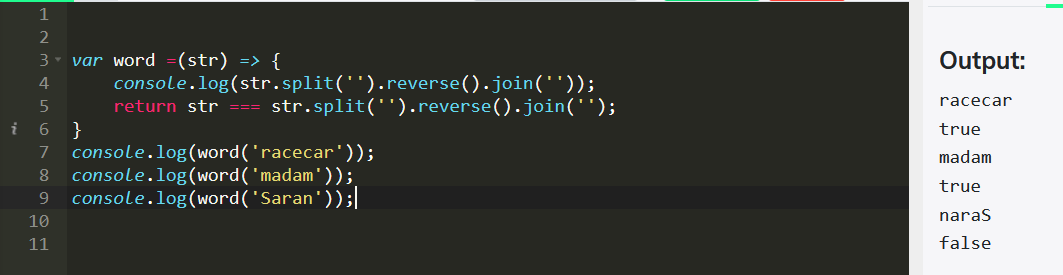
return str === str.split('').reverse().join('');

}

console.log(word('racecar'))

console.log(word('madam'))

console.log(word('Saran'))



**Anonymous Function:**

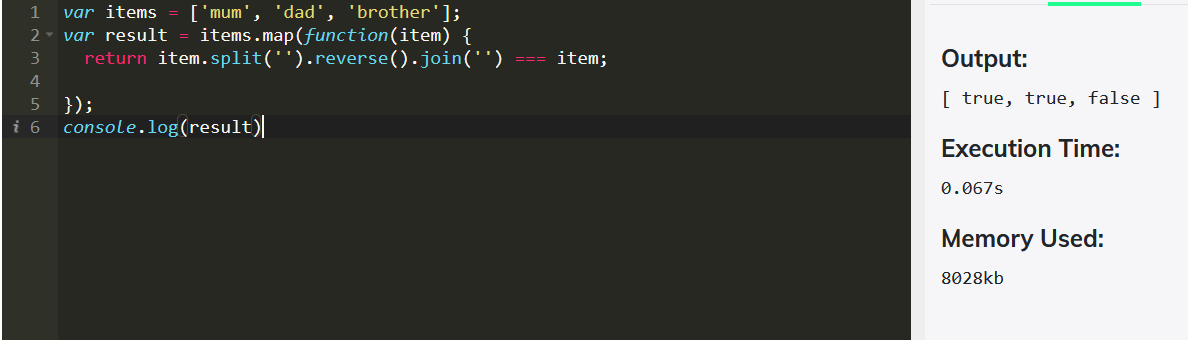
var items = ['mum', 'dad', 'brother'];

var result = items.map(function(item) {

return item.split('').reverse().join('') === item; //reverse the element in the array and join the aaray

});

console.log(result)

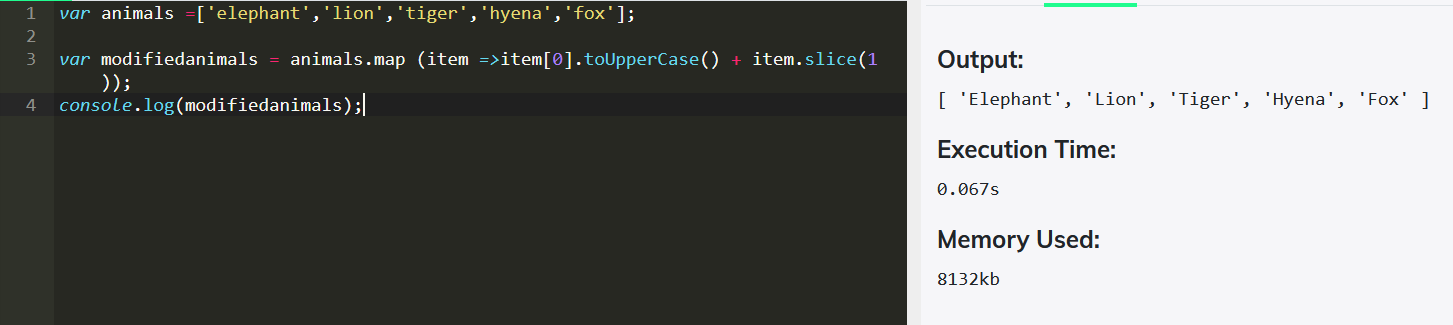


**5**.**Capitalize the First word: Arrow function**

var animals =['elephant','lion','tiger','hyena','fox'];

var modifiedanimals = animals.map (item =>item[0].toUpperCase() + item.slice(1));

console.log(modifiedanimals);



**Anonymous Function**

var days = ['sunday', 'monday', 'tuesday', 'wednesday', 'thursday', 'friday', 'saturday'];

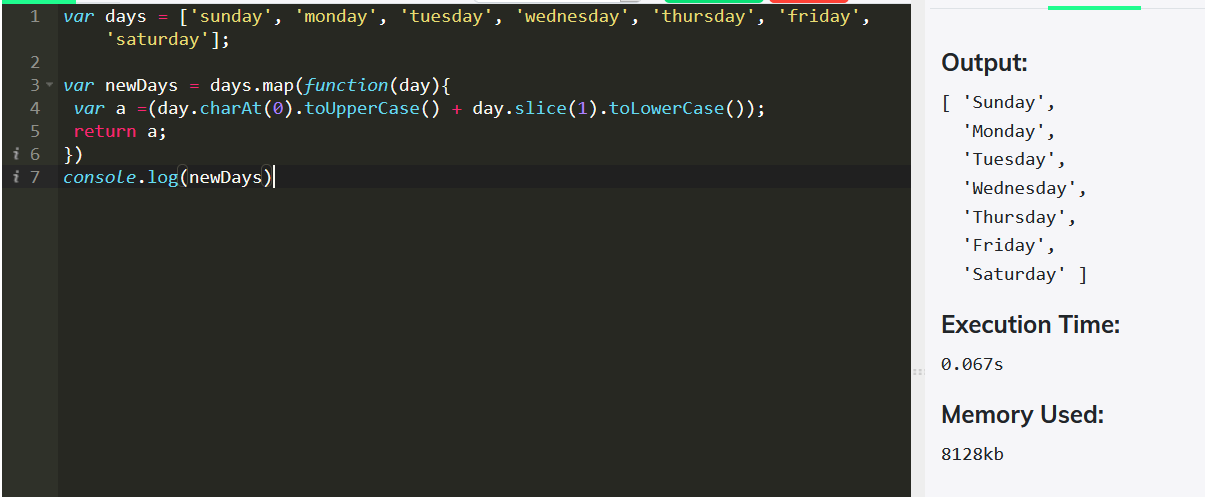
var newDays = days.map(function(day){

var a =(day.charAt(0).toUpperCase() + day.slice(1).toLowerCase()); //remove charat(0) and slice (1)

return a;

})

console.log(newDays)



**6. Removing Duplicates Elements from the Array:**

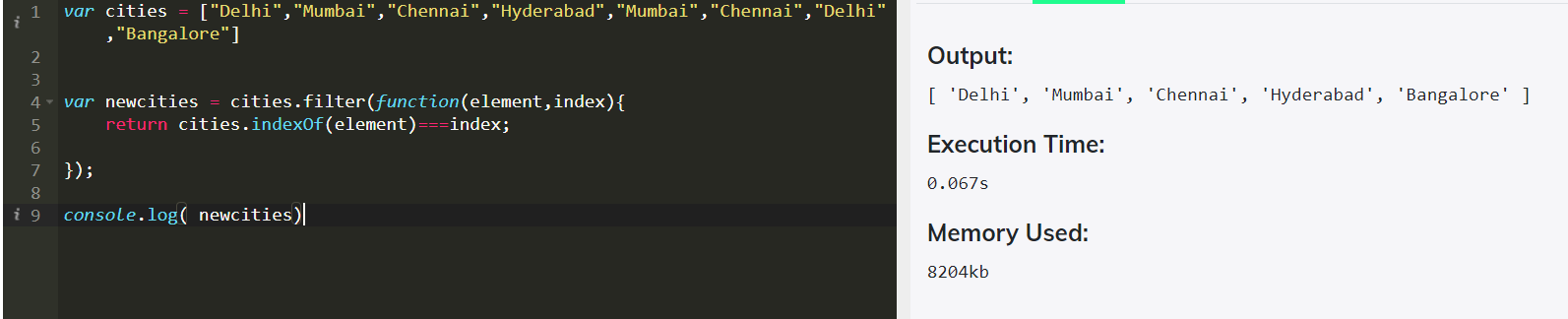
var cities = ["Delhi","Mumbai","Chennai","Hyderabad","Mumbai","Chennai","Delhi","Bangalore"]

var newcities = cities.filter(function(element,index){

return cities.indexOf(element)===index;

});

console.log( newcities)



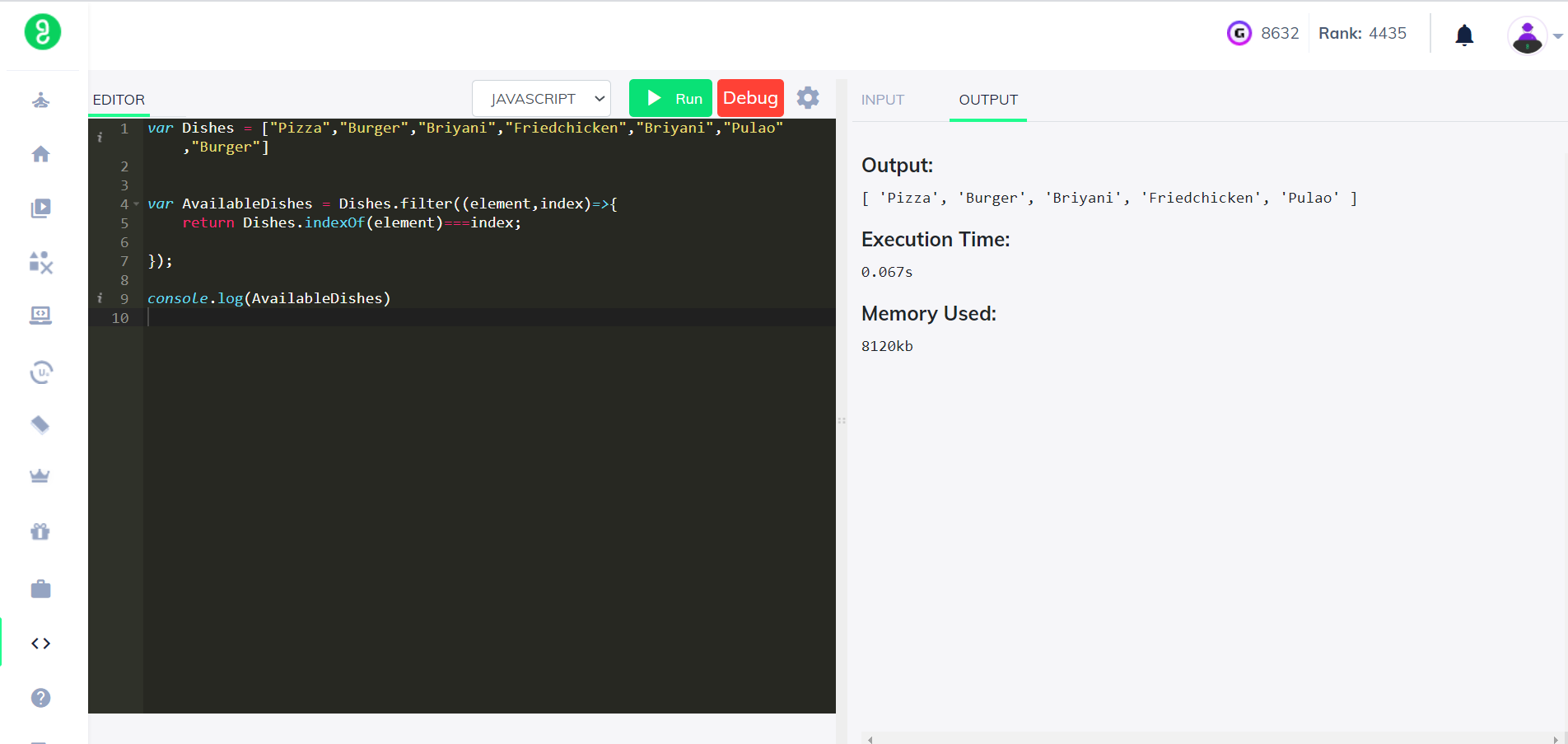
var Dishes = ["Pizza","Burger","Briyani","Friedchicken","Briyani","Pulao","Burger"]

var AvailableDishes = Dishes.filter((element,index)=>{

return Dishes.indexOf(element)===index;

});

console.log(AvailableDishes)



**7.Find the Median of the Array: (Arrow Function)**

var a=[1,3,5,7,9,11];

var b=[2,4,6,8,10,12];

var concat=[...a,...b];

var sort=concat.sort(function(a, b) {

return a - b;

});

console.log(sort)

var value = Math.floor(concat.length/2) //Math.floor =6

var result= concat =>{

if(concat.length%2===0)

{

return concat[value - 1] + concat[value]; // =>7+6 => 13

}

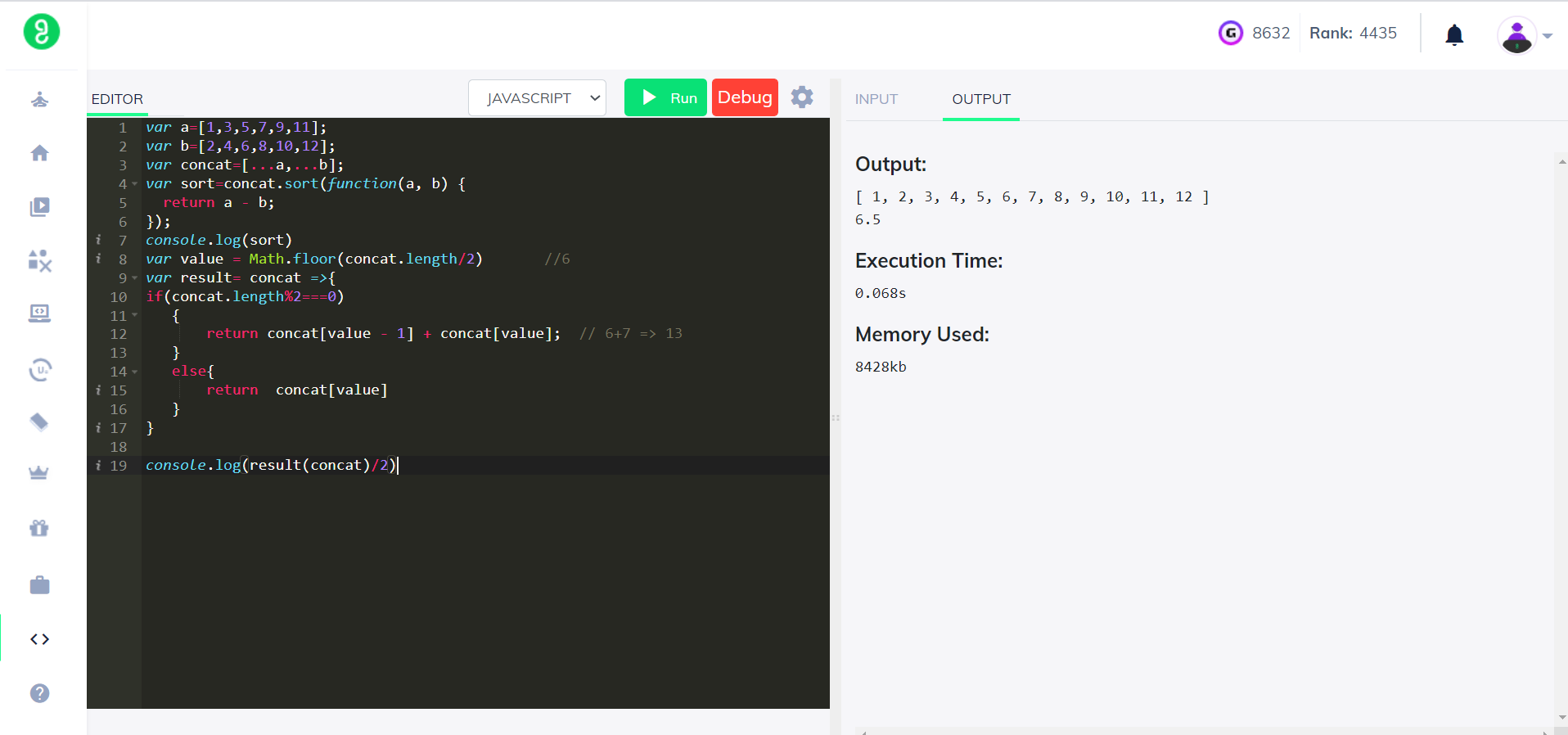
else{

return concat[value]

}

}

console.log(result(concat)/2)



**8. Rotating Array by K times: Arrow Function**

var numbers= [1,2,3,4,5,6,7];

var k=4; // number of rotation

var rotate = (nums, k) => {

for (let i = 0; i < k; i++) {

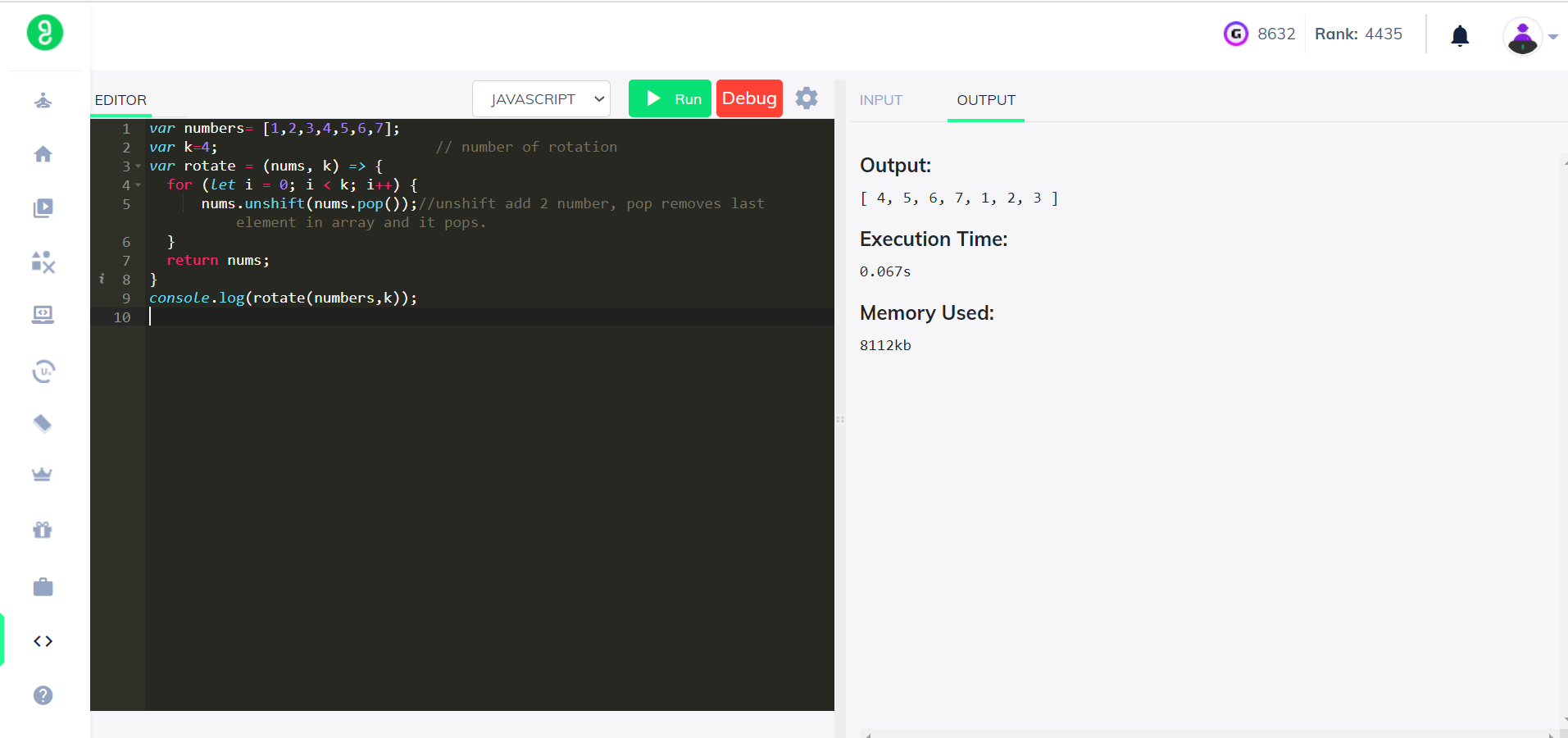
nums.unshift(nums.pop());//unshift add 2 number, pop removes last element in array and it pops.

}

return nums;

}

console.log(rotate(numbers,k));



**Task 4**

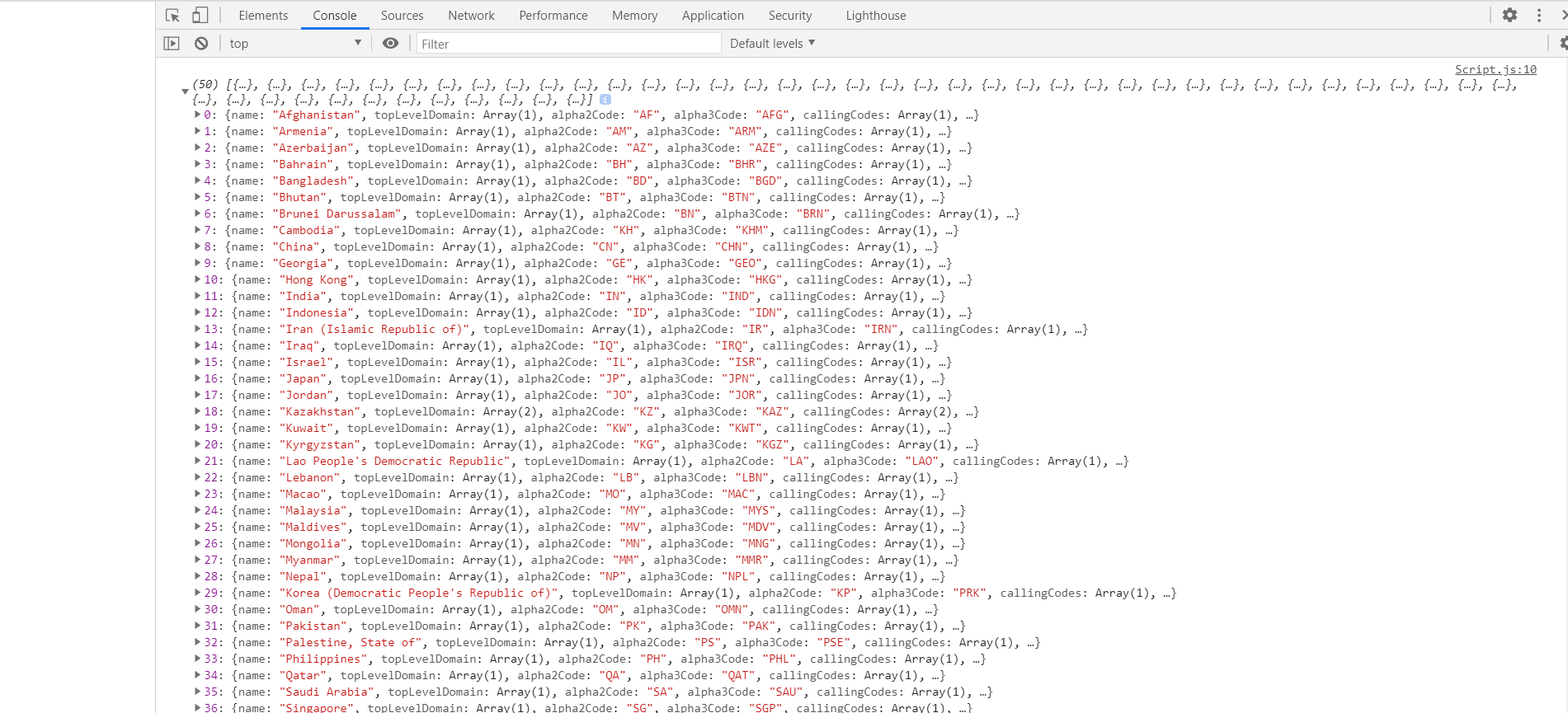
* Get all the countries from Asia continent / “region” using Filter method

  var countryInAsia = countrydata.filter(function(country){

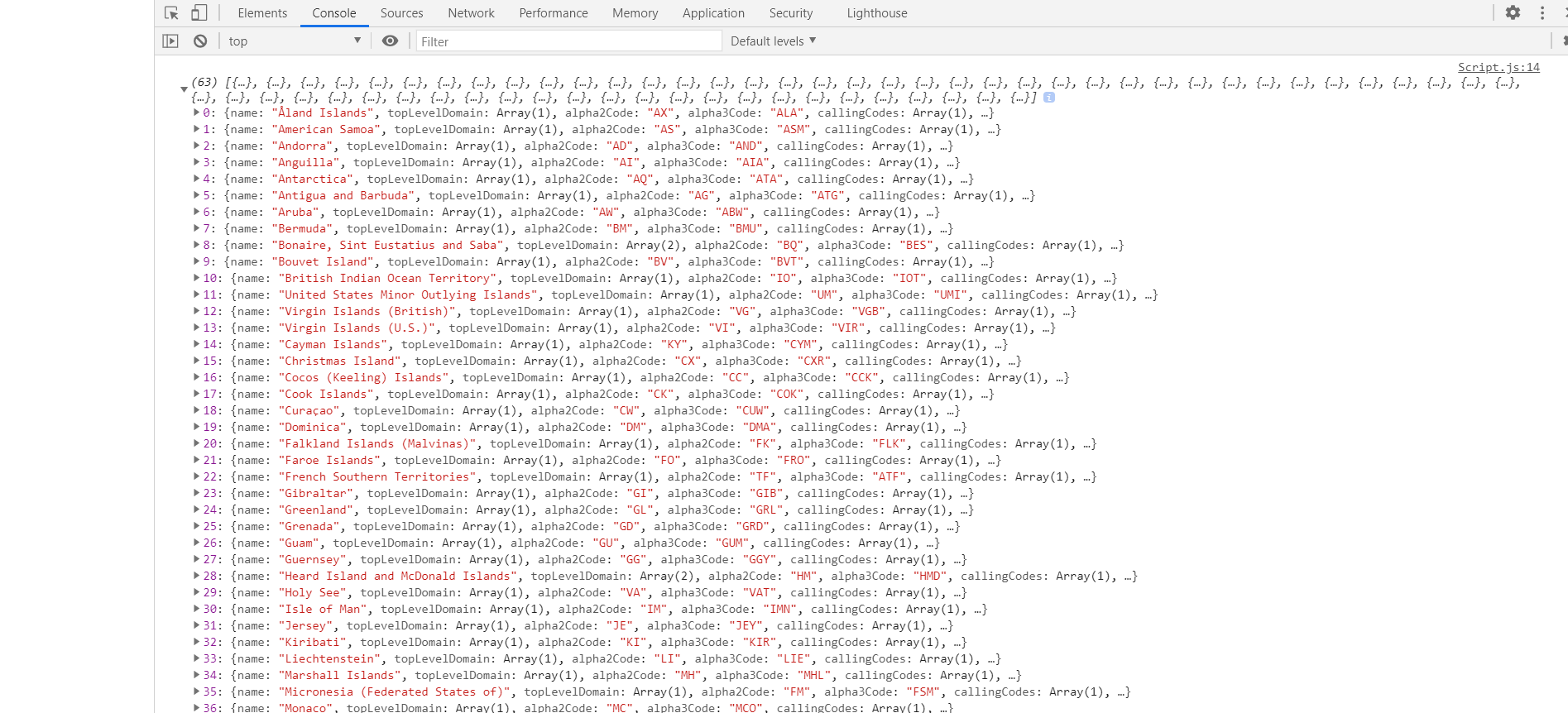
    return country.region ==="Asia"

})

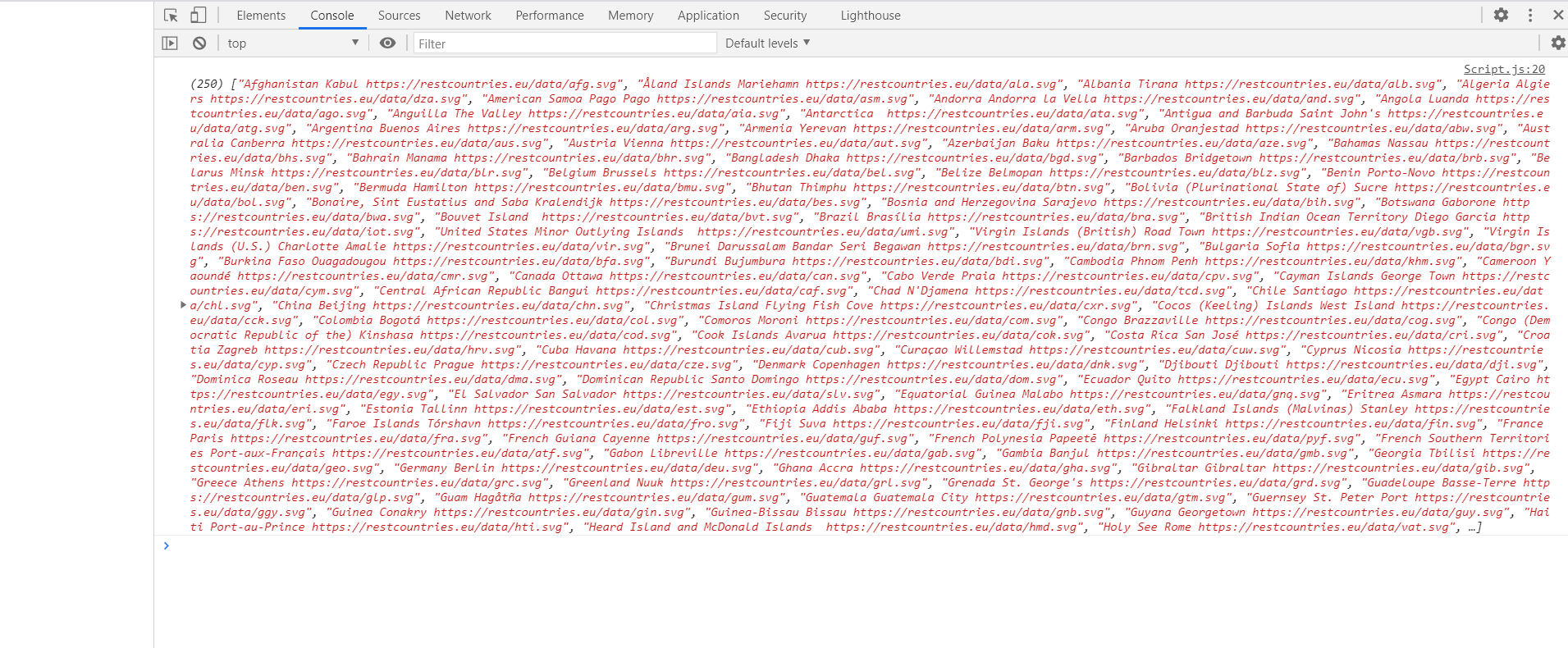
console.log(countryInAsia)



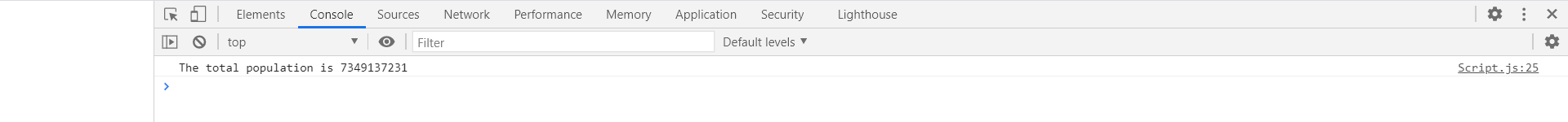
* Get all the countries with population of less than 2 lacs using Filter method
* var populationlessthan2L = countrydata.filter(function(country){
* return country.population < 200000
* })
* console.log(populationlessthan2L)



* Print the following details name, capital, flag using forEach.
* var countryDetails = [];
* countrydata.forEach((item, index) => {
* countryDetails[index]=(item.name+" "+item.capital+" "+item.flag )
* });
* console.log(countryDetails);



* Print the total population of countries using the reduce method.
* var countrydatapopulation = countrydata.reduce(function(result,item,index){
* return result+item.population;
* },0);
* console.log(“The Total Population is ” :countrydatapopulation)



* Print the country which uses US Dollars as currency.
* var countryuseusdollars = countrydata.filter(function(country){
* for(i=0;i < country.currencies.length;i++){
* if (country.currencies[i].code === "USD"){
* return country
* }
* }
* })
* console.log(countryuseusdollars)
* }

