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// Ex6.

const countries = [

'Albania',

'Bolivia',

'Canada',

'Denmark',

'Ethiopia',

'Finland',

'Germany',

'Hungary',

'Ireland',

'Japan',

'Kenya'

]

const webTechs = [

'HTML',

'CSS',

'JavaScript',

'React',

'Redux',

'Node',

'MongoDB'

]

const mernStack = ['MongoDB', 'Express', 'React', 'Node']

var to10 = "";

for(let i=0;i<=10;i++){

to10 = to10 + i + " ";

}

console.log(to10);

var i =0;

to10 = "";

while(i<=10){

to10 = to10 + i + " ";

i++;

}

console.log(to10);

var to0 = "";

for(let i=10;i>=0;i--){

to0 = to0 + i + " ";

}

console.log(to0);

var i =10;

to0 = "";

while(i>=0){

to0 = to0 + i + " ";

i--;

}

console.log(to0);

n = 7;

var ton = "";

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

ton = ton + i + " ";

}

console.log(ton);

for(let i=1;i<=n;i++){

let temp = "#";

for(let j=1;j<i;j++)

temp = temp + "#";

console.log(temp);

}

console.log();

for(let i=0;i<=10;i++){

console.log(i+' x '+i+' = '+ (i\*i));

}

console.log();

for(let i=-1;i<=10;i++){

if(i==-1){

console.log("i "+" i^2 "+ " i^3");

}else{

console.log(i+' '+(i\*i)+' '+ (i\*i\*i));

}

}

console.log();

var to100 = "";

for(let i=0;i<=100;i++){

if(!(i%2)){

to100 = to100 + i + " ";

}

}

console.log(to100);

console.log();

var to100 = "";

for(let i=0;i<=100;i++){

if((i%2)){

to100 = to100 + i + " ";

}

}

console.log(to100);

console.log();

var to100 = "";

for(let i=2;i<=100;i++){

let isP = true;

for(let j=2;j<i;j++){

if(!(i%j)){

isP = false;

break;

}

}

if(isP){

to100 = to100 + i +" ";

}

}

console.log(to100);

console.log();

var sum100 = 0;

for(let i=0;i<=100;i++){

sum100 = sum100 + i;

}

console.log(sum100);

console.log();

var sum100 = 0;

for(let i=0;i<=100;i++){

if(!(i%2)){

sum100 = sum100 + i;

}

}

console.log(sum100);

console.log();

var sume100 = 0;

var sumo100 = 0;

var arr = [];

for(let i=0;i<=100;i++){

if(!(i%2)){

sume100 = sume100 + i;

}else{

sumo100 = sumo100 + i;

}

arr[0] = sume100;

arr[1] = sumo100;

}

console.log(arr);

arr = [];

for(var i=0;i<5;i++){

arr.push(Math.ceil(Math.random()\*10));

}

console.log(arr)

var hash\_map = {};

arr = [];

for(var i=0;i<5;i++){

let rand = Math.ceil(Math.random()\*10);

if(hash\_map[rand]){

i--;

continue;

}else{

hash\_map.rand = 1;

arr.push(rand);

}

}

console.log(arr)

var str="";

for(var i=0;i<6;i++){

let rand = Math.ceil(Math.random()\*126);

if(rand>=0 && rand<=31){

i--;

continue;

}else{

var chr = String.fromCharCode(rand);

str = str + chr;

}

}

console.log(str);

console.log();

var r = Math.ceil(Math.random()\*50);

var str="";

for(var i=0;i<r;i++){

let rand = Math.ceil(Math.random()\*126);

if(rand>=0 && rand<=31){

i--;

continue;

}else{

var chr = String.fromCharCode(rand);

str = str + chr;

}

}

console.log(str);

console.log('rgb('+Math.ceil(Math.random()\*255)+','+Math.ceil(Math.random()\*255)+','+Math.ceil(Math.random()\*255)+')');

var carr=[];

var hash\_map = {};

arr = [];

for(var i=0;i<5;i++){

let rand = Math.ceil(Math.random()\*countries.length);

if(hash\_map[rand]){

i--;

continue;

}else{

hash\_map.rand = 1;

carr.push(countries[rand]);

}

}

console.log(carr);

var clen = [];

for(var i=0;i<countries.length;i++){

clen[i] = countries[i].length;

}

console.log(clen)

var mat = [];

for(var i=0;i<countries.length;i++){

var temp = [];

temp[0] = countries[i];

temp[1] = (countries[i].substring(0,30)).toUpperCase();

temp[2] = clen[i];

mat[i] = temp;

}

console.log(temp);

var land = [];

for(var i=0;i<countries.length;i++){

if(countries[i].includes("land")){

land.push(countries[i]);

}

}

console.log(land);

var ia = [];

for(var i=0;i<countries.length;i++){

if(countries[i].endsWith("ia")){

ia.push(countries[i]);

}

}

console.log(ia);

var big=ia[0];

var bigl = ia[0].length;

for(var i=0;i<ia.length;i++){

if(ia[i].length>bigl){

big = ia[i];

bigl = ia[i].length;

}

}

console.log(big);

var l5 = [];

for(var i=0;i<countries.length;i++){

if(countries[i].length == 5){

l5.push(countries[i]);

}

}

console.log(l5);

var big=webTechs[0];

var bigl = webTechs[0].length;

for(var i=0;i<webTechs.length;i++){

if(webTechs[i].length>bigl){

big = webTechs[i];

bigl = webTechs[i].length;

}

}

console.log(big);

var wtmat = [];

for(var i=0;i<webTechs.length;i++){

wtmat[i] = [webTechs[i],webTechs[i].length];

}

console.log(wtmat);

var arr = ["HTML", "CSS", "JS", "React", "Redux", "Node", "Express", "MongoDB"];

for(var i=0;i<arr.length;i++){

console.log(arr[i]);

}

var arr = ['banana', 'orange', 'mango', 'lemon'];

for(var i=0;i<Math.floor(arr.length/2);i++){

var temp = arr[i];

arr[i] = arr[arr.length-i-1];

arr[arr.length-i-1] = temp;

}

console.log(arr);

const fullStack = [

['HTML', 'CSS', 'JS', 'React'],

['Node', 'Express', 'MongoDB']

];

for(var i=0;i<2;i++){

for(var j=0;j<fullStack[i].length;j++){

console.log(fullStack[i][j]);

}

}

var contc = countries.slice();

contc[0] = "India";

console.log(countries);

console.log(contc);

var sortedCountries = countries.slice();

sortedCountries.sort();

console.log(sortedCountries);

for(var i=0;i<Math.floor(countries.length/2);i++){

var temp = countries[i].toUpperCase();

countries[i] = countries[countries.length-i-1].toUpperCase();

countries[countries.length-i-1] = temp;

}

countries[Math.floor(countries.length/2)] = countries[Math.floor(countries.length/2)].toUpperCase();

console.log(countries);

**Output:**

0 1 2 3 4 5 6 7 8 9 10

0 1 2 3 4 5 6 7 8 9 10

10 9 8 7 6 5 4 3 2 1 0

10 9 8 7 6 5 4 3 2 1 0

0 1 2 3 4 5 6 7

#

##

###

####

#####

######

#######

0 x 0 = 0

1 x 1 = 1

2 x 2 = 4

3 x 3 = 9

4 x 4 = 16

5 x 5 = 25

6 x 6 = 36

7 x 7 = 49

8 x 8 = 64

9 x 9 = 81

10 x 10 = 100

i i^2 i^3

0 0 0

1 1 1

2 4 8

3 9 27

4 16 64

5 25 125

6 36 216

7 49 343

8 64 512

9 81 729

10 100 1000

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100

1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 89 91 93 95 97 99

2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97

5050

2550

[ 2550, 2500 ]

[ 8, 2, 5, 10, 5 ]

[ 2, 1, 3, 10, 10 ]

7SFv#l

+LcmI=5OzcaVQ.)pdFN

rgb(221,128,40)

[ 'Canada', 'Germany', 'Kenya', 'Germany', 'Germany' ]

[ 7, 7, 6, 7, 8, 7, 7, 7, 7, 5, 5 ]

[ 'Kenya', 'KENYA', 5 ]

[ 'Finland', 'Ireland' ]

[ 'Albania', 'Bolivia', 'Ethiopia' ]

Ethiopia

[ 'Japan', 'Kenya' ]

JavaScript

[ [ 'HTML', 4 ],

[ 'CSS', 3 ],

[ 'JavaScript', 10 ],

[ 'React', 5 ],

[ 'Redux', 5 ],

[ 'Node', 4 ],

[ 'MongoDB', 7 ] ]

HTML

CSS

JS

React

Redux

Node

Express

MongoDB

[ 'lemon', 'mango', 'orange', 'banana' ]

HTML

CSS

JS

React

Node

Express

MongoDB

[ 'Albania',

'Bolivia',

'Canada',

'Denmark',

'Ethiopia',

'Finland',

'Germany',

'Hungary',

'Ireland',

'Japan',

'Kenya' ]

[ 'India',

'Bolivia',

'Canada',

'Denmark',

'Ethiopia',

'Finland',

'Germany',

'Hungary',

'Ireland',

'Japan',

'Kenya' ]

[ 'Albania',

'Bolivia',

'Canada',

'Denmark',

'Ethiopia',

'Finland',

'Germany',

'Hungary',

'Ireland',

'Japan',

'Kenya' ]

[ 'KENYA',

'JAPAN',

'IRELAND',

'HUNGARY',

'GERMANY',

'FINLAND',

'ETHIOPIA',

'DENMARK',

'CANADA',

'BOLIVIA',

'ALBANIA' ]