

JAVASCRIPT ASSIGNMENT (Trainer: Rahul Pareek)

- Submitted by (Kavita Goodwani INT 438)

JAVASCRIPT ASSIGNMENT

Q1. Explain Array Functions with examples.

Function name	Command	Output
concat()	<pre>var arr=[10,8,9,12,14,67,78] arr.concat(22)</pre>	<pre>var arr=[10,8,9,12,14,67,78] arr.concat(22) ▼ (8) [10, 8, 9, 12, 14, 67, 78, 22] ⓘ 0: 10 1: 8 2: 9 3: 12 4: 14 5: 67 6: 78 7: 22 length: 8 ▶ __proto__: Array(0)</pre>
every()	<pre>var arr=[10,8,9,12,14,67,78] const isgreaterthanequal10= (currentValue) => currentValue >=10; arr.every(isgreaterthanequal10)</pre>	<pre>var arr=[10,8,9,12,14,67,78] const isgreaterthanequal10= (currentValue) => currentValue >=10; arr.every(isgreaterthanequal10) false</pre>
filter()	<pre>var arr=[10,8,9,12,14,67,78] const isgreaterthanequal10= (currentValue) => currentValue >=10; arr.filter(isgreaterthanequal10)</pre>	<pre>> var arr=[10,8,9,12,14,67,78] arr.filter(isgreaterthanequal10) < ▼ (5) [10, 12, 14, 67, 78] ⓘ 0: 10 1: 12 2: 14 3: 67 4: 78 length: 5 ▶ __proto__: Array(0)</pre>

forEach()	<pre>var arr=[10,8,9,12,14,67,78] arr.forEach(element => console.log(element+1));</pre>	<pre>> var arr=[10,8,9,12,14,67,78] arr.forEach(element => console.log(element+1)); 11 9 10 13 15 68 79</pre>
indexOf()	<pre>var arr=[10,8,9,12,14,67,78] arr.indexOf(12)</pre>	<pre>> var arr=[10,8,9,12,14,67,78] arr.indexOf(12)</pre>
join()	<pre>var arr=[10,8,9,12,14,67,78] arr.join()</pre>	<pre>> var arr=[10,8,9,12,14,67,78] arr.join() < "10,8,9,12,14,67,78"</pre>
lastIndexOf	<pre>var newArray=[12,14,133,5,4,12,13] newArray.lastIndexOf(12)</pre>	<pre>> var newArray=[12,14,133,5,4,12,13] newArray.lastIndexOf(12) < 5</pre>
map()	<pre>var newArray=[12,14,133,5,4,12,13] newArray.map(x=>x*2)</pre>	<pre>> var newArray=[12,14,133,5,4,12,13] newArray.map(x=>x*2) < ▼ (7) [24, 28, 266, 10, 8, 24, 26] ⓘ 0: 24 1: 28 2: 266 3: 10 4: 8 5: 24 6: 26 length: 7</pre>
pop()	<pre>var newArray=[12,14,133,5,4,12,13] newArray.pop()</pre>	<pre>> var newArray=[12,14,133,5,4,12,13] newArray.pop() < 13</pre>
push()	<pre>var newArray=[12,14,133,5,4,12,13] newArray.push(2)</pre>	<pre>> var newArray=[12,14,133,5,4,12,13] newArray.push(2) < 8</pre>

reduce()	<pre>var newArray=[12,14,133,5,4,12,13] function subtract(total, num) { return total - num; } newArray.reduce(subtract)</pre>	<pre>> var newArray=[12,14,133,5,4,12,13] function subtract(total, num) { return total - num; } newArray.reduce(subtract) < -169</pre>
reduceRight()	<pre>var newArray=[12,14,133,5,4,12,13] function subtract(total, num) { return total - num; } newArray.reduceRight(subtract)</pre>	<pre>> var newArray=[12,14,133,5,4,12,13] function subtract(total, num) { return total - num; } newArray.reduceRight(subtract) < -167</pre>
reverse()	<pre>var newArray=[12,14,133,5,4,12,13] newArray.reverse()</pre>	<pre>> var newArray=[12,14,133,5,4,12,13] newArray.reverse() < ▼ (7) [13, 12, 4, 5, 133, 14, 12] ⓘ 0: 13 1: 12 2: 4 3: 5 4: 133 5: 14 6: 12 length: 7</pre>
shift()	<pre>var newArray=[12,14,133,5,4,12,13] newArray.shift()</pre>	<pre>> var newArray=[12,14,133,5,4,12,13] newArray.shift() < 12</pre>
slice()	<pre>var newArray=[12,14,133,5,4,12,13] newArray.slice(1,4)</pre>	<pre>> var newArray=[12,14,133,5,4,12,13] newArray.slice(1,4) < ▼ (3) [14, 133, 5] ⓘ 0: 14 1: 133 2: 5 length: 3 ▶ __proto__: Array(0)</pre>

some()	<pre>var arr=[10,8,9,12,14,67,78] const isgreaterthanequal10= (currentValue) => currentValue >=10; arr.some(isgreaterthanequal10)</pre>	<pre>> var arr=[10,8,9,12,14,67,78] arr.some(isgreaterthanequal10) < true</pre>
sort()	<pre>var newArray=[12,14,133,5,4,12,13] sort():newArray.sort()</pre>	<pre>> var newArray=[12,14,133,5,4,12,13] newArray.sort() < ▼ (7) [12, 12, 13, 133, 14, 4, 5] ⓘ 0: 12 1: 12 2: 13 3: 133 4: 14 5: 4 6: 5 length: 7</pre>
toString()	<pre>var newArray=[12,14,133,5,4,12,13] newArray.toString()</pre>	<pre>> var newArray=[12,14,133,5,4,12,13] newArray.toString() < "12,14,133,5,4,12,13"</pre>
unshift()	<pre>var newArray=[12,14,133,5,4,12,13] newArray.unshift()</pre>	<pre>> var newArray=[12,14,133,5,4,12,13] newArray.unshift() < 7</pre>
splice()	<pre>var month = ['Jan', 'March', 'April', 'June']; month.splice(1, 0, 'Feb'); month</pre>	<pre>> var month = ['Jan', 'March', 'April', 'June']; month.splice(1, 0, 'Feb'); month < ► (5) ["Jan", "Feb", "March", "April", "June"]</pre>

Q2. What will be the output of given code. Explain your answer.

```
var add = ( function(){ var counter=0; return function() { return counter+=1;}})() ;
add();
add();
add();

> var add = ( function(){ var counter=0; return function() { return counter+=1;}})() ;
  add();
  add();
  add();
< 3

> var add = ( function(){ var counter=0; return function() { return counter+=1;}})() ;
  add();
< 1

> add()
< 2

> add();
< 3
```

EXPLANATION:

The above is an example of self-invoking function in javascript, wherein the outer function returns the reference of outer function and the the initialisation is only called one time, therefore everytime add() is called it increments counter by one.

The self invoking function return as above by a developer is converted to a simple
f () { return counter+=1;}
// an incrementer function

```
> console.log(add)
f () { return counter+=1;}
```

Q3. What is difference between /n and /r?

Ans /n refers to New line and /r is Carriage return : /n is used to point the cursor to the next line whereas /r is used to point to the start of the page i.e. to extreme left of page.

In Javascript we generally use only /n for next line.

Operating systems have different ideologies of next line and use both /n and /r together that is to place cursor to the extreme left of next line.

Q4. Create a webpage and do the following:

**a. Take a string as input and check whether it matches a given regex
(starts with hot/dot/not and ends with h(o)+t/d(o)+t/n(o)+t)**

b. Take an array as input and do the following:

i. Sort the array

ii. Filter the array (Elements in array >=10)

iii. Add 1 to each element in the array

iv. Return Array elements from index 1 to 4

This page says

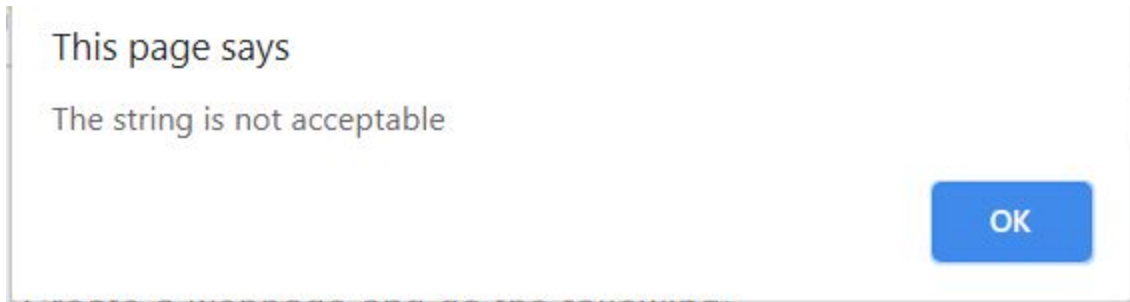
The sorted array is: 112,2,2,4,45,56,576,576,6876 The Filtered Array is
112,45,56,576,576,6876 The incremented array is
113,46,57,577,577,6877 The final array is 46,57,577,577

OK

1. Take a string as input and check whether it matches a given regex
(starts with hot/dot/not and ends with h(o)+t/d(o)+t/n(o)+t)

Enter string to test whether it matched regular expression

Match String



Create a webpage and do the following:

1. Take a string as input and check whether it matches a given regex (starts with hot/dot/not and ends with h(o)+t/d(o)+t/n(o)+t)

Match String

2. Take an array as input and do the following:
 - i. Sort the array
 - ii. Filter the array (Elements in array ≥ 10)
 - iii. Add 1 to each element in the array
 - iv. Return Array elements from index 1 to 4

Perform task