

### CSC-325: Web Engineering

### Semester VI (CS, SE) Section (A, B) (Spring 2022)

### Course Instructor(s): Riaz Ali Soomro

### Sajjad Ali

### 023-19-0100

### BSCS VI B

### Sukkur IBA University

1. Declare variables which should hold data of following types. You may assign some

value according to variable type to the variables.

• Integer

• Float

• Boolean

• String

• Date

• undefined

• Array of integers

• Array of Strings

• Array of Mixed elements

• Object with properties (ID is 1, Name is “ABC”)

let integer = 12;

let float = 3.14;

let boolean = true;

let string = 'string';

let date = new Date(2000, 03, 07);

let undefinedVariable = undefined;

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

let stringsArray = ['A', 'B', 'C'];

let mixed = [integerArray, stringsArray, integer];

let obj = {

id : 1,

name: 'ABC'

};

2. Provide different inputs to following functions in given code and see what they return

(you may use console.log to print output)

Number

parseInt

parseFloat

For example

var abc = Number("1212a");

console.log(abc);

console.log('parseInt');

console.log(parseInt('123')); // 123

console.log(parseInt('123.123')); // 123

console.log(parseInt('123abcd')); // 123

console.log(parseInt('qwes123')); // NaN

console.log('parseFloat');

console.log(parseFloat('123')); // 123

console.log(parseFloat('123.123')); // 123.123

console.log(parseFloat('123abcd')); // 123

console.log(parseFloat('qwes123')); // NaN

console.log('Number');

console.log(Number('123')); // 123

console.log(Number('123.123')); // 123.123

console.log(Number('123abcd')); // NaN

console.log(Number('qwes123')); // NaN

3. Write a function which checks and prints only the string type properties of an object.

function check(obj){

for(i in obj){

if(typeof obj[i] == typeof "")

console.log(obj[i]);

}

}

let obj = {

id: 1,

name: 'Sajjad',

age: 21,

caste: 'Khaskheli'

};

check(obj);

4. Write a function which checks number till given input/parameter is odd or even.

function evenOdd(number){

if(number % 2 == 0)

console.log(`Input Number ${number} is even`);

else

console.log(`Input Number ${number} is odd`);

}

evenOdd(1);

5. Write a function which checks given input/parameter:

• If input/parameter is below speedlimit of 70 print => 'Good Safe Driving'

• If input/parameter is above speedlimit of 70, every 5 kilometers is Penalty

Point, print => 'Speed Limit Crossed by Penalty Point' + Point

• If Driver gets more than 10 penalty points ie. above the speed limit 120, print

=> 'License Suspended'

function safeDriving(speed){

if(speed <= 70)

console.log('Good Safe Driving');

else{

console.log()

let penalty = (speed - 70)/5;

console.log(`Speed Limit Crossed by Penalty ${penalty}`);

if(penalty > 10)

console.log('License Suspended');

}

}

safeDriving(123);

6. Write an arrow function which calculate the sum of marks provided in an array,

average it and also show Grade. Follow Grading Policy.

const details = (marks) => {

let sum = marks.reduce((a,b) => a + b)

let average = sum / marks.length;

console.log(`Marks = ${marks}, Average = ${average}`);

if(average >= 80)

console.log('Grade A1');

else if(average >= 70){

console.log('Grade A');

}

else if(average >= 60){

console.log('Grade B');

}

else if(average >= 50){

console.log('Grade C');

}

else{

console.log('Grade D');

}

}

details([0, 19.75, 99, 94]);

7. Write an anonymous program to reverse a string

(function(message){

let reverse = "";

for(i of message)

reverse = i + reverse;

console.log(reverse);

})('Hello World');

8. Write a function which returns a list of elements which contains at least one

character as digit.

function list(message){

let data = []

for(i of message){

if(i.match(/\d+/g)){

data.push(i);

}

}

return data;

}

let data = "chas";

console.log(list(["name","abc", "Item", "pass123"]));

9. Write a function which accepts two valid dates and returns the difference between

them as number of days. Please read this for understanding Date or Google it

function getDays(d1, d2){

if(typeof d1 != typeof new Date() || typeof d2 != typeof new Date())

return false;

return Math.abs(d2.getDate() - d1.getDate());

}

let date = new Date();

let date2 = new Date(2022, 04, 24);

console.log(getDays(date, date2));

10. Write a function which can check if a given object is empty or not. If not empty, then

display all the keys as well as values of an object. (Also values of nested objects)

function display(obj, delimit){

let keys = Object.keys(obj);

if(keys.length != 0){

for(k of keys){

console.log(delimit + `${k} : ${obj[k]}`);

if(typeof obj[k] == typeof {}){

display(obj[k], delimit + " ");

}

}

}

}

let obj = {

id : 1,

name: 'Sajjad Ali',

address: {

street: 'Latifabad',

city: 'Hyderabad',

province: 'Sindh'

},

caste: 'Khaskheli',

empty: {}

}

display(obj, "");

Find the number of occurrences of minimum value in the numbers list and replace all

the occurrences with -1 value.

function findMin(list){

let min = list[0]

for (v of list)

if(v < min)

min = v;

return min;

}

function findOccurrencesAndReplace(list, value){

let count = 0;

for(k in list)

if(list[k] == min){

list[k] = -1;

count++;

}

return count

}

let list = [1,-123,3,-123,5,6];

let min = findMin(list);

console.log(findOccurrencesAndReplace(list, min));

console.log(list);

12. Extra Task

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Document</title>

</head>

<body>

<form action="#">

<input type="button" id="he" value="Turn On" onclick="call()">

</form>

<script>

function call(){

let btn = document.getElementById("he");

if(btn.value == 'Turn On'){

btn.value = 'Turn Off';

}

else{

btn.value = 'Turn On';

}

}

</script>

</body>

</html>