Q.1 Using console.log() print out the following statement: The quote 'There is no exercise better for the heart than reaching down and lifting people up.' by John Holmes teaches us to help one another. Using console.log() print out the following quote by Mother Teresa:

* console.log("The quote 'There is no exercise better for the heart than reaching down and lifting people up.' by John Holmes teaches us to help one another.");
* console.log("Mother Teresa once said, 'If you want to change the world, go home and love your family.'");

Q.2 Check if typeof '10' is exactly equal to 10. If not make it exactly equal?

console.log(typeof '10' === typeof 10);

let num = Number('10');

console.log(num === 10);

Q.3 Write a JavaScript Program to find the area of a triangle?

function calculateTriangleAreaSides(a, b, c) {

    let s = (a + b + c) / 2;

    return Math.sqrt(s \* (s - a) \* (s - b) \* (s - c));

}

Q.4 Write a JavaScript program to calculate days left until next Christmas?

 function daysUntilNextChristmas() {

    const today = new Date();

    let christmas = new Date(today.getFullYear(), 11, 25);

    if (today > christmas) {

        christmas.setFullYear(today.getFullYear() + 1);

    }

    const differenceInMilliseconds = christmas - today;

    const daysLeft = Math.ceil(differenceInMilliseconds / (1000 \* 60 \* 60 \* 24));

    return daysLeft;

}

console.log("Days left until next Christmas: " + daysUntilNextChristmas());

Q.5 What is Condition Statement?

if (condition) {

    // Code if condition is true

} else {

    // Code if condition is false

}

Q.6 Find circumference of Rectangle formula : C = 4 \* a ?

function rectengle(a){

    return a\*4

}

console.log(rectengle(7))

Q.7 WAP to convert years into days and days into years?

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Document</title>

</head>

<body>

<label>days</label>

<input type="number" id="days"><br>

<label>year</label>

<input type="number" id="year">

<button onclick="convert()">convert year</button>

<button onclick="covertyear()">convert year</button>

</body>

<script>

let convert=()=>{

let days=document.getElementById('days').value

let yeara=days/365

document.getElementById("year").value=yeara

}

let covertyear=()=>{

let year=document.getElementById("year").value

let dayss=year\*365

document.getElementById("days").value=dayss

}

</script>

</html>

Q.8 Convert temperature Fahrenheit to Celsius? (Conditional logic Question)

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Document</title>

</head>

<body>

<label>fernhit</label>

<input type="number" id="cal" readonly>

</body>

<script>

Let cal=parseInt(prompt("enter the Celsius"))

Let fernhit=(9/5)\*cal+32

document.getElementById("cal").value=fernhit

</script>

</html>

Q.9 Write a JavaScript exercise to get the extension of a filename.?

function paramiter(a){

const parts= a.split(".");

if(parts.length>1){

console.log(parts.pop())

}else{

console.log("plx enter valid file name")

}

}

console.log(paramiter("doc.pf"))

Q.10 What is the result of the expression (5 > 3 && 2 < 4)?

ANS: True

Q.11What is the result of the expression (true && 1 && "hello")?

ANS: hello

Q.12What is the result of the expression true && false || false && true?

ANS: false

Q.13 Check Number Is Positive or Negative in JavaScript?

function checkNumber(num) {

    if (num > 0) {

        return "The number is positive.";

    } else if (num < 0) {

        return "The number is negative.";

    } else {

        return "The number is zero.";

    }

}

Q.14 Find the Character Is Vowel or Not ?

function isVowel(char) {

    char = char.toLowerCase();

    if (char === 'a' || char === 'e' || char === 'i' || char === 'o' || char === 'u') {

        return "The character is a vowel.";

    } else {

        return "The character is not a vowel.";

    }

}

Q.15 Write to check whether a number is negative, positive or zero?

function checkNumber(num) {

    if (num > 0) {

        return "The number is positive.";

    } else if (num < 0) {

        return "The number is negative.";

    } else {

        return "The number is zero.";

    }

}

Q.16 Write to find number is even or odd using ternary operator in JS?

function checkEvenOrOdd(num) {

    return (num % 2 === 0) ? "The number is even." : "The number is odd.";

}

console.log(checkEvenOrOdd(4));

console.log(checkEvenOrOdd(7));

Q.17 Write find maximum number among 3 numbers using ternary operator in JS?

function findMaxNumber(num1, num2, num3) {

    return (num1 >= num2 && num1 >= num3) ? num1 :

           (num2 >= num1 && num2 >= num3) ? num2 : num3;

}

// Example:

console.log(findMaxNumber(10, 20, 15));

console.log(findMaxNumber(5, 3, 8));

console.log(findMaxNumber(30, 30, 20));

Q.18 Write to find minimum number among 3 numbers using ternary operator in JS?

function findMinNumber(num1, num2, num3) {

    return (num1 <= num2 && num1 <= num3) ? num1 :

           (num2 <= num1 && num2 <= num3) ? num2 : num3;

}

// Example :

console.log(findMinNumber(10, 20, 15));

console.log(findMinNumber(5, 3, 8));

console.log(findMinNumber(30, 30, 20));

Q.19 Write to find the largest of three numbers in JS?

let a=parseFloat(prompt("enter a"))

let b=parseFloat(prompt("enter b"))

let c=parseFloat(prompt("enter c"))

if(a>=b){

if(a>=c){

console.log("a is greter")

}else{

if(a==c){

if(a==b && a==c){

console.log("a nd b and c is same");

}else if(a==b){

console.log("a and b greter")

}else if(a==c){

console.log("a and c greter")

}else{

console.log("b and c greter")

}

}else{

console.log("c is greter");

}

}

}else{

if(b>=c){

if(a==b){

if(a==b && a==c){

console.log("a nd b and c is same");

}else if(a==b){

console.log("a and b greter")

}else if(a==c){

console.log("a and c greter")

}else{

console.log("b and c greter")

}

}else{

console.log("b is greter");

}

}else{

if(a==c){

if(a==b && a==c){

console.log("a nd b and c is same");

}else if(a==b){

console.log("a and b greter")

}else if(a==c){

console.log("a and c greter")

}else{

console.log("b and c greter")

}

}else{

if(b==c){

if(a==b && a==c){

console.log("a nd b and c is same r");

}else if(a==b){

console.log("a and b greter")

}else if(a==c){

console.log("a and c greter")

}else{

console.log("b and c greter")

}

}else{

console.log("c is greter");

}

}

}

}

Q.20 Write to show

i. Monday to Sunday using switch case in JS?

ii. Vowel or Consonant using switch case in JS?

let days=parseInt(prompt("enter the number"))

switch(days){

case 1:

console.log("monday");

break;

case 2:

console.log("tuesday");

break;

case 3:

console.log("wednesday");

break;

case 4:

console.log("thrusday");

break;

case 5:

console.log("friday");

break;

case 6:

console.log("satruday");

break;

case 7:

console.log("sunday");

break;

default:

console.log("error");

}

let vowel=prompt("enter the number")

switch(vowel){

case 'a':

console.log("it is vowel");

break;

case 'e':

console.log("it is vowel");

break;

case 'i':

console.log("it is vowel");

break;

case 'o':

console.log("it is vowel");

break;

case 'u':

console.log("it is vowel");

break;

case 'A':

console.log("it is vowel");

break;

case 'E':

console.log("it is vowel");

break;

case 'I':

console.log("it is vowel");

break;

case 'O':

console.log("it is vowel");

break;

case 'U':

console.log("it is vowel");

break;

default:

console.log("it is not vowel");

}

Q.21 What are the looping structures in JavaScript? Any one Example?

for (let i = 1; i <= 5; i++) {

    console.log(i);

}

Q.22 Write a print 972 to 897 using for loop in JS?

for (let i = 972; i >= 897; i--) {

    console.log(i);

}

Q.23 Write to print factorial of given number?

let number=parseInt(prompt("enter the number"))

mul=1;

for(i=number;i>=2;i--){

mul=mul\*i;

}

console.log(mul);

Q.24 Write to print Fibonacci series up to given numbers?let number=parseInt(prompt("enter the number"))

let t1=0

let t2=1

let ans

console.log(t1);

console.log(t2);

for(i=3;i<=number;i++){

let ans=t1+t2

console.log(ans);

t1=t2

t2=ans

}

Q.25Write to print number in reverse order e.g.: number = 64728 ---> reverse =82746 in JS?

let number=prompt("enter the number")

let rev=number.toString().split('').reverse().join('')

console.log(rev)

Q.26 Write a program make a summation of given number (E.g., 1523 Ans: - 11) in JS?

let arr=parseInt(prompt("enter the number"))

let ans=arr.toString().split('').reduce((curr,i)=>{

return curr+parseInt(i)

},0)

console.log(ans);

Q.27 Write a program you have to make a summation of first and last Digit. (E.g., 1234 Ans: - 5) in JS?

let arr=parseInt(prompt("enter the number"))

let ans=arr.toString().split('')

let fristde=parseInt(ans[0])

let lastd=parseInt(ans[ans.length-1])

let sum=fristde+lastd

console.log(sum)

Q.28 Use console.log() and escape characters to print the following pattern in JS?

1 1 1 1 1

2 1 2 4 8

3 1 3 9 27

4 1 4 16 64

5 1 5 25 125

1 1 1 1 1

console.log("1\ 1\ 1\ 1")

2 1 2 4 8

console.log("2\ 1\ 2\ 4\ 8")

3 1 3 9 27

console.log("3\ 1\ 3\ 9\ 27")

4 1 4 16 64

console.log("4\ 1\ 4\ 16\ 27")

5 1 5 25 125

console.log("5\ 1\ 5\ 25\ 125")

29Use pattern in console.log in JS? 1)

1

1 0

1 0 1

1 0 1 0

1 0 1 0 1

console.log(" 1");

console.log("1 0");

console.log("1 O 1");

console.log("1 O 1 O");

console.log("1 O 1 0 1");

2) A

B C D

E F

G H I J

K L M N O

console.log("A");

console.log("B C D");

console.log("E F");

console.log("G H I J");

console.log("K L M N O");

3)

1

2 3

4 5 6

7 8 9 10

11 12 13 14 15

console.log("1");

console.log("2 3");

console.log("4 5 6");

console.log("7 8 9 1O");

console.log("11 12 13 14 15");

4)

\*

\* \*

\* \* \*

\* \* \* \*

\* \* \* \* \*

console.log("\*");

console.log("\* \*");

console.log("\* \* \*");

console.log("\* \* \* \*");

console.log("\* \* \* \* \*");

Q.30 Accept 3 numbers from user using while loop and check each numbers palindrome

let no=parseInt(prompt("enter the number"))

let f=no

let res=0;

while(no>0){

let num=no%10;

let ans=(num\*10)+num

let num2=Math.floor(no/10);

}

if(f==ans)

console.log("it is palidrom")

else

console.log("it is not palidrom")

Q.31 Write a JavaScript Program to display the current day and time in the following

format. Sample Output: Today is Friday. Current Time is 12 PM: 12 : 22 2 ?

 function displayDayAndTime() {

    const daysOfWeek = ["Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday"];

    const now = new Date();

    const day = daysOfWeek[now.getDay()];

    let hours = now.getHours();

    const minutes = now.getMinutes();

    const seconds = now.getSeconds();

    const ampm = hours >= 12 ? "PM" : "AM";

    hours = hours % 12;

    hours = hours ? hours : 12;

    const formattedTime = `${hours} ${ampm}: ${minutes < 10 ? "0" : ""}${minutes} : ${seconds < 10 ? "0" : ""}${seconds}`;

    console.log(`Today is ${day}.`);

    console.log(`Current Time is ${formattedTime}`);

}

displayDayAndTime();

Q.32 Write a JavaScript program to get the current date?

 function displayCurrentDate() {

    const now = new Date();

    const day = now.getDate();

    const month = now.getMonth() + 1;

    const year = now.getFullYear();

    const formattedDate = `${month}/${day}/${year}`;

    console.log(`Current Date: ${formattedDate}`);

}

displayCurrentDate();

Q.33 Write a JavaScript program to compare two objects?

let a={

name:'tulsi',

age:35

}

let b={

name:'tuli',

age:37

}

console.log(JSON.stringify(a)===JSON.stringify(b))

Q.34 Write a JavaScript program to convert an array of objects into CSV string?

function arrayToCSV(arr) {

  if (!arr.length) return '';

  const headers = Object.keys(arr[0]);

  const rows = arr.map(obj => headers.map(header => JSON.stringify(obj[header], null, 2)).join(','));

  return [headers.join(','), ...rows].join('\n');

}

// Example

const data = [

  { name: "John", age: 28, city: "New York" },

  { name: "Jane", age: 22, city: "Los Angeles" },

  { name: "Mike", age: 32, city: "Chicago" }

];

console.log(arrayToCSV(data));

Q.35 Write a JavaScript program to capitalize first letter of a string?

     function capitalizeFirstLetter(str) {

  if (!str) return '';

  return str.charAt(0).toUpperCase() + str.slice(1);

}

const text = "hello world";

console.log(capitalizeFirstLetter(text));

Q. 45 Write a JavaScript program to determine if a variable is array?

function array(a){

return Array.isArray(a)

}

let arr=[12,13,14]

let arr2="tulsi"

console.log(array(arr));

console.log(array(arr2));

Q.46 Write a JavaScript program to clone an array?

let arr=[12,13,1,15,16]

let newarr=[...arr]

newarr[0]=100;//it not change origanla array

console.log(arr);

console.log(newarr);

Q.47 What is the drawback of declaring methods directly in JavaScript objects?

let obj={

a:function(){

console.log("it is obj ");

}

}

let obj2={

a:function(){

console.log("it is obj ");

}

}

console.log(obj.a===obj2.a);

Q.48 Print the length of the string on the browser console using console.log()?

let str="one"

console.log(str.length);

Q.49 Change all the string characters to capital letters using toUpperCase() method?

let str="two"

console.log(str.toUpperCase());

Q.50 What is the drawback of declaring methods directly in JavaScript objects

let obj={

a:function(){

console.log("it is obj ");

}

}

let obj2={

a:function(){

console.log("it is obj ");

}

}

console.log(obj.a===obj2.a);

Q.51 Write a JavaScript program to get the current date. Expected Output : mm-ddyyyy, mm/dd/yyyy or dd-mm-yyyy, dd/mm/yyyy?

const today = new Date();

const formatMMDDYYYY = (date) => {

  const mm = String(date.getMonth() + 1).padStart(2, '0');

  const dd = String(date.getDate()).padStart(2, '0');

  const yyyy = date.getFullYear();

  return `${mm}-${dd}-${yyyy}`;

};

const formatMMDDYYYYSlash = (date) => {

  const mm = String(date.getMonth() + 1).padStart(2, '0');

  const dd = String(date.getDate()).padStart(2, '0');

  const yyyy = date.getFullYear();

  return `${mm}/${dd}/${yyyy}`;

};

const formatDDMMYYYY = (date) => {

  const dd = String(date.getDate()).padStart(2, '0');

  const mm = String(date.getMonth() + 1).padStart(2, '0');

  const yyyy = date.getFullYear();

  return `${dd}-${mm}-${yyyy}`;

};

const formatDDMMYYYYSlash = (date) => {

  const dd = String(date.getDate()).padStart(2, '0');

  const mm = String(date.getMonth() + 1).padStart(2, '0');

  const yyyy = date.getFullYear();

  return `${dd}/${mm}/${yyyy}`;

};

console.log("mm-dd-yyyy:", formatMMDDYYYY(today));

console.log("mm/dd/yyyy:", formatMMDDYYYYSlash(today));

console.log("dd-mm-yyyy:", formatDDMMYYYY(today));

console.log("dd/mm/yyyy:", formatDDMMYYYYSlash(today));

Q.52 Use indexOf to determine the position of the first occurrence of a in 30 Days Of JavaScript?

const str = "30 Days Of JavaScript";

const position = str.indexOf("a");

console.log(position);

Q,53 Use lastIndexOf to determine the position of the last occurrence of a in 30 Days Of JavaScript?

const str = "30 Days Of JavaScript";

const position = str.lastIndexOf("a");

console.log(position);

Q.54 Form Validtion in JS?

**Form validation in JavaScript** is the process of checking the input data submitted by users in web forms to ensure it meets certain criteria before being processed or sent to a server.

Q.55 Form in Email, number, Password, Validation?

Form validation for email, number, and password is the process of checking user inputs in a web form to ensure they meet specific criteria before the form is submitted. Each type of input has its own validation requirements based on what is considered acceptable data.

Q.56 Dynamic Form Validation in JS?

Dynamic form validation in JavaScript involves validating form inputs based on user interactions in real time. This means that as users type or select options, the validation logic responds immediately, providing feedback and ensuring that the data entered meets specified criteria.

Q.57 how many type of JS Event? How to use it ?

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Document</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-QWTKZyjpPEjISv5WaRU9OFeRpok6YctnYmDr5pNlyT2bRjXh0JMhjY6hW+ALEwIH" crossorigin="anonymous">

</head>

<body>

<button class="btn btn-success" id="btn"> btn</button>

</body>

<script>

document.getElementById("btn").addEventListener("click",function(){

alert("btn was click")

})

</script>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDzOxhy9GkcIdslK1eN7N6jIeHz" crossorigin="anonymous"></script>

</html>

Q.60 What is Bom vs Dom in JS?BOM is focused on interacting with the browser, while DOM is centered on manipulating the web page content.

BOM provides window and related objects, while DOM provides document and HTML element nodes.

DOM is standardized by the W3C, but BOM is not a standard and can vary across browsers.

Q.61 Array vs object defences in JS?

|  |  |  |
| --- | --- | --- |
| Feature | Arrays | Objects |
| Usage | Lists of items | Key-value pairs |
| Indexing | By numerical index | By strings keys |
| Structure | Ordered | Unordered |
| Methods | Push(), pop(),map(),filter() | Object.keys(),object.values() |

Q.62 Split the string into an array using split() Method?

const str = "apple,banana,orange";

const fruitsArray = str.split(",");

console.log(fruitsArray);

Q.63 Check if the string contains a word Script using includes() method?

let str="one";

let ans=str.toLowerCase()

console.log(ans);

Q.64 Change all the string characters to lowercase letters using toLowerCase() Method.

let text = "JavaScript Is Fun!";

let lowerCaseText = text.toLowerCase();

console.log(lowerCaseText);

Q.65 What is Character at index 15 in ’30 Days of JavaScript’ string? Use charAt() method.let text = '30 Days of JavaScript';

let character = text.charAt(15);

console.log(character);

Q.66 copy to one string to another string in JS?

copiedString = "Hello, JavaScript!";

console.log(originalString);

console.log(copiedString);