ROUND 1

1. We can declare all types of variables in javascript using Keyword _____

    a. var

    b. obj

    c. jvar

    d. None of these

    Answer: var

2. "What will be the output of the following code snippet?

```
<pre>
var a = ""Scaler"";
var result = a.substring(2, 4);
console.log(result);
</pre>"
```

    a. al

    b. ale

    c. cal

    d. caler

    Answer: al

3. What keyword is used to check whether a given property is valid or not?

    a. in

    b. is in

    c. exists

    d. lies

    Answer: in

4. JavaScript is ideal to……..

a. make computations in HTML simpler

b. increase the download time for the client

c. increase the loading time of the website

d. minimize storage requirements on the web server

Answer: minimize storage requirements on the web server

5. JavaScript code can be calling by using……..

a. RMI

b. function/method

c. Preprocessor

d. Triggering event

Answer: function/method

6. What kind of expression is “new Point(2,3)”?

a. Primary expression

b. invocation expression

c. Object creation expression

d. Constructor calling expression

Answer: Object creation expression

7. The method or operator used to identify the array is _____

a. isarrayType()

b. .==

c. .===

d. typeof

Answer: typeof

8. What will happen if a return statement does not have an associated expression?

a. It will throw an exception

b. It returns the value 0

c. It will throw an error

d. It returns the undefined value

Answer: It returns the undefined value

9. The method that performs the search-and-replace operation to strings for pattern matching is _____

a. replace()

b. add()

c. edit

d. searchandreplace()

Answer: replace()

10. When an operator's value is NULL, the typeof returned by the unary operator is:

a. Boolean

b. Undefined

c. Object

d. Integer

Answer: Object

11. "What will be the output of the following code snippet?

```
<pre>
var a = 1;
var b = 0;
while (a <= 3)
{
  a++;
  b += a * 2;
  console.log(b);
}
```

</pre>"

a. 4 10 18

b. 1 2 3

c. 1 4 7

d. None of the above

Answer: 4 10 18

12. "What will be the output of the following code snippet?

<pre>

var a = Math.max();

var b = Math.min();

console.log(a);

console.log(b);

</pre>"

a. –infinity infinity

b. infinity –infinity

c. infinity infinity

d. –infinity –infinity

Answer: –infinity infinity

13. "What will be the output of the following code snippet?

<pre>

var a = Math.max() < Math.min();

var b = Math.max() > Math.min();

console.log(a);

console.log(b);

</pre>"

a. true false

b. false true

c. true true

d. false false

Answer: true false

14. "What will be the output of the following code snippet?

<pre>

var a = true + true + true * 3;

console.log(a)

</pre>"

a. 3

b. 0

c. Error

d. 5

Answer: 15

15. "What will be the output of the following code snippet?

<pre>

var a = ""hello"";

var sum = 0;

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

  sum += (a[i] - 'a');

}

console.log(sum);

</pre>"

a. 47

b. NaN

c. 0

d. None of the above

Answer: NaN

16. Initialization of a variable can be done by writing _____ operator in between variable name and operand value

a. Equals

b. 1=

c. Value

d. ==

Answer: =

17. "What will be the output of the following code snippet?

<pre>

const obj1 = {Name: ""Hello"", Age: 16};

const obj2 = {Name: ""Hello"", Age: 16};

console.log(obj1 === obj2);

</pre>"

a. TRUE

b. FALSE

c. Undefined

d. None of the above

Answer: FALSE

18. Which of the following are not server-side JavaScript objects?

a. Date

b. FileUpload

c. Function

d. All of the above

Answer: All of the above

19. Recursion is a method in which the solution of a problem depends on _____

    a. Larger instances of different problems

    b. Larger instances of the same problem

    c. Smaller instances of the same problem

    d. Smaller instances of different problems

    Answer: Smaller instances of the same problem

20. Which of the following problems can't be solved using recursion?

    a. Factorial of a number

    b. Nth fibonacci number

    c. Length of a string

    d. Problems without base case

    Answer: Problems without base case

21. In recursion, the condition for which the function will stop calling itself is _____

    a. Best case

    b. Worst case

    c. Base case

    d. There is no such condition

    Answer: Base case

22. If an array with five elements a=[1,2,3,4,5]; what will do the expression a.length=0

    a. checks length of array is 0 or not

    b. deletes all elements

    c. replaces all elements with 0

    d. adds 0 at the beginning

    Answer: deletes all elements

23. While iterating elements of an array a,……. will test the array elements in order to skip null, undefined and non-existent elements.

a. !a[i]

b. a[i]= = = undefined

c. !(i in a)

d. !a.hasOwnProperty(i)

Answer: !a[i]

24. The …….. method in JavaScript is a general purpose method for inserting or removing elements from an array.

a. Array.join( )

b. Array.concat( )

c. Array.slice( )

d. Array.splice( )

Answer: Array.splice( )

25. Array indexes start with _____.

a. -1

b. 0

c. 1

d. Cannot say

Answer: 0

26. Arrays always use numbered indexes.

a. Yes

b. No

c. Can be yes or no

d. Cannot say

Answer: Yes

27. "What will happen, if the following JavaScript code is executed?

<pre>

```
var count =0;
while (count <10)
{
        console.log(count);
        count++;
}
</pre>"
```

a. An error is displayed

b. An exception is thrown

c. The values of count variable are logged or stored in a particular location or storage

d. The value of count from 0 to 9 is displayed in the console

Answer: The value of count from 0 to 9 is displayed in the console

28. "Which of the following is the correct output for the following JavaScript code:

```
<pre>
var x=3;
var y=2;
var z=0;
if(x==y)
document.write(x);
else if(x==y)
document.write(x);
else
document.write(z);
</pre>"
```

a. 3

b. 0

c. Error

d. 2

Answer: 0

29. n JavaScript the x===y statement implies that:

a. Both x and y are equal in value, type and reference address as well.

b. Both are x and y are equal in value only.

c. Both are equal in the value and data type.

d. Both are not same at all.

Answer: Both are equal in the value and data type.

30. Variable declared without a value will have the value _____

a. undefined

b. 0

c. Null

d. None of these

Answer: undefined

31. What is the worst case time complexity of merge sort?

a. O(n log n)

b. O(n2)

c. O(n2 log n)

d. O(n log n2)

Answer: O(n log n)

32. What is the worst case time complexity of a quick sort algorithm?

a. O(n log n)

b. O(n2)

c. O(n2 log n)

d. O(n log n2)

Answer: O(n2)

33. Which of the following method is used for sorting in merge sort?

a. merging

b. partitioning

c. selection

d. exchanging

Answer: merging

34. Which of the following methods is the most effective for picking the pivot element?

a. first element

b. last element

c. median of three element

d. random element

Answer: median of three element

35. Which of the following is not a variant of merge sort?

a. bottom up merge sort

b. in-place merge sort

c. top down merge sort

d. linear merge sort

Answer: linear merge sort

36. How many sub arrays does the quick sort algorithm divide the entire array into?

a. 1

b. 2

c. 3

d. 4

Answer: 2

37. Which of the following is not in place sorting algorithm by default?

a. merge sort

b. quick sort

c. heap sort

d. None of these

Answer: merge sort

38. Which is the worst method of choosing a pivot element?

a. first element as pivot

b. last element as pivot

c. median-of-three partitioning

d. random element as pivot

Answer: first element as pivot

39. Which of the following is a step of merge sort

a. Divide

b. Conquer

c. Combine

d. All of the above

Answer: All of the above

40. Quick sort uses which of the following algorithm to implement sorting?

a. backtracking

b. Greedy

c. Dynamic

d. Divide and Conquer

Answer: Divide and Conquer

ROUND 2

Problem Statement

Given a value N, if we want to make change for N cents, and we have infinite supply of each of S = { S1, S2, .. , Sm} valued coins, how many ways can we make the change? The order of coins doesn't matter.

Constraint

Input should be a number

Explanation:

From the input 4 is the total number when we add the pair of number {1, 2, 3}

Below are the pairs

1. { 1, 1, 1, 1 } => 4
2. { 1, 2, 1 } => 4
3. { 2, 2 } => 4
4. { 1, 3 } => 4

Total 4 pairs so the output is 4

Input Format

First line of Input should be a number N

Second line of input should be a number separated by space

Output Format

Number of pairs as Number

Sample Input 1 :

4

1 2 3

output :

4

Sample Input 2 :

10

1 2 3 4 5 6

output :

35

Solution Link : https://www.ideone.com/t3hagK

Problem Statement

Given the arrival and departure times of all trains that reach a railway station, the task is to find the minimum number of platforms required for the railway station so that no train waits.

We are given two arrays that represent the arrival and departure times of trains that stop.

Constraint

Input should be in the time format (hours:minutes) format

Input Format

Two arrays separated by newline and each array element separated by space

Output Format

Integer

Explanation

From the below input default 1 track should be free for train to be arrived

1. 9:00 => 9:10 (default track is booked and it will be released at 9:10)
2. 9:40 => 12:00 (default track is released and it is free to use the default track so far required track is 1)
3. 9:50 => 11:20 (Need one more track as the default track is not free at that interval so far required track is 2)
4. 11:00 => 11:30 (Need one more track as the existing track is not free at that interval so far required track is 3)
5. 15:00 => 19:00 (No additional track is required since all tracks are free at that interval so far required track is 3)
6. 18:00 => 20:00 (No additional track is required since all tracks are free at that interval so far required track is 3)

So, the output is 3

Sample Input 1 :

900 940 950 1100 1500 1800

910 1200 1120 1130 1900 2000

output :

3

Sample Input 2 :

900 940

910 1200

output :

1

Solution Link: https://www.ideone.com/bFmhv5

Round 3

Create a Calendar

application which will perform the following operation

a.

While opening show the current month and its date

Round 4

a. **When click left arrow on the top show the previous month**
b. **When click right arrow on the top show the next month**

Application will be similar to the below attached image

Solution Link - https://codesandbox.io/s/admiring-https-q5renr?file=/package.json