Crypton Tech (P) Ltd

Javascript - questionnaire

PROCEDURE

Please the read the following procedure before starting implementing the questions:

1. For each question, implement the code in a separate file. File name is specified in the same question.
2. Try to put comments in your code to improve readability.
3. Try to exhibit your good programming skills by completing the given questions.
4. Feel free to contact the technical person to clarify all your doubts.

QUESTIONS

1. Write a javascript program to convert seconds to human readable format

Create a function which accepts a number and prints the output like the following:

Input and Output:

displayTime(50)

50 secs

displayTime(120)

 2 mins

displayTime(135)

2 mins 15 secs

displayTime(3600)

 1 hour

displayTime(7500)

2 hours 5 mins

File: displaytime.js

2. Write a JavaScript program to count the number of vowels in a given string.

Create a function which accepts a string and prints the output like the following:

Input and Output:

countVowels('hesitate')

Count of vowels: 4

countVowels('anagrams')

Count of vowels: 3

countVowels('simultaneously')

Count of vowels: 6

countVowels('passionate')

Count of vowels: 5

countVowels('information technology')

Count of vowels: 8

File: vowels.js

3. Write a JavaScript program to capitalize the first letter of each word of a given string

Create a function which accepts a string and prints the output like the following:

Input and Output:

capitalizeWord('the train leaves in ten minutes')

The Train Leaves In Ten Minutes.

capitalizeWord('they speak english at work')

They Speak English At Work.

capitalizeWord('mary enjoys to work')

Mary Enjoys To Work

capitalizeWord('cycling uphill from this hill is really dangerous')

Cycling Uphill From This Hill Is Really Dangerous

capitalizeWord('does he play tennis?')

Does He Play Tennis?

File: capitalize.js

4. Write a JavaScript program to return object containing max, min, sum of the given array

Create a function which accepts a array with number and prints the output like the following:

Input and Output:

arrayStats([10, 20, 30])

stats: { min: 10, max: 30, sum: 60 }

arrayStats([55, 35, 65, 75])

stats: { min: 35, max: 75, sum: 230 }

arrayStats([12, 100, 15, 280])

stats: { min: 12, max: 280, sum: 407 }

File: arraystats.js

5. Write a JavaScript program to print the keys and values of the given object

Create a function which accepts a object and prints the output like the following:

Input and Output:

printObject({ name: 'John', phone: '9865412312' })

Keys: name. phone

Values: John, 9865412312

processObject({ id: 2, status: 'Active', title: 'test' })

Keys: id, status, title

Values: 2, Active, test

File: printobject.js

6. Write a JavaScript program to count no of odd & even numbers in given array

Create a function which accepts array of numbers and prints the output like the following:

Input and Output:

countOddEven([5, 8, 7, 12, 13])

Odd: 2

Even: 3

countOddEven([200, 135, 58, 40, 18])

Odd: 1

Even: 4

countOddEven([50, 40, 20, 25, 55, 85, 35])

Odd: 4

Even: 3

countOddEven([23, 18, 11, 69])

Odd: 3

Even: 1

countOddEven([26, 16, 15, 25, 63])

Odd: 3

Even: 2

File: countoddeven.js

7. Write a JavaScript program to check whether a given number is in a given range

Create a function which accepts 3 numbers and prints the output like the following:

Input and Output:

isInRange(5, 10, 20)

True

isInRange(99, 100, 200)

False

isInRange(151, 150, 250)

True

isInRange(161, 170, 270)

False

isInRange(20, 10, 50)

True

File: range.js

8. Write a JavaScript program to calculate output from expression string and print the output

Create a function which accepts a string and prints the output like the following:

Input and Output:

calculate('10 + 30')

40

calculate("20 * 20")

400

calculate("10 / 5")

2

calculate("12 - 10")

2

calculate("11 % 2")

1

File: calculate.js

9. Write a JavaScript program to find the longest string and index from a given array

Create a function which accepts array of strings and prints the output like the following:

Input and Output:

longestIndex(['architect', 'help', 'concentrate'])

concentrate 2

longestIndex(['determine', 'introductory', 'adequate', 'ability'])

introductory 1

longestIndex(['outsourcing', 'problem', 'process', 'product'])

outsourcing 0

longestIndex(['promoted', 'projections', 'publishing'])

publishing 2

longestIndex(['webmaster', 'understanding', 'uncommon', 'telecommunications'])

telecommunications 3

File: longestindex.js

10. Write a JavaScript program to delete array of values from the given array and prints the new array

Create a function which accepts array of numbers and array of indexes and prints the output like the following:

Input and Output:

deleteValues([5, 8, 7, 12, 13], [1, 3, 4])

[5, 7]

deleteValues([200, 135, 58, 40, 18], [1, 4])

[200, 58, 40]

deleteValues([50, 40, 20, 25, 55, 85, 35], [6, 4, 3, 1])

[50, 20, 85]

deleteValues([23, 18, 11, 69], [3, 0])

[18, 11]

deleteValues([26, 16, 15, 25, 63], [2, 0, 1])

[25, 63]

File: deletevalues.js

11. Write a JavaScript program to perform series of array operations

Perform following series of operations in the given array:

1) add number at start of array

2) remove last element

3) add element at 2nd index

4) remove first element

5) add new last element

Input and Output:

File: arrayoperations.js

12. Write Javascript code to update the given object with following operations:

For the given object:

```
var task = {
   id: 2,
   status: 'active',
   isCompleted: false,
   spendTimes: [20],
   description: 'A new sample task for Javascript',
   comments: [
      { date: '19-04-2022 05:30PM', comment: 'Task updated with
description' }
   ],
   project: { id: 2, code: 'Questions' },
   user: { id: 4, name: 'Ram' },
```

```
    categories: ['object', 'functions'],
};
```

Implement following actions in javascript:

1. Change status to **in-progress**
2. Add new comment with description: 'This is a new comment' with current date and time
3. Print the project code of the task
4. Print the categories with comma separated
5. Add new category - "array" and print the categories again
6. Change the description
7. Add spend time with 5, 15, 20
8. Print the name of user
9. Print all comment descriptions
10. Make task completed

Print the objects after doing the actions

File: objectactions.js

13. Write Javascript code to update array of student objects

Create an array of student objects like given below and complete the following functions to change the array of objects

```
var students = [
    { id: 1, name: 'Ram', total: 72, gender: 'Male' },
    { id: 2, name: 'Sheela', total: 75, gender: 'Female' },
]
```

Implement the following functions:

1. findStudentById(id) - returns student object for the given id if found else null
2. findStudentsByGender(gender) - returns array of students for the given gender
3. addStudent(id, name, total, gender) - add new student to list of students
4. deleteStudentById(id) - deletes the student from the array using id
5. printStudents - print the list of students row. Each row is in format:
   ID: 1, Name: Ram (Male), Total: 72

File: studentslist.js

14. Write Javascript code to print whether given no is palindrome or not

Palindromic numbers remain the same when the digits are reversed.. Create a function which accepts a number and prints whether it is palindrome or not:

Input and Output:

isPalindrome(1441)

true

isPalindrome

false

File: palindrome.js

15. Write Javascript code to validate the password.

Create a function which accepts password as string, validate and print the result or errors like the following:

Valid password should have:

1. Minimum length of 8
2. Should have atleast one number
3. Should have atleast one Capital letter
4. Should have atleast one of special chars: *, -, +, $, #

Input and Output:

validatepassword("2FRbL*GgPd2n")

Password is valid

validatepassword("frblgn")

Password is not valid: Minimum length is not 8, No number present, No Capital present, No special char present

validatepassword("frb*lg2n")

Password is not valid: No Capital present

File: validatepassword.js

16. Write Javascript code to calculate the number of visiting birds in a specific week

Implement a function birdsInWeek that accepts an array of bird counts per day and a week number. It returns the total number of birds that you counted in that specific week. You can assume weeks are always tracked completely.

Input and Output:

      var birdsPerDay = [2, 5, 0, 7, 4, 1, 3, 0, 2, 5, 0, 1, 3, 1];

      birdsInWeek(birdsPerDay, 2)

      12

File: birdsinweek.js

17. Write Javascript code to calculate the next higher prime number

Create a function which accepts a number and prints the output like the following:

Input and Output:

      nextPrime(38)

      41

      nextPrime(115)

      127

      nextPrime(2000)

      2003

File: nextprime.js

18. Write a Javascript code to split a number into its digits

Create a function which accepts a number and prints the output like the following:

Input and Output:

      splitNumber(10)

      [1, 0]

splitNumber(931)

[9, 3, 1]

splitNumber(19375)

[1, 9, 3, 7, 5]

File: splitnumber.js