JavaScript Beginner/Intermediate Practice Questions

The following is a list of some beginner/intermediate JavaScript practice questions to help you practice and feel more comfortable writing code. Please attempt each question before referencing the official solution. Keep in mind that there are many ways to answer each question and just because your solution doesn't match mine doesn't mean it's not correct.

How to use these questions effectively:

- Do not rush
- Don't cheat! That means don't look at the answer until you've given it a solid attempt!
- If you finish the question quickly, think about other ways you could solve them.
- Compare my answer to yours and see if you can understand my approach to the problem.
- Discuss with classmates in discord!

Solutions

The solutions are in the same google drive folder in a folder named "<question number>", it's best to open them in your code editor.

Questions

Questions are in the order of difficulty. Start with question 1 and work your way through them in order. I have given some pretty challenging questions intentionally, don't feel badly if you can't solve them on your first try.

Question 1 - Easy

Write a simple program that uses both HTML and JavaScript (you can write your JavaScript code directly in your HTML file or by referencing a script).

This program should prompt the user to enter a number and tell them if their number is odd or even.

Example:

~Program displays a prompt~
~User enters 3~
~Program shows an alert saying: "Odd"~

You can use the functions "prompt" and "alert" in your javascript code.

Question 2 - Easy

Write a simple program that uses both HTML and JavaScript (you can write your JavaScript code directly in your HTML file or by referencing a script).

This program should ask the user to enter 3 numbers, it should store each of the numbers and tell the user what the largest number they entered was.

Example:

~Program asks for number 1~
~User enters 1~
~Program asks for number 2~
~User enters -3~
~Program asks for number 3~
~User enters -5~
~Program shows an alert saying “The largest number was: 1”~

Question 3 - Easy

Write a simple program that only requires a JavaScript console. You can use node.js or the console from the chrome browser, it’s up to you.

The program should declare two variables: min and max. These variables should store two positive numbers that you can change before running the code. Your code should print an array to the console that contains all of the values from min -> max (inclusive).

You can define these variables as constants at the top of your program. The idea is that you can manually change them before you run the code to change what the output will be.

Example 1:

Min = 2, max = 7
~Program outputs: “[2, 3, 4, 5, 6, 7]”~

Example 2:

Min = -3, Max = -9
~Program outputs: “[ ]”~ this is because the max is less than the min

Example 3:

Min = -1, Max = -1
~Program outputs: “[-1]”~

Question 4 - Medium

Write a simple program that only requires a JavaScript console. You can use node.js or the console from the chrome browser, it's up to you.

For this program you define three variables:
1. Target (a string you will manipulate)
2. Delimiter (a single character)
3. Spacing (a positive integer greater than 0)

You can define these variables as constants at the top of your program. The idea is that you can manually change them before you run the code to change what the output will be.

Your goal will be to print a new version of the target string that has the delimiter character between the spacing number of characters. See the example below:

Example 1:

Target = "timisgreat"
Delimiter = "-"
Spacing = "3"

~Program prints: "tim-isg-rea-t"~ notice the - exists after 3 characters

Example 2:

Target = "coursecareers"
Delimiter = "|"
Spacing = "1"

~Program prints: "c|o|u|r|s|e|c|a|r|e|e|r|s"~

Question 5 - Medium

Write a simple program that only requires a JavaScript console. You can use node.js or the console from the chrome browser, it's up to you.

For this question you will write a JavaScript function called: mathIsFun . This function will have one parameter called "numberString". The string will contain a set of numbers, all separated by |'s. Your job will be to determine all of the numbers in the string and return the largest number that can be created by adding two of the numbers. You should return this number from the function.

Example 1:

mathIsFun(“12|13|-4|5|”) -> 25
// the numbers are 12, 13, -4 and 5. The largest sum of two numbers is 12 + 13 = 25

Example 2:

mathIsFun(“-2|-4|-1|-1”) -> -2
// the numbers are -2, -4, -1 and -1. The largest sum of two numbers is -1 + -1 = -2

Hint: You will need to use a nested for loop to try every possible sum of numbers.

Question 6 - Hard

Write a simple program that only requires a JavaScript console. You can use node.js or the console from the chrome browser, it’s up to you.

For this question you will write a JavaScript function called: friends . This function will accept a parameter called “people” that contains a list of objects. These objects will have two properties, the first is “name” and the second is a list of strings called “friends”. Your job will be to determine which person has the most loyal friends. A loyal friend is one that a person has in their friends list that also has that person in their friends list. For example, if John has Susan in his friends list and Susan has John in her friends list then they are “loyal friends”. On the contrary, if John has Mike in his friends list but Mike does not have John in his friends list they are not loyal friends.

Note: This is a difficult question!

Example:

```
people = [
   {“name”: “Tim”, “friends”: [“John”, “Sally”]},
   {“name”: “John”, “friends”: [“Tim”, “Mike”]},
   {“name”: “Mike”, “friends”: []},
   {“name”: “Sally”, “friends”: [“Tim”]}
]
friends(people) -> “Tim”

// In this example Tim has two loyal friends, John and Sally, because both of them also list Tim as a friend
// John has one loyal friend, Tim, as Mike doesn’t list John
// Mike has no loyal friends as he lists no one as a friend
// Sally has one loyal friend, “Tim”
```