

CS242

JavaScript Lab Practice Questions

1. According to Wikipedia a happy number is defined by the following process : "Starting with any positive integer, replace the number by the sum of the squares of its digits, and repeat the process until the number equals 1 (where it will stay), or it loops endlessly in a cycle which does not include 1. Those numbers for which this process ends in 1 are happy numbers, while those that do not end in 1 are unhappy numbers (or sad numbers)". Write a Javascript program that accepts a number from user and alerts whether the input number is happy or not.

Some examples are : 1, 7, 10, 13, 19, 23

2. Write a Javascript function to explore string functions for the following:
 - a. to check whether an `input` is a string or not.
 - b. to check whether a string is blank or not.
 - c. to split a string and convert it into an array of words.
 - d. to validate an email address.

[Note: Use pop-up box]

3. Write a simple JavaScript program to accept sequence of comma-separated integers from user. Convert the sequence into an array of numbers and sort the sequence in ascending order.
4. Write a simple JavaScript program to join all elements of the following array into a string.
5. You'll create a simple word guessing game where the user gets infinite tries to guess the word. Follow,
 - a. Create two global arrays: one to hold the letters of the word (e.g. 'F', 'O', 'X'), and one to hold the current guessed letters (e.g. it would start with '_', '_', '_' and end with 'F', 'O', 'X').
 - b. Write a function called guessLetter that will:
 - i. Take one argument, the guessed letter.

- ii. Iterate through the word letters and see if the guessed letter is in there.
- iii. If the guessed letter matches a word letter, change the guessed letters array to reflect that.
- iv. When it's done iterating, it should log the current guessed letters ('F__')
- v. and congratulate the user if they found a new letter.
- vi. It should also figure out if there are any more letters that need to be guessed,
- vii. and if not, it should congratulate the user for winning the game.

6. Take the previous problem and make it Hangman,
- a. Keep track of all the guessed letters (right and wrong) and only let the user guess a letter once. If they guess a letter twice, do nothing.
 - b. Keep track of the state of the hangman as a number (starting at 0), and subtract or add to that number every time they make a wrong guess.
 - c. Once the number reaches 6 (a reasonable number of body parts for a hangman), inform the user that they lost.