

Programming Puzzle



Please take a bit of time to answer the problems below. There may be more than one way of solving these. The purpose of the puzzle is not to determine your programming ability, but rather to give us insight how you might think, and your approach to problems.

We encourage you therefore to feel welcome to show your work and/or explain how you arrived at your answer.

Best of Luck!

1. PHP

Write a php script to solve the following problem. Input array will consist of only 0 or 1. Find the max number of successive 1's in the array.

Example 1:

Input: \$nums = [1,1,1,0,1,1,1,1]

Output: 4

Output Explanation: The first three digits or the last four digits are successive 1s. The max number of successive 1s is 4.

Example 2:

Input: \$nums = [1,0,1,1,1,0,1]

Output: 3

2. MySQL

Given the two tables below, write a SQL query that uses a join statement to list all users from the user table, their average correct answers, as well as the time of their most recently taken test. All user entries should appear, even if they have not taken a test.

Table: user

user_id	first_name	last_name
1	Bob	Sanders
2	Dave	Greggers
3	Susan	Bowie
4	Gary	Anderson

Table: test_result

user_id	test_id	correct	time_taken
1	1	88	2012-09-02 13:01:28
3	2	56	2012-09-03 09:39:02
1	2	44	2012-09-05 16:22:11
2	3	97	2012-09-15 11:27:51
3	4	22	2012-09-15 15:01:49