

IT2234: Web Service and Server Technologies - Practical

ICAE 01

Department of Physical Science

Faculty of Applied Science, University of Vavuniya

Answer All Questions

Duration: 1 hour

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Note:

- Find the solutions for the given tasks using JavaScript.
 - Use separate files for each question.
 - Your solutions should work with various input test cases.
1. A buyer wants to find whether a computer keyboard and a mouse can be purchased within a specific budget. Write a code to input the budget and the prices of each item available. The program should return the maximum possible purchase amount that is less than or equal to the budget. If no feasible purchase is available, return -1.

Example:

Budget = 60

Keyboard prices = [40,50,60]

Mouse prices = [5,8,12]

Return 58

Buyer can purchase a 50 Rupees keyboard and an 8 Rupees mouse, so the maximum purchasable value less than the budget is returned, which is 58.

Budget = 10

Keyboard prices = [3,1]

Mouse prices = [5,2,8]

Return 9.

Budget = 20

Keyboard prices = [30,15]

Mouse prices = [8,10,6]

Return -1.

2. Identify the unique programming languages known to the students from the provided JSON data in the *Data.js* file.
Expected output:
['Java', 'JavaScript', 'C++', 'Python', 'C', 'Go', 'Swift', 'R', 'SQL', 'Ruby', 'Bash']
3. Rearrange the digits of a given number to create a maximum value. The number should have a minimum of 2 digits. Note: input and output should be numbers.
For example:
Input number = 215, Max = 521
Input number = 1093, Max = 9310
4. Convert a decimal number to a Hexadecimal number using recursion and callback function techniques. You have given a switch case function called *HexSWC* in the *Q4.js* file, you may use it as a callback function to complete the task.