

## Backend live coding Logic Question :

### 1. Flatten a Nested Array (poin 30)

*Desc:* Write a function that flattens an arbitrarily nested array of arrays.

*Example:* Input: `[1, [2, [3, 4]], 5]`; Output: `[1, 2, 3, 4, 5]`

### 2. Find All Pairs with a Given Sum (poin 30)

*Desc :* Given an array of integers, find all unique pairs that add up to a specific target sum.

*Example:* Input: `[1, 2, 3, 4, 3]`, Target: `6`; Output: `[[2, 4], [3, 3]]`

### 3. Check if Two Strings are Anagrams (poin 15)

*Desc:* Write a function that takes two strings and checks if they are anagrams of each other.

*Example:* Input: `"listen"` and `"silent"`; Output: `true`

### 4. Find the First Non-Repeating Character (poin 30)

*Desc:* Given a string, find the first character that does not repeat. Return the character, or `null` if all characters repeat.

*Example:* Input: `"swiss"`; Output: `"w"`

### 5. Sum of Two Numbers Equals Target (15)

*Desc:* Given an array of integers and a target integer, return indices of the two numbers that add up to the target.

*Example:* Input: `[2, 7, 11, 15]`, Target: `9`; Output: `[0, 1]` (because `2 + 7 = 9`)

## Backend Homework Interview Question

**1. Create a Middleware for Logging without using any library (poin 10)**

The middleware should log each incoming request's details to the console and then pass control to the next middleware.

**2. Create a Recursive Function to Read Nested Directories (poin 40)**

Use the `fs.promises` API to handle reading asynchronously, and ensure errors are caught and logged.

**3. Create a Rate Limiter Middleware (poin 20)**

For example, limit users to 10 requests per minute. If they exceed this, respond with a `429 Too Many Requests` status.

**4. Implement Caching with Memory (poin 40)**

Cache the response for each unique request for 1 minute. If the same request comes within that time frame, return the cached response.

**5. Data Validation and Sanitization with Zod or Joi (poin 10)**

Return a response indicating success if data is valid, or return an error if validation fails.

### Backend Scraping Interview Question

- web scraping menggunakan bun.js dan selenium
  1. navigate <https://www.logammulia.com/id/harga-emas-hari-ini>
  2. ambil Harga emas Batangan hari ini
  3. simpan data hasil scraping ke dalam db postgres
  
- buat api untuk hitung simulasi Harga emas Batangan menggunakan bun.js berdasarkan Harga emas yang sudah disimpan di db
  1. method : post
  2. Request :
    - berat emas per batang dalam satuan gram (decimal)
    - jumlah batang yang dibeli (int)
    - flag include pajak (Boolean)
  3. response :
    - Harga dasar emas (decimal)
    - total Harga emas (decimal)