

# CSE 310 Online A2

**Time: 40 minutes**

## JSON Validator

You will create a new `.l` file (not reused from offline labs) to validate a simplified JSON-like input format. The input consists of a single JSON object with key-value pairs where:

- Keys and values are strings wrapped in double quotes (")
- Values can also be another JSON structure
- Colons (:) separate keys from values
- Commas (,) separate key-value pairs
- The entire structure is enclosed within {}

Your task is to validate:

- Proper use of quotes
- Proper nesting and closure of {} and "
- Correct key-value structure

Hint: You can keep track of the curly braces using a simple counter variable. But if needed, you may also use the built-in C/C++ data structures.

### Sample I/O:

**Input:**

```
{
    "name": "alice",
    "address": { "city": "sylhet", "phone": "01234" }
}
```

**Output:** Valid JSON Structure

**Input:** {"name": "alice", age": 29}

**Output:** Error: must be a quoted string

**Input:** {"name": "alice", "age": 29

**Output:** Error: unmatched {

**Input:** {"name" "alice", "age": 29}

**Output:** Error: Missing separator

## Marks Distribution

- Proper matching of {} and " using states: 4
- Valid key-value pattern recognition: 2
- Correct error reporting: 4

**Submit only your 2105ABC.l file, nothing else.**