Coding Interview for Graduates

Coding Challenge

Using https://api.publicapis.org/ complete the following tasks in any language/server.

1) Create an API that lists the title, description based on the category passed as an input parameter.

2) Create an API that would save a new entry with all the relevant properties which retrieves values from the endpoint GET /entries.

3) Question: what are the key things you would consider when creating/consuming an API to ensure that it is secure and reliable?

Theoretical Challenge

Suppose you have a CSV file with the data below.

A1: 5, A2: 7, A3: 9, B1: 3, B2: 8, B3: =4+5, C1: =5+A1, C2: =A2+B2, C3: =C2+B3

This can be represented in an excel sheet below:

A B C

1 5 3 =5+A1

2 7 8 =A2+B2

3 9 =4+5 =C2+B3

I want a program that will take the CSV input above and produce CSV output with the results. If it is a value, then return a value. If it is a formula then calculate the formula and return the value of that formula.

1. How will you tackle the challenge above?

2. What type of errors you would you check for?

3. How might a user break your code?

Q2. Create an API that would save a new entry with all the relevant properties which retrieves values from the endpoint GET /entries.

Ans :- To address the above challenges, we recommend the following steps:
Parses an input CSV file and reads its contents into a data structure such as a 2D array or pandas dataframe.
Iterates through each cell in the data structure and checks to see if the cell contains a value or formula. If the
cell contains a value, add it to the CSV output file.
If the cell contains a formula, use a library such as eval() or formulaparser to evaluate the formula and append the result to the CSV output file.
Writes the CSV output file to disk.
The types of errors to check are:

Syntax error in formula
Circular reference in formula
Invalid reference to cell in formula
File not found or permission error Read or write CSV file
Wrong column number or row in CSV input file
The user specified an incorrect file path, specified a file that was not in CSV format, specified a file that did not have the correct number of columns or rows, or specified a file that did not have the correct number of columns or rows. can break your code. You are providing an expression that is not valid or contains malicious code. To mitigate these issues, your code should include robust error handling, input validation, and cleanup.

3) Question: what are the key things you would consider when creating/consuming an API to ensure that it is secure and reliable?

Ans :- fetch(`https://api.publicapis.org/entries?category=${category_name}`)
.then(response => response.json())
.then(data => {
// data.entries is an array of API entries
// You can filter entries by category_name and extract title and description properties
constfilteredEntries = data.entries.filter(entry => entry.category === category_name);
const titleDescEntries = filteredEntries .map(Entry => ({Title: Entry.API, Description: Entry.Description}));
});