

Theory Answers MDO

1. **To tackle the challenge of reading the CSV file with formulas and calculating the values,** I would first need to parse the CSV file and extract the data. Then, I would need to iterate through the data, identify any formulas, and use a library such as pandas or openpyxl to evaluate the formulas and calculate the values. Once the values have been calculated, I would then write the data back to a new CSV file.

2. **Some types of errors that I would check for include:** -Invalid formula syntax: check to make sure that the formulas are written in the correct format and that they are valid calculations.
 - Missing or invalid cell references: check to make sure that the formulas reference existing cells and that the references are valid.
 - Missing or invalid operators: check to make sure that the formulas include the correct operators for the calculation being performed.
 - Missing or invalid values: check to make sure that the formulas include the correct values for the calculation being performed.
 - Errors with reading/writing the CSV file

3. **Some ways a user might break the code include:**
 - Providing an incorrect file path for the CSV file
 - Providing a CSV file that is not structured correctly or does not contain the expected data
 - Providing a formula with an invalid syntax or referencing non-existent cells
 - Providing a formula that contains an infinite loop, like `=A1+A1`, which would make the program run indefinitely
 - Providing a formula that results in a division by zero, which would cause an error.

To mitigate these issues, I would include proper error handling and validation throughout the code to catch and handle any potential errors that may arise.