Report

Before coding, how to model the problem:

1. Need to read data from CSV file.
2. Each number or operation is separated by spaces, so we need to split these and save it for further calculation.
3. Before calculation, need to check whether the format of input is legal.
4. We will go through the entire operation first time, and calculate operation contains number but not references. The reason why doing is this in case there are more one references need to calculate for each cell. It’ s better to pre-process the cell.
5. Then calculate the second time to tackle the operation containing references.
6. Finally write the result into another CSV file.

Limitations of the implementation:

1. The edge cases (eg. format checking of each cell) may not cover all the illegal cases.
2. Iterate all cells twice which make the code a little bit verbose, maybe that’s not the best solution. I think it also can be done by recursion, but from my perspective, recursion makes the code clean but always take more time and spaces.