Additional Guidance on probable alternative solution(s) constructed by students and additional input examples:

If you are able to develop your alternative solution(s) (it can be alternative solution using Z3 solver and/or the like CSP tools) for CW2, you will discover that for most of the input examples, for the five constraints indicated, after testing with your alternative solution(s), the outputs will usually be the same or similar to the outputs produced by my basic Python code, i.e. using the OR tools.

For most of the 4th and 5th constraints of the input test examples, except that usually alternative solution(s) may give **faster execution time** and/or **much more efficient output with (or without) more components** shown in certain of the input instances, the 4th and 5th constraints may show the same output(s) as the output(s) produced by my basic Python code, i.e. empty or quite empty. Hence, please do not worry about the 4th and 5th constraints as there is nothing wrong with the code. Based on the Appendix 1 of Coursework 2 (already uploaded in Moodle together with CW2 last month), kindly check that if the output is 'infeasible' or 'unsat', the 4th and 5th constraints will usually not be able to incorporate successfully to get the values in the relevant arrays.

The hint to students is that you can try using **Z3 solver** (i.e. **Z3Py**) or the like to generate your own **alternative solution(s)**, and then do a few comparison and contrast tables of the all the outputs shown by the input examples. Then, even if you could not produce any alternative solution for Coursework 2, you can use my fundamental code to try to apply to the additional examples that I uploaded to Moodle. Then, do further comparisons and contrast of the additional examples with the basic input examples as your conclusion and discussions after your analysis on each of the different outputs produced by the input examples and the additional examples.

You can compare and contrast the time taken to execute, the components that can be shown in the output(s) of both the input examples and the additional examples and then do a differential analysis. Then, make a fruitful conclusion with proper discussions. Please not worry about the 4th or the 5th constraints since the basic Python code provided and everything is the right track.

-------------- End of **CW2** Additional Guidance -------------