

Mid Sem Revision Prac

Last modified on Saturday, 6 April 2019 by f.maire@qut.edu.au

The prac of this week revisits CSP. The prac consists in implementing a simple solver for formula puzzles.

You are strongly encouraged to talk to your tutor for advice if you hesitate between different designs for your assignment.

Exercise 1

- Finish the function *fill_in* in the file *formula_puzzle.py*
- You should first compute the set of letters occurring in the formula
- Then for every possible assignment of digits to letters, replace the letters in the formula with the assigned digits and yield the resulting string
- Hints:
 - use the regular expression module (<https://docs.python.org/3/howto/regex.html>) to extract the letters present in the formula
 - use *itertools.permutations* to generate the possible assignments
 - Look up the functions *str.maketrans* and *str.translate*

Exercise 2

- Using the file *scrip_graph_revision.py*, create variations of the given graph. Perform by hands different searches (in the style of the past mid sem exam questions). Compare your answers to what is computed by the *search* library functions.