Algorithm of MakeSolution

The basic idea is similar to an arbitrary arity tree.

The course solutions are layers of single schedule of sections. First of all, the program enqueues all the sections of the first course in the list of course onto the solution queue.

Each time we layer a new course schedule (consist of a list of sections) up, it dequeues an existing solution, and for each section, it layers the section’s schedule onto the dequeued solution, and then the program checks if the new solution is valid or not. If valid, the program enqueues the new valid solution to the solution queue, otherwise, throw away the invalid one (simply just not enqueue it).

Repeat the process until the end of the course list.

The basic algorithm diagram is showed below: