- Your problems will be on Dynamic Programming and Max Flow/Min Cut exclusively (no string matching or anything we had no time to cover).
- This trimester, due to the number of students in this class, you will be writing your answers to the final problems in a special booklet which will be electronically scanned and the tutors will access your answers through Moodle.
- Each problem will be written on a separate page with the subsequent page left blank. Your answer for each problem **MUST** be written in the blank space below that problem statement and on the subsequent, blank page. The tutor who will mark this problem will have access **ONLY** to these two pages, so if you put your answer anywhere else **it cannot be marked**.
- Read the problem statements **very carefully**. A problem might be just a slight variant of a problem which we have done in class; make sure you are solving the problem **as stated** and **NOT** the problem which we have done in class. As an example, we have solved a problem of finding the height of the tallest tower that can be built from some boxes; a version of that problem could be **to construct** such a tallest tower, rather than just determining its height. Also, the conditions might be slightly changed, so read the statements of the problems **CAREFULLY to make sure that you understand what you are asked to solve**.
- To facilitate fair marking of each problem by several tutors, for Dynamic Programming problems you **MUST:**

  1. clearly state what the sub-problems are;
  2. state in what order the sub-problems should be solved;
  3. state explicitly the base cases for initialising the recursion;
  4. state explicitly the recursion step;
  5. once the recursion is done, you have to explicitly state what the solution to the original problem is.
  6. **if explicitly asked** you have to estimate the asymptotic time complexity of your solution.

  A correct solution to each of these components will contribute to the total score for that problem.

- To facilitate fair marking of each problem by several tutors, for Max Flow/ Min Cut problems you **MUST:**

  1. specify what the vertices of your flow network are;
  2. specify what the edges of the flow network are and what their capacities are;
  3. you can simply state that you are using a feasible max flow algorithm, such as Edmonds - Karp algorithm, but you **do not** have to describe its details;
  4. if you need a min cut, you must explain how you obtain it after the max flow algorithm has terminated.
  5. you do NOT have to estimate the time complexity of your algorithm.