Combinatorial Algorithms (104291)
Programming Assignment: Generation

Instructions. This is a group assignment. Read and follow the instructions for the programming assignments on Moodle. It should be possible to easily run your code with different values of the parameters, which are provided as input during the run (not hard-coded in your program). Start on all exercises early enough, so that there is time for questions. Some students may be less versed on algorithmic aspects, while others may need to understand more deeply some of the material covered in class before applying them in a different context. Use our classes on Mondays, Thursdays, and Fridays for these purposes! You are expected to understand and uphold high standards of academic integrity. Copying and/or trying to pass someone else work as your will not be tolerated.

Q1 [40 points] Permutations: Lexicographic Order

Implement in `Python` the functions RANK, UNRANK, and SUCCESSOR for permutations in lexicographic order.

Q2 [60 points] Permutations: Minimal Change Order

Implement in `Python` the functions PERM, RANK, UNRANK, and SUCCESSOR for permutations in minimum change order.