Ideas on the assignment of evolutionary computing

# Ideas related to the implementation of a stopping criterion

* Waar kan ik dit terugvinden in de boek? Geen hoofdstuk hierover
* Er is momenteel al een stopping criterion geïnstalleerd, wat moet hier dan mee gebeuren?
  + Dit stopping criterion kan al beschreven worden in de tekst
  + Beter ook nog een ander stopping criterion installeren 🡪 ik zou voor convergence gaan 🡪 is dit terug te vinden in het boek of in de slides?
    - In de exercise session was er een vraag ivm de stopping criteria, het antwoord op deze vraag/ de voorgestelde stopping criteria waren:
      * Total cost of algorithm exceeds a predefined limit
        + Will try this one second
      * The efficiency E3 drops below a predefined limit
      * Diversity in the phenotype space is lower than limit
      * Diversity in the genotype space is below some limit
      * Maximal improvement over last N generations is below a certain limit
        + Will try this one first
      * Average rate of improvement over last N generations drops below a certain limit
      * The quality of the solution drops below a certain treshold

# About the implementation of another representation

* In the algorithm as we get it, an adjacency representation is used in combination with the suitable crossover and mutation operators
* The most logical thing to do is to switch to a path representation because:
  + no extra function is needed to switch to this representation
  + it is widely regarded as the most natural (and best?) way to represent instances in the search space for the TSP
* as a crossover operator, a lot of options are available for the path representation
  + for now, a couple of crossover operators are available in the toolbox that can be used easily
  + afterwards it would be interesting to implement the cyclic crossover operator that I read about in the paper by Hussain et al.

# General information

* Elitism means you transfer a percentage of the population immediately to the next generation without mutation
* Permutation representation 🡪 p67 in the book