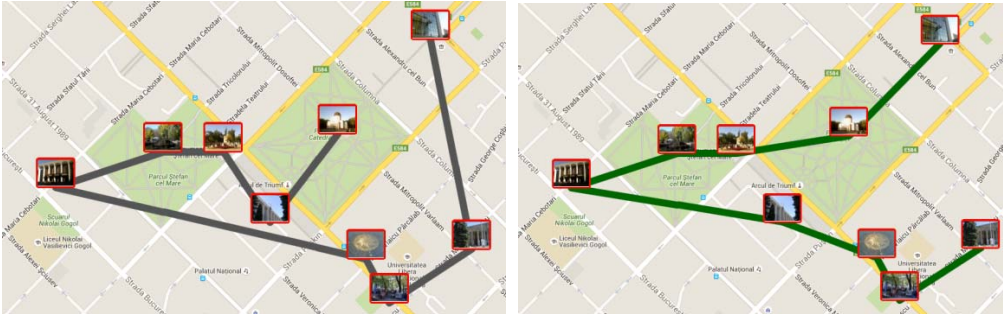


DAA++ exercises

27.4.2016

Task 1. Below are two solutions for open loop Traveling salesman problem. Design possible crossover operation for genetic algorithm that combines these solutions to create a new solution. Demonstrate it with this example.



Task 2. How would you define mutation operation for the same problem?

Task 3. The code linked below extracts the content of a web page into a DOM tree. Use this to extract phrases (words or groups of words) from DOM tree. How many can you find in your page? List them in the order from longest to shortest.

http://cs.uef.fi/pages/franti/daa++/get_text.php

Task 4. Calculate two features for each sentence as follows:

- The phrase is within a header tag. Score $\langle h1 \rangle = 1$ $\langle h2 \rangle = 1/2$ $\langle h3 \rangle = 1/3$ and so on.
- Emphasize. Score $\langle u \rangle = 1$ $\langle b \rangle = 1$ $\langle a \rangle = 1$.

List the phrases sorted by the order of (a) score of the first feature, (b) score of the second feature, (c) their average $(x+y)/2$, (d) some other way you find more appropriate.

Task 5. How can you find *images* from the web page? Analyze few pages of your own choice what images would be the best to represent them? Then see from the HTML code and DOM tree how they are located. Can you find any hints that would help to select them automatically.

