Evolutionary Computation Theory and Application - Assignment 2: Traveling Salesman Problem -

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1 General Remarks

Please Follow those remarks. Deviating will lead to a reduced score

- Lable your axis
- Include a descriptive, not covering legend in your plots
- Caption you images with a clear description
- Remember to name the file correctly
- Make sure that both team members submit the same file, with the same name
- Please make sure that all figures and lines are clearly readable

2 Solution

Parameter	**Value**
Population size	50
Crossover Rates	1%, 10%, 50%, 99%
Mutation Rates	1%, 10%, 50%, 99%
Repetitions	30
Generations	1000
Average best fitness	71.9508

Table 1: 99% mutation rate used for various crossover rate and 99% crossover rate used for various mutation rate. For 30 repetition, both crossover and mutation rate was set to 99%

3 Results

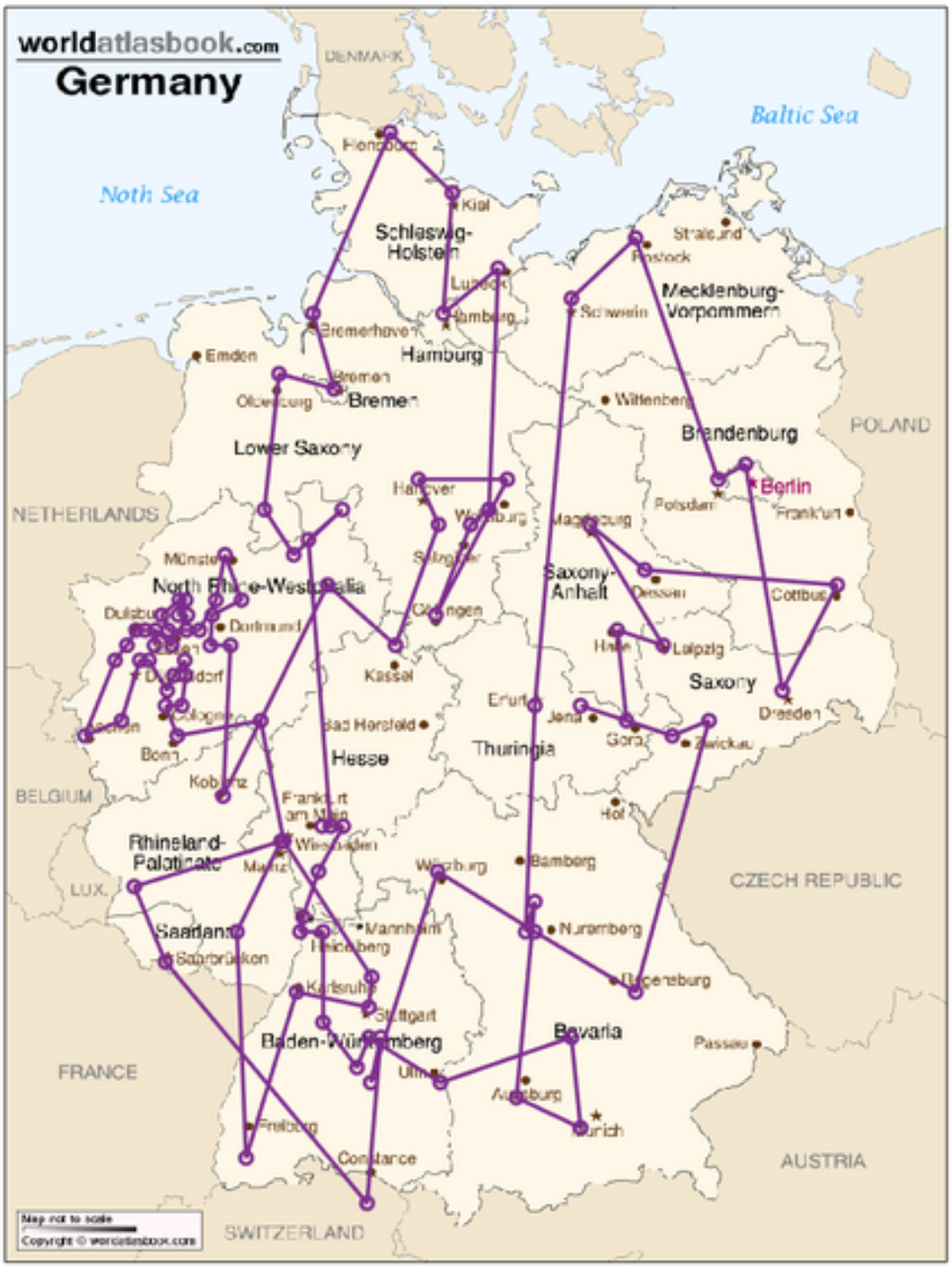

Figure 1: Map using 99% crossover and 99%mutation

3.1 Result for 30 repeats

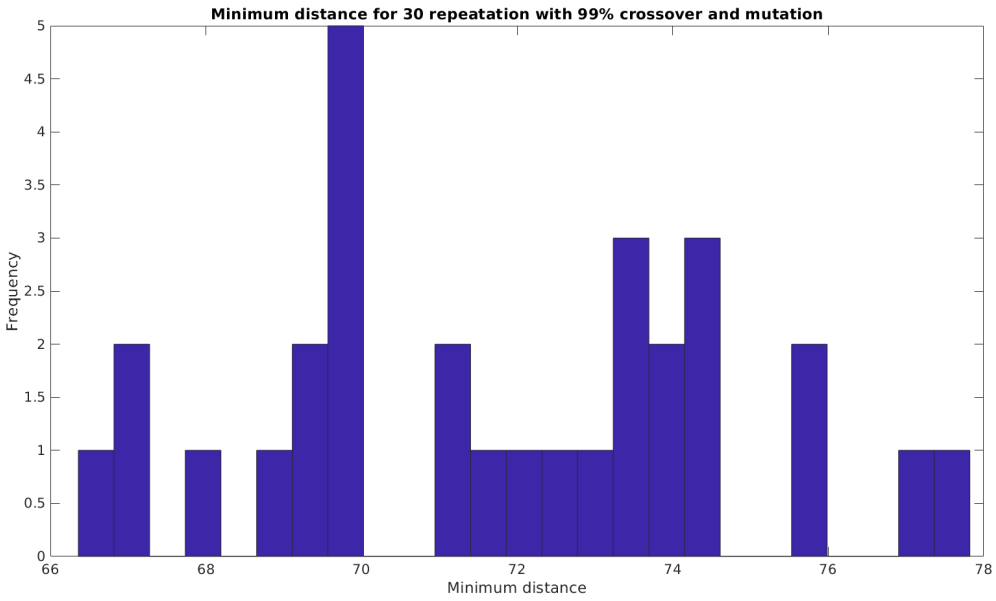

Figure 2: Histogram for 30 runs

3.2 Different mutation rates

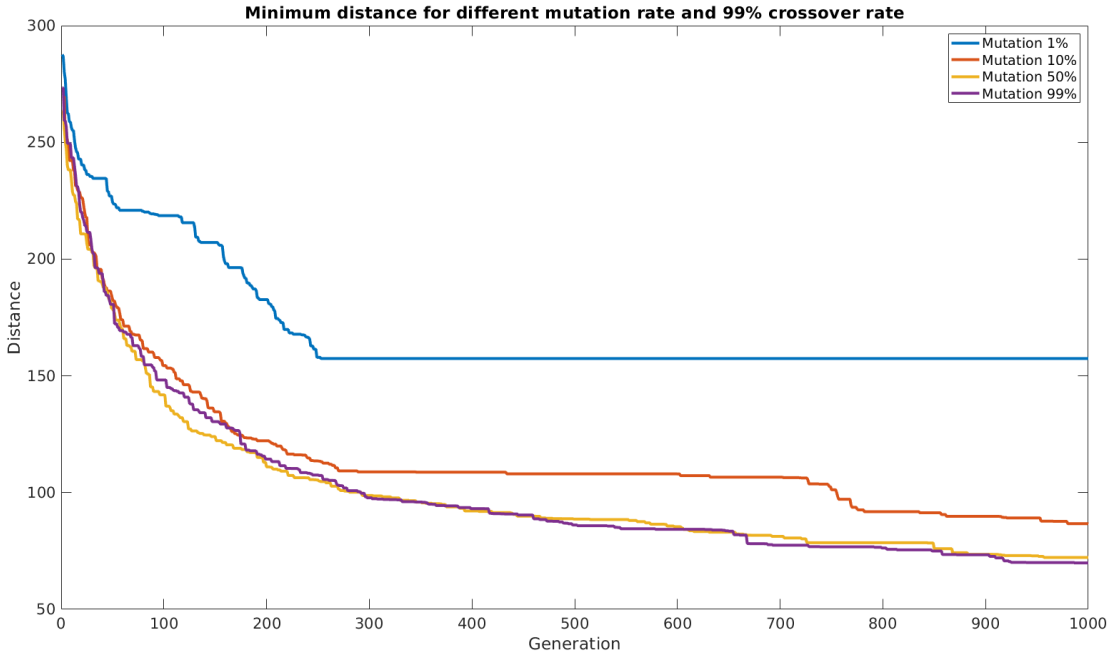

Figure 3: Different mutation rate for 99% crossover

Describe and explain the different mutation rates and how they influence the learning

behaviour. Please remember to also focus on why, not only on what. Also elaborate on the mutation rate you have chosen as best mutation rate.

3.3 Different crossover rates

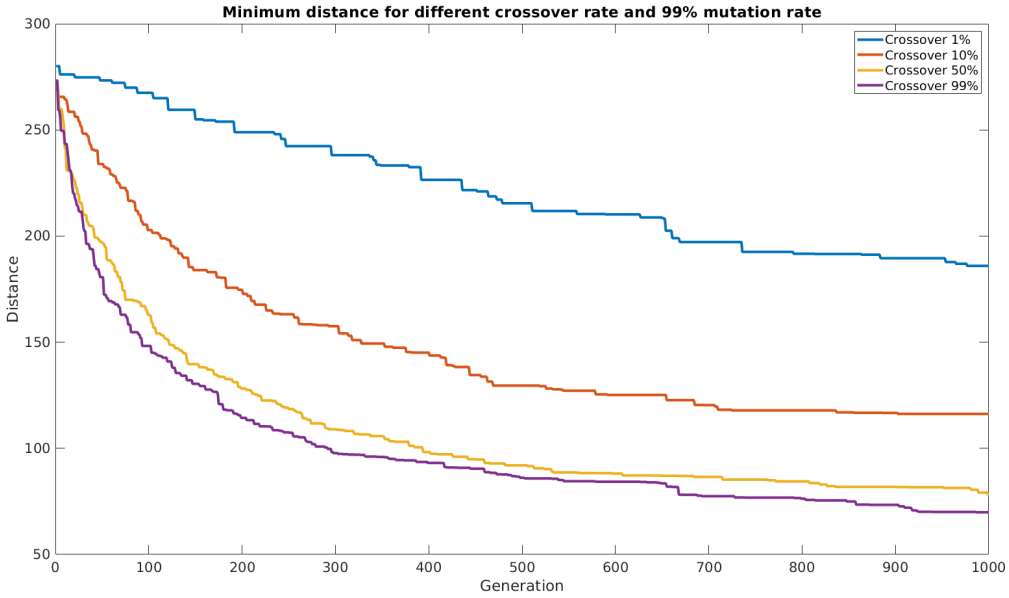

Figure 4: Different crossover rate for 99% mutation

Describe and explain the different crossover rates and how they influence the learning behaviour. Please remember to also focus on why, not only on what. Also elaborate on the crossover rate you have chosen as best mutation rate.