FEDERAL STATE AUTONOMOUS EDUCATIONAL INSTITUTION OF HIGHER EDUCATION ITMO UNIVERSITY

Report

on the practical task No. 6

Algorithms on graphs. Path search algorithms on weighted graphs

 $\begin{array}{c} {\rm Performed~by} \\ {\rm Dmitry~Grigorev,~Maximilian~Golovach} \\ {\rm J4133c} \end{array}$

Accepted by Dr Petr Chunaev

1. Goal of the work

The goal of this work consists of the following points:

- to become familiar with graphs, ways of their representation and some algorithms of traversing around them,
- to apply these algorithms to one generated graph.

2. Formulation of the problem

Suppose we have a graph G which is simple unweighted undirected and built from generation of its adjacency matrix. The subproblems here are:

1. some points

3. Brief theoretical part

The theory is taken from [1].

4. Results

5. Data structures and design techniques used in algorithms

6. Conclusion

7. Appendix

Algorithms implementation code is provided in [2].

Bibliography

- $1. \ \, {\rm Erciyes\ K.\ Guide\ to\ Graph\ Algorithms.} {\rm Springer\ Cham,\ 2018.} {\rm ISBN:\ 9783319732350.}$
- $\hbox{2. Grigorev D., Golovach M. Code repository.} {\tt https://github.com/dmitry-grigorev/AlgoAnalysisDevelopment.} 2022.$