Obsah

1. Introduction

1.1 Rough specification of the project

Create an election processing program with different election rules, elections will be processed using streaming algorithms.

1.2 Where is the project stored

Project is stored at Gitlab and at this Github.

2. More detailed specifications

2.1 Libraries

- Preflib.
- ...

2.2 Resources

- Book about streaming algorithms.
- Paper reservoir sampling.
- Wiki reservoir sampling.
- ...

2.3 Algorithms

- Misra-Gries algorithm.
- Reservoir sampling algorithms.
- ...

2.4 Decomposition of the project

2.4.1 File tree

- src:

  Contains all source code.

- docs:

  Contains .tex files related to the project, specifications, user documentation, developer documentation. All at least in thesse languages:

  - Czech.
  - English.

- votes:

  Contains ballot files.

- test:

  Contains function tests in src.

2.4.2 Dekomposition of src

main.py

This is the main method it will read data from a file, call functions from other Python files that will contain individual voting stream algorithms, and more.

vote_generator.py

This is a file that will generate choices, in various ways:

- Exponential distribution.
- Normal distribution (Gaussian curve).
- ...

2.4.3 Files of individual election rules

In the file vote_rules. It contains the implementation of individual election rules.

2.4.4 Sampling algorithms

Selection of smaller number of tickets.