

DENIS SHABANOV

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Education

Saint Petersburg State University

2021 — June 2022

Bachelor of Computer Science in Applied Mathematics and Computer Science

Jacobs University, Bremen

September 2022 — Expected 2024

Bachelor of Computer Science

Second Year

Skills

Languages: C++, Kotlin, Python

Developer Tools: IntelliJ IDEA, Git

Technologies: Linux

Skills: Algorithms & Data Structures

Projects

Visualization Tool | *Kotlin, Apache Batik, Clikt*

October 2021

- A tool that renders SVG charts using data from external CSV file.
- I used Apache Batik library to work with SVGs as with `java.awt.Graphics` instances.

Key-Word Database | *Kotlin, kotlinx-serialization, Clikt*

October 2021

- A dbm-inspired key-word database management tool.
- Used `kotlinx-serialization` to read and write from JSON file.
- `Clikt` was used to design command-line interface.

Diff Tool | *Kotlin*

September 2021

- A simplified clone of an UNIX diff utility.
- Uses naive $O(n^2)$ longest common subsequence finding algorithm.
- Is able to produce output in normal (Linux-like) and unified (GitHub-like) modes.

C, C++ Homework | *C, C++*

Since November 2021

- Unfortunately, it's forbidden by the rules of the course to make homework solutions publicly accessible in the Internet. I may add you as a collaborator on the e-mail. [.zip repo](#) (in Russian)
- C homeworks: Makefile, implementation of some functions from `cstring`, mergesort implementation, intrusive list implementation. C++ homeworks: vector implementation, `shared_ptr`, C++ I/O, vector implementation.
- Most complex assignment in C: console utility that crops a rectangular segment of a BMP image and rotates it 90 degrees.
- Most complex assignment in C++: console utility that implements Huffman encoding and allows to compress all types of files.

Achievements

Participation in Russian Competitive Programming Contests

2019 – Spring 2021

- **High School Student Olympiad in Informatics and Programming (2021):** 43rd place out of 378 participants
- **All-Siberian Olympiad in Informatics (2020):** 77th place out of 540 participants
- **Saint Petersburg State University Olympiad in Informatics (2020):** 17th place out of more than 300 participants