



Ovakimyan Arman

Languages

- Russian (Native)
- English (B2)

Projects

DEC 2023 - MAY 2024

Tools: C/C++, ASM X86-64, Graphviz

X86-64 Compiler for my own programming language

GH link: <https://github.com/d3clane/Compiler>

My own esoteric programming language with compiler to executable x86-64 elf64 file. Divided into three programs:

1. Frontend
2. Middle-end
3. Backend

APR 2024

Tools: C/C++, ASM X86-64, KCachegrind, Python, Graphviz

Optimizing hash table using asm

GH link: <https://github.com/d3clane/HashTable>

Optimizing hash table requests time performance using asm. Three types of optimizations are used:

1. SIMD instructions
2. Inline asm
3. Linking with another file with asm code

NOV 2024 - DEC 2024

Tools: C++, SFML

Graphics editor

GH link: <https://github.com/d3clane/MyPhotoshop>

Developed my own graphics editor as part of a student group project, during which we discussed and implemented standard API and developed various plugins for it. Implemented plugins based on the standard API, including a brush tool, eraser, Gaussian blur filter, and negative filter, among others.

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🌐 d3clane

Education

Moscow State School 57

Physics class, graduated with gold medal

2019-2023

Moscow Institute of Physics and Technology

Bachelor degree (finished first year)

Phystech School of Applied Mathematics and Informatics

2023-PRESENT

Grades

Overall

Overall GPA: 9.18/10 (5.0/5)

Programming courses
GPA: 9.30/10

Dedinsky' programming courses

First semester: 9/10

Second semester: 10/10

Third semester: 10/10

Skills

- C
- C++
- Assembly x86-64
- Concurrency
- Graphviz
- Algorithms and data structures
- EDB
- Python
- SFML

Achievements

Russian National Physics Olympiad

Twice final stage silver medal
2022, 2023

Candidate to the national physics team for the international Olympiad

2022

International Experimental Physics Olympiad (IEPHO)

Bronze medal
2020

Russian National Informatics Olympiad

Twice region stage prize winner
2021, 2023

NOV 2023

Tools: C/C++, LATEX, Gnuplot

Differentiator

GH link: <https://github.com/d3clane/Differentiator>

Reading math expressions from human-readable common form, differentiating it. After that generating pseudo-scientific pdf with step-by-step differentiating, graphs building. Also decomposes the expression into a Maclaurin series.

FEB 2024

Tools: C/C++, Disasm, SDL

Hacking my friend's program (crackme)

GH link: <https://github.com/d3clane/DosHack>

Finding vulnerabilities in my friend's program and exploiting them.

FEB 2024 - MAY 2024

Tools: C/C++, Python

Laboratory works from algorithm course

GH link: <https://github.com/d3clane/labs>

Laboratory works to study different data structures and algorithms:

1. Comparing speed performance of stack implementation using list and dynamic array.
2. Comparing different sorting algorithms
3. Comparing different algorithms of building binary heap.
4. Comparing different hash tables and hashing algorithms
5. Comparing different binary search trees implementations.

Soft Skills

- Quick learning
- Organized
- Hard-working
- Sociable and collaborative
- Responsible