SHUMILO PAVEL

CONTACTS

Mobile

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Email

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Github

Pave2005

SKILLS

Programming languages:

C, C++, Assembly x86-64

Technologies:

Git, Latex, Make, Gdb, Mac, Windows, Linux, Perf, IDA Disassembler, DOT Language, Doxygen

Libraries:

SFML, SDL

Knowledge:

Algorithms, Data Structures, Processor architecture, Optimisations

EDUCATION

Moscow Institute of Physics and Technology

Moscow, Russia

August 2023 – ongoing

Bachelor of Department of Radio Engineering and Computer Technology.

Current status: Finished 1st year

Training course in system programming and compiler technologies

MIPT, Moscow, Russia

August 2023 – May 2024

LANGUAGES

English

B2 – Upper Intermediate

Russian

Native language

PROJECTS

Hash Table

April 9, 2024 – April 29, 2024

Tools: C, Assembly x86-64

Source lines of code: 869

Assembly-optimised hash table. Has 3 types of optimisations: inline assembly, external assembly function, with which I managed to expand the loop, which significantly accelerated the time of my program's work, and C intrinsic functions. Also includes comparison of different hash functions' work.

[https://github.com/Pave2005/Hash-Table]

JIT Translator

May 7,2024 – May 23, 2024

Tools: C, Assembly x86-64

Source lines of code: 1 888

GRADES

Programming average

MIPT Average Programming Grade - **8.0/10.0**

Overall average

MIPT Average Overall Grade - **8.1/10.0**

SOFT SKILLS

Personal traits

Sociable, Responsible, Reliable, Honest, Funny, Hard-working, Punctual

Hobbies

cheerleading, swimming, skiing, snowboarding, painting

This program converts my binary representation for the processor emulator into instruction sets of the Intel x86 architecture. The result of the conversion is stored in a dedicated location in the main memory, and you can also use the -S command to view the Assembly x86-64 representation. It uses double precision arithmetic and AVX-256 instructions.

[https://github.com/Pave2005/Binary-Translator]

Differentiator

November 27, 2023 – December 16, 2023

Tools: C, dot

Source lines of code: 983

A tool for taking derivatives and for decomposing of into the Maclaurin series. Uses recursive descent and binary trees.

[https://github.com/Pave2005/differential]

CPU Emulator

October 24, 2023 – November 27, 2023

Tools: C

Source lines of code: 777

Processor emulator. In this one I had to make my own command system and and assembly language for it.

[https://github.com/Pave2005/processor]

Akinator

November 11, 2023 – November 30, 2023

Tools: C, dot

Source lines of code: 777

My version of a famous guesser game with a use of a binary tree.

[https://github.com/Pave2005/akinator]