MURATOV ARTYOM

1-year MIPT student

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📍 Kotlas, Arkhangelsk region, Russia ⊙ RTCupid

EDUCATION

High school

Lyceum 3

📅 Sept 2022 – June 2024 📍 Kotlas, Arkhangelsk region, Russia

UNIVERSITY

1-year Department of Radio Engineering and Cybernetics

MIPT

📅 Sept 2024 – Present 📍 Moscow, Russia

- A course including Mathematical Analysis, Linear Algebra, General English, General Physics, General Physics Laboratory Practicum, Computer Science, Discrete analysis and Probability Theory.

System programming and compiler technology course

MIPT course, Lector: Ilya Rudolfovich Dedinsky

📅 Sept 2024 – Present 📍 Moscow, Russia

- I am taking this course in Ilya Rudolfovich Dedinsky's advanced programming group.
- The course is based on projects that focus on various aspects of the C language or processor architecture including projects written in assembly language. The course provides skills in large project management, using version control system, debugging, including graphical methods, and code optimization.

TECHNICAL SKILLS

C/C++ NASM Python

Markdown dot HTML LaTex

Git Radare2 Make Excel Perf

SFML Graphviz Matplotlib

Program on Linux.

INTERESTS

- I am a member of the MIPT table tennis team and footbal player.
- Like to read classical books and books about computers.

MAIN PROJECTS

C/C++ projects

Mandelbrot fractal

github.com/RTCupid/Mandelbrot Fractal

- Project based on optimization calculations points for Mandelbrot fractal with help of AVX instructions and comparing it with standart method.
- Also it include using graphics library SFML to check the accuracy of calculations and make beautiful graphics.

Programming language

github.com/RTCupid/Programming Language

- Project based on recursive descent and include frontend and backend parts.
- In project was used Graphviz to debug binary tree.
- Also this project include other my program - processor, to running code in my programming language.

Differentiator

github.com/RTCupid/Differentiator

- My program differentiator takes an expression as input and differentiates it. Also it convolves constants and removes neutral expressions. The program output generates a LaTex file with step-by-step solution and funny comments.
- Also Graphviz for debug and DSL for setting of differentiation algorithms was used in the project.

NASM project

My Printf

github.com/RTCupid/My Printf

- My function printf. Project in assembly language NASM. It based on two calling conventions: cdecl and fastcall. The program include my cdecl version of printf that handles specifiers: %c, %s, %d, %x, %o, %b.
- The selection of the code that will process the specifier is made using the Jump Table.
- Also it have trampoline for transition from fastcall version to cdecl version of my printf.
- Radare2 was used to debugging NASM projects.

LANGUAGES

Russian (Native) and English (B1).