

# MIPS Simulator

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## Abstract

This is a simple project to implement various mips instructions.

## 1 Specs

- The compiler used is GCC, using GDB to debug.
- The operating system is Fedora 25.
- The IDE used is Code::Blocks.
- The main problem was reading the binary file to the *mem* variable, the binary file is not sequentially organized, The solution found is to read byte by byte and then shift it to the left the amount of bits necessary until we have a word.

```
instrucao = 0;
instrucao |= getc(text_fp);
instrucao |= getc(text_fp) << 8;
instrucao |= getc(text_fp) << 16;
instrucao |= getc(text_fp) << 24;
mem[i] = instrucao;
```

- The implementation contributed a lot to a better understanding of how MIPS work, it serves as a study of how the most basic instructions in a computer might be implemented and it helps to imagine the computer as a machine and not a magical box.