GameBoy Virtual Machine (GBVM)

File: gbvm.h

Author: Soham Metha

Date: January 2025

This file contains the declarations of functions and structures related to the virtual machine. The virtual machine represents the execution environment for the Game Boy program.

Structures

Vm

Represents the virtual machine instance.

- Memory mem: The memory component of the virtual machine.
- Program prog: The program component of the virtual machine.
- CPU cpu: The CPU component of the virtual machine.

Functions

void loadProgram(Vm* vm, char* inputFile)

Loads the program from the specified input file into the virtual machine.

- **Parameters**:
    - vm: The virtual machine instance.
    - inputFile: The input binary file containing the program bytecode.

void dumpStack(FILE* stream, const Vm* vm)

Dumps the contents of the stack to the specified stream.

- **Parameters**:
    - stream: The stream to dump the stack contents to.
    - vm: The virtual machine instance.

void dumpFlags(FILE* stream, const Vm* vm)

Dumps the flags of the virtual machine to the specified stream.

- **Parameters**:
    - stream: The stream to dump the flags to.
    - vm: The virtual machine instance.

void executeProgram(Vm* vm, int debug, int i)

Recursively executes the program loaded in the virtual machine.

- **Parameters**:
  - `vm`: The virtual machine instance.
  - `debug`: The debug level (0, 1, or 2).
  - `i`: The current execution count.