octochip8

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1.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

Chapter 3

Class Documentation

3.1 CPU Class Reference

`#include <CPU.h>`

Public Member Functions

- CPU ()
- virtual ~CPU ()
- void initalize ()
- void loadGame (std::string filenamne)
- void emulateCycle ()
- bool getDrawFlag ()
- void setKeys ()
- vector< unsigned char > getGFX ()

Static Public Attributes

- static const int SCREEN_SIZE = 64 * 32
- static const int SCREEN_WIDTH = 64
- static const int SCREEN_HEIGHT = 32

Private Member Functions

- vector< unsigned char > memory (4096)
- vector< unsigned char > V (16)
- vector< unsigned char > gfx (CPU::SCREEN_SIZE)
- vector< unsigned short > stack (16)
- vector< unsigned char > key (16)

Private Attributes

- unsigned short opcode
- unsigned short I
- unsigned short pc
- unsigned short sp

3.1.1 Constructor & Destructor Documentation

3.1.1.1 CPU::CPU ( )

The height of the screen in pixels. The constructor for the class, initalise must be called after this to be used.

3.1.1.2 CPU::~CPU ( ) [virtual]

3.1.2 Member Function Documentation

3.1.2.1 void CPU::emulateCycle ( )

Emulate a cycle of the CPU

3.1.2.2 bool CPU::getDrawFlag ( )

Gets the current draw flag determining wether or not to draw during this cpu cycle.

Returns

A bool of the current draw flag. True = Draw screen. False = Don't draw screen.

3.1.2.3 vector<unsigned char> CPU::getGFX ( )

3.1.2.4 vector<unsigned char> CPU::gfx (CPU::SCREEN_SIZE) [private]

A vector representing the current screen

3.1.2.5 void CPU::initalize ( )

Called after construction, sets up all registers and memory.

3.1.2.6 vector<unsigned char> CPU::key (16) [private]

The pointer to the current level in the stack

3.1.2.7 void CPU::loadGame (std::string *filenamne*)

Load a game into the emulator.

Parameters

filenamne	The file to load. Type will probably change later.

3.1.2.8 vector<unsigned char> CPU::memory (4096) [private]

The virtual memory - 8k memory

3.1.2.9 void CPU::setKeys ( )

Sets the keys for the current screen.

3.1.2.10 vector<unsigned short> CPU::stack (16) [private]

The stack. Has 16 levels. ha pancakes

3.1.2.11 vector<unsigned char> CPU::V (16) [private]

3.1.3 Member Data Documentation

3.1.3.1 unsigned short CPU::I [private]

< The CPU registers. CPU registers: The Chip 8 has 15 8-bit general purpose registers named V0,V1 up to VE. The 16th register is used for the 'carry flag'. The index register, counts down from value to 0 when in use.

3.1.3.2 unsigned short CPU::opcode [private]

The current operation code.

3.1.3.3 unsigned short CPU::pc [private]

The program counter, counts down from value to 0 when in use.

3.1.3.4 const int CPU::SCREEN_HEIGHT = 32 [static]

The width of the screen in pixels.

3.1.3.5 const int CPU::SCREEN_SIZE = 64 * 32 [static]

The amount of pixels for the screen

3.1.3.6 const int CPU::SCREEN_WIDTH = 64 [static]

3.1.3.7 unsigned short CPU::sp [private]

The documentation for this class was generated from the following files:

- src/CPU.h
- src/CPU.cpp

3.2 Graphics Class Reference

`#include <Graphics.h>`

Public Member Functions

- void initalize ()
- void draw (char screen[CPU.SCREEN_SIZE])
- Graphics ()
- virtual ~Graphics ()

3.2.1 Constructor & Destructor Documentation

3.2.1.1 Graphics::Graphics ( )

3.2.1.2 Graphics::~Graphics ( ) [virtual]

3.2.2 Member Function Documentation

3.2.2.1 void Graphics::draw (char *screen[CPU.SCREEN_SIZE]*)

3.2.2.2 void Graphics::initalize ( )

The documentation for this class was generated from the following files:

- src/Graphics.h
- src/Graphics.cpp

Chapter 4

File Documentation

4.1 src/CPU.cpp File Reference

```
#include "CPU.h"
```

4.2 src/CPU.h File Reference

```
#include <string>
#include <vector>
```

Classes

- class CPU

4.3 src/Graphics.cpp File Reference

```
#include "Graphics.h"
```

4.4 src/Graphics.h File Reference

```
#include "CPU.h"
```

Classes

- class Graphics

4.5 src/octochip8.cpp File Reference

```
#include <iostream>
```

Functions

- int main (void)

4.5.1 Function Documentation

4.5.1.1 int main (void)

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