

octochip8

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Chapter 1

Class Index

1.1 Class List

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

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Graphics	7

Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

src/ CPU.cpp	9
src/ CPU.h	9
src/ Graphics.cpp	9
src/ Graphics.h	9
src/ octochip8.cpp	9

Chapter 3

Class Documentation

3.1 CPU Class Reference

```
#include <CPU.h>
```

Public Member Functions

- [CPU](#) ()
- virtual [~CPU](#) ()
- void [inititalize](#) ()
- void [loadGame](#) (std::string filename)
- 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, initialise 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 whether 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::initialize ()

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 filename)

Load a game into the emulator.

Parameters

<i>filename</i>	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 [inititalize](#) ()
- 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::initailize ()`

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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