InputInterface Documentation

**GroupA**

**Lonnie C.**

**Steve H.**

**Gustavo F.**

# Implementations

Return Definitions

#define SUCCESS S\_OK

#define FAIL 0x82000001

#define INVALID 0x83000001

Enumeration for Input devices

typedef enum INPUT\_TYPE

{

DEV\_KEYBOARD,

DEV\_JOYSTICK,

DEV\_MOUSE

};

Direct Input Device class

class InputDevice

{

protected:

HWND m\_hWndMain;

HINSTANCE m\_hInst;

bool m\_bRunning;

FILE \*m\_pLog;

public:

InputDevice(void){};

~InputDevice(void){};

virtual HRESULT Init(HWND, const RECT\*, bool) = 0;

virtual void Release(void) = 0;

virtual bool Running(void) = 0;

virtual bool HasJoystick(char \*) = 0;

virtual HRESULT Update(void) = 0;

//mouse and joystic

virtual HRESULT GetPosition(INPUT\_TYPE, POINT\*) = 0;

//all devices

virtual bool Pressed(INPUT\_TYPE, UINT) = 0;

//all devices

virtual bool Released(INPUT\_TYPE, UINT) = 0;

};

Input Device Interface Class

class InputInterface : public InputDevice

{

private:

LPDIRECTINPUT8 m\_pDI;

InputKeyboard \*m\_pKeyboard;

InputJoystick \*m\_pJoystick;

InputMouse \*m\_pMouse;

public:

InputInterface(HINSTANCE hInst);

~InputInterface(void);

HRESULT Init(HWND, const RECT\*, bool);

void Release(void);

HRESULT Update(void);

bool Running(void);

bool HasJoystick(char \*pJoyName);

bool Pressed(INPUT\_TYPE type, UINT nBtn);

bool Released(INPUT\_TYPE type, UINT nBtn);

HRESULT GetPosition(INPUT\_TYPE type, POINT\* pPt);

};

Interface Class member functions

class InputInterface : public InputDevice {}

The input interface class connects all the input devices into one convenient class. It inherits its functionality from the InputDevice class. The InputDevice class contains Pure virtual functions for the interface and handles for the Window and log file.

# Init

HRESULT InputInterface::Init(HWND hWnd, const RECT \*rcWindow, bool bSaveToLog)

This creates the DirectInput8 object and initializes the Keyboard, Joystick, and mouse class. If any of these fail, the function will pass FAIL to HRESULT. If the init succeeds HRESULT is passed SUCCESS.

|  |  |
| --- | --- |
| hWnd | Window Handle |
| rcWindow | The coordinates of the edges of the window |
| bSaveLog | Decides if you want to save the init log |

# Release

void InputInterface::Release()

Releases all the memory allocated by the Input Device.

# Update

HRESULT InputInterface::Update(void)

Polls all the input devices . If any of the devices don't get updated, FAIL is passed to HRESULT. If all get updated SUCCESS is passed to HRESULT.

# HasJoystick

bool InputInterface::HasJoystick(char \*pJoyName)

Checks the status of the Joystick and passes its name through \*pJoyName.

|  |  |
| --- | --- |
| \*pJoyName | Points to the Joysticks name |

# GetPosition

HRESULT InputInterface::GetPosition(INPUT\_TYPE type, POINT\* pPt)

Gets the position of the mouse or the joystick. If it fails, FAIL is passed to HRESULT. If it succeeds, SUCCESS is passed.

|  |  |
| --- | --- |
| type | Any of the enumerated INPUT\_TYPE. THis defines whether the input device is a joystick, keyboard and or mouse. It can be DEV\_MOUSE, DEV\_KEYBOARD, or DEV\_JOYSTICK |
| \*pPt | Pointer to a point. This represents the coordinate of the cursor or joystick position with respect to screen coordinates. |

# Pressed

bool InputInterface::Pressed(INPUT\_TYPE type, UINT nBtn)

This function checks to see if a button was pressed on any of the devices. returns true if a button or key is pressed, false if nothing is pressed.

|  |  |
| --- | --- |
| Type | Any of the enumerated INPUT\_TYPE. This defines whether the input device is a joystick, keyboard and or mouse. It can be DEV\_MOUSE, DEV\_KEYBOARD, or DEV\_JOYSTICK |
| nBtn | The unsigned integer value of the button or key being pressed. |

# Released

bool InputInterface::Released(INPUT\_TYPE type, UINT nBtn)

This function checks to see if a button was released on any of the devices. returns true if a button or key is released, false if nothing is released.

|  |  |
| --- | --- |
| Type | Any of the enumerated INPUT\_TYPE. This defines whether the input device is a joystick, keyboard and or mouse. It can be DEV\_MOUSE, DEV\_KEYBOARD, or DEV\_JOYSTICK |
| nBtn | The unsigned integer value of the button or key being released. |