

Engine.h Reference Sheet

For Version Alpha 0.0.01

Dependencies:

- ncurses.h
- stdio.h
- stdlib.h

Non Static Functions:

Init

Description:

Initializes ncurses and generates colors. This function must be called for the engine to work.

Input:

NONE

Returns:

NONE

Usage:

```
Input ();
```

Declaration:

```
void Init(void);
```

SetMaxYX

Description:

Allows the user to set the screen size instead of using the actual screen size.

Input: (2)

A Constant Unsigned Integer 'y' for the custom y axis (also known as col/height)

A Constant Unsigned Integer 'x' for the custom x axis (also known as row/width)

Returns:

NONE

Usage:

```
SetMaxYX(100, 100); //make the new screen size 100x100 chars
```

Declaration:

```
void SetMaxYX(const unsigned int y, const unsigned int x);
```

GenBox

Description:

Creates a box/menu in the center of the screen.

Input: (3)

A Constant Unsigned Integer 'Width' for the row size

A Constant Unsigned Integer 'Height' for the col size

A Constant Short 'UseShadow' determines if a shadow will be placed around the box

Returns:

NONE

Usage:

```
GenBox(20, 25, 0); //Creates a 20x25 box with no shadow
```

Declaration:

```
void GenBox(const unsigned int Width, const unsigned int Height, const short UseShadow);
```

PutTitle

Description:

Creates a title bar on top of a box with the inverse color of said box.

Input: (4)

A Constant Unsigned Integer 'Width' for the width of the box

A Constant Unsigned Integer 'Height' for the height of the box

A String 'Msg' to put on the center of the title bar

A Constant Unsigned Integer 'Size' for the ammount of chars in Msg (so they display centered)

Returns:

NONE

Usage:

```
/* Creates a title bar on a 20x25 box and displays "Testing" in the center */
```

```
PutTitle(20, 25, "Testing", 7);
```

Declaration:

```
void PutTitle(const unsigned int Width, const unsigned int Height, char* Msg, const unsigned int Size);
```

Pause

Description:

Displays “Press any key to continue...” under the current cursor position and waits for a key press.

Input:

NONE

Returns:

NONE

Usage:

```
Pause ( ) ;
```

Declaration:

```
void Pause(void);
```

DisableWarnings

EnableWarnings

Description:

Enables/Disables the engine from displaying warnings. Warnings are on by default

Input:

NONE

Returns:

NONE

Usage:

```
DisableWarnings(); //Turn OFF warnings
```

```
EnableWarnings(); //Turn ON warnings
```

Declaration:

```
void DisableWarnings();
```

```
void EnableWarnings();
```

Minimize()**Maximize()**Description:

Suspends/Resumes ncurses. Drops the user to the simple input/output terminal.

Input:

NONE

Returns:

NONE

Usage:

```
Minimize();  
puts("Now you see me");  
Maximize(); //now you don't
```

Declaration:

```
void Minimize();  
void Maximize();
```

SetColorDescription:

Allows the user to set a custom default color for the menu. See the colors section for more info.

Input: (2)

A Constant Short 'FColor' sets the foreground color as defined in curses.h

A Constant Short 'BColor' sets the background color as defined in curses.h

Returns:

NONE

Usage:

```
SetColor(7, 1); //sets the default to white text on a red background
```

Declaration:

```
void SetColor(const unsigned short FColor, const unsigned short Bcolor);
```

GetTopY**GetTopX**Description:

Returns the top left corner of the box.

Input:(1) each

A Constant Unsigned Integer 'Height' for the height of the box

A Constant Unsigned Integer 'Width' for the width of the box

Returns:

An Unsigned Int of either the Y axis or X axis respectively

Usage:

```
unsigned int Top_y = GetTopY(20);
```

```
unsigned int Top_x = GetTopX(25);
```

Declaration:

```
unsigned int GetTopY(const unsigned int Height);
```

```
unsigned int GetTopX(const unsigned int Width);
```

SetWindowColorDescription:

Sets a color to use then overwrites the screen with spaces ' ', then returns to the default color.

Input:

A Constant Unsigned Short 'FColor' sets the foreground color as defined in curses.h

A Constant Unsigned Short 'BColor' sets the background color as defined in curses.h

Returns:

NONE

Usage:

```
SetWindowColor(2, 2); //Make the screen all green
```

Declaration:

```
void SetWindowColor(const unsigned short FColor, const unsigned short Bcolor)
```

Variables:

`_USING_ENGINE`

Description:

Tells the compiler that engine.h was already added to the program

`_ENGINE_VERSION "Alpha 0.0.01"`

Description:

Holds the current engine version.

`_ENGINE_DEBUG 1`

Description:

Toggles debugging. It makes the engine be more verbose.

`ENGINE_NAME "Display Engine"`

Description:

The human readable name of the engine.

`static unsigned int Max_y, Max_x;`

Description:

The user defined screen size. If the user does not define a screen size, this is set to the actual screen size. See SetMaxYX.

`static unsigned int Real_Max_y, Real_Max_x;`

Description:

Holds the actual screen size that is given from ncurses getmaxyx function.

`static unsigned short UseWarn = 1;`

Description:

Toggles the display of warnings from the engine. See DisableWarnings.

Colors (as defined by curses.h):

`COLOR_BLACK 0`

`COLOR_RED 1`

`COLOR_GREEN 2`

`COLOR_YELLOW 3`

`COLOR_BLUE 4`

`COLOR_MAGENTA 5`

`COLOR_CYAN 6`

`COLOR_WHITE 7`

For more information on curses or ncurses, click [here](#).

Example Code (in C):

```
/* This program sets the screen color to blue
 * Sets the default color to white text on a red background
 * creates a box that is 10x14 with a shadow
 * Adds a title in center saying "Testing"
 * Moves the cursor to the top of the screen
 * Pauses
 * Exits
 */

/* - Start - */

#include "engine.h"
#define WIDTH 10
#define HEIGHT 14
#define TITLE "Testing"
#define USE_SHADOW 1

int main(){
    Init();
    SetWindowColor(COLOR_BLUE, COLOR_BLUE);
    SetColor(COLOR_WHITE, COLOR_RED);
    GenBox(WIDTH, HEIGHT, USE_SHADOW);
    PutTitle(WIDTH, HEIGHT, TITLE, sizeof(TITLE)-1);
    move(0,0);
    Pause();
    return 0;
}

/* - End - */
```

Example Code Output:

