

termschem

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Chapter 1

Bug List

File [arrayhelper.h](#)

No known bugs.

File [mtxhelper.h](#)

No known bugs.

Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

include/ arrayhelper.h	
A set of macros that help manage arrays	5
include/ charhelper.h	6
include/ mtxhelper.h	
A set of macros that help create, init, and control mutexes with variables	7
include/ tui.h	9
src/ main.c	13
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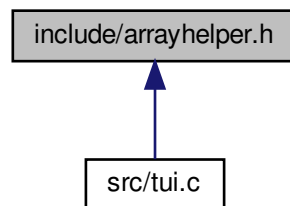
Chapter 3

File Documentation

3.1 include/arrayhelper.h File Reference

A set of macros that help manage arrays.

This graph shows which files directly or indirectly include this file:



Macros

- `#define ARRAY_SIZE(array) (sizeof(array) / sizeof(array[0]))`

3.1.1 Detailed Description

A set of macros that help manage arrays.

Author

Zachary T. Hickman (zhickman)

Bug No known bugs.

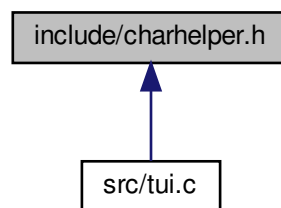
3.1.2 Macro Definition Documentation

3.1.2.1 ARRAY_SIZE

```
#define ARRAY_SIZE(  
    array ) (sizeof(array) / sizeof(array[0]))
```

3.2 include/charhelper.h File Reference

This graph shows which files directly or indirectly include this file:



Macros

- #define `CHAR_ESC` `"\x1B"`

3.2.1 Macro Definition Documentation

3.2.1.1 CHAR_ESC

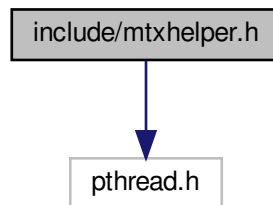
```
#define CHAR_ESC '\x1B'
```

3.3 include/mtxhelper.h File Reference

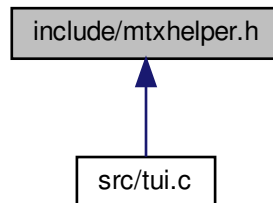
A set of macros that help create, init, and control mutexes with variables.

```
#include <pthread.h>
```

Include dependency graph for mtxhelper.h:



This graph shows which files directly or indirectly include this file:



Macros

- #define [DECLARE_MUTEX_EXTERN](#)(type, name) extern type name;
- #define [DECLARE_MUTEX_VAR](#)(type, name)
- #define [INIT_VAR_MUTEX](#)(name) pthread_mutex_init(&name_mutex, NULL);
- #define [LOCK_VAR_MUTEX](#)(name) pthread_mutex_lock(&name_mutex);
- #define [UNLOCK_VAR_MUTEX](#)(name) pthread_mutex_unlock(&name_mutex);
- #define [SET_MUTEX_VAR](#)(name, value)

3.3.1 Detailed Description

A set of macros that help create, init, and control mutexes with variables.

Author

Zachary T. Hickman (zhickman)

Bug No known bugs.

3.3.2 Macro Definition Documentation

3.3.2.1 DECLARE_MUTEX_EXTERN

```
#define DECLARE_MUTEX_EXTERN(  
    type,  
    name ) extern type name;
```

3.3.2.2 DECLARE_MUTEX_VAR

```
#define DECLARE_MUTEX_VAR(  
    type,  
    name )
```

Value:

```
volatile type name; \  
    pthread_mutex_t name_mutex;
```

3.3.2.3 INIT_VAR_MUTEX

```
#define INIT_VAR_MUTEX(  
    name ) pthread_mutex_init(&name_mutex, NULL);
```

3.3.2.4 LOCK_VAR_MUTEX

```
#define LOCK_VAR_MUTEX(  
    name ) pthread_mutex_lock(&name_mutex);
```

3.3.2.5 SET_MUTEX_VAR

```
#define SET_MUTEX_VAR(  
    name,  
    value )
```

Value:

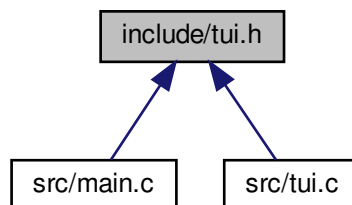
```
LOCK_VAR_MUTEX(name) \  
    name = value; \  
    UNLOCK_VAR_MUTEX(name)
```

3.3.2.6 UNLOCK_VAR_MUTEX

```
#define UNLOCK_VAR_MUTEX(  
    name ) pthread_mutex_unlock(&name_mutex);
```

3.4 include/tui.h File Reference

This graph shows which files directly or indirectly include this file:



Macros

- `#define COLORPAIR_WHITE_BLACK 1`
Define color pair indexes to use with ncurses.
- `#define COLORPAIR_BLACK_WHITE 2`
- `#define COLORPAIR_WHITE_BLUE 3`
- `#define COLORPAIR_BLUE_WHITE 4`

Functions

- `int tui_handle_input ()`
- `void tui_resize_handler (int sig)`
- `void tui_init ()`
HIFN Initializes the UI interface, and panels.
- `void tui_stop ()`
HIFN Deinitializes the UI interface and panels.
- `void tui_update_ui ()`

3.4.1 Macro Definition Documentation

3.4.1.1 COLORPAIR_BLACK_WHITE

```
#define COLORPAIR_BLACK_WHITE 2
```

3.4.1.2 COLORPAIR_BLUE_WHITE

```
#define COLORPAIR_BLUE_WHITE 4
```

3.4.1.3 COLORPAIR_WHITE_BLACK

```
#define COLORPAIR_WHITE_BLACK 1
```

Define color pair indexes to use with ncurses.

3.4.1.4 COLORPAIR_WHITE_BLUE

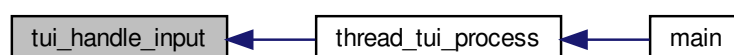
```
#define COLORPAIR_WHITE_BLUE 3
```

3.4.2 Function Documentation

3.4.2.1 tui_handle_input()

```
int tui_handle_input ( )
```

Here is the caller graph for this function:

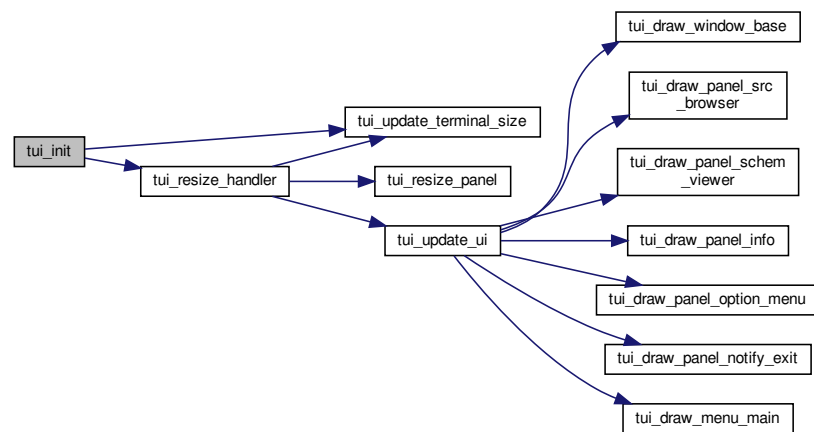


3.4.2.2 tui_init()

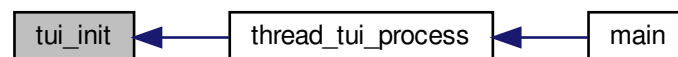
```
void tui_init ( )
```

HIFN Initializes the UI interface, and panels.

Here is the call graph for this function:



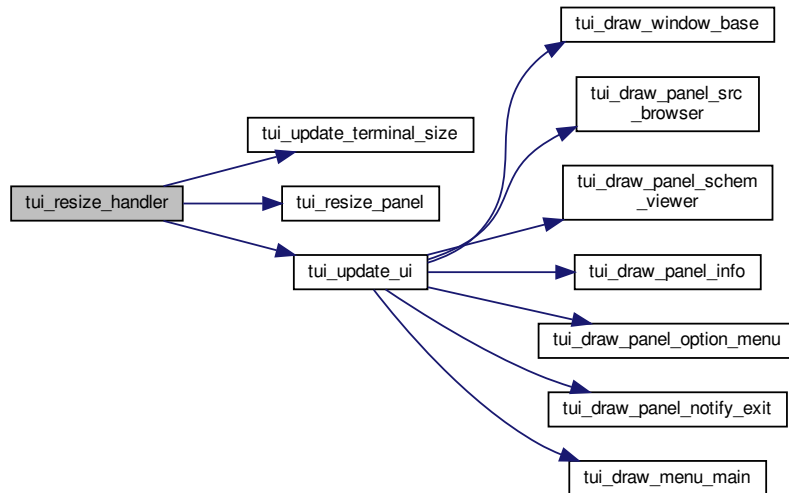
Here is the caller graph for this function:



3.4.2.3 tui_resize_handler()

```
void tui_resize_handler (
    int sig )
```

Here is the call graph for this function:



Here is the caller graph for this function:

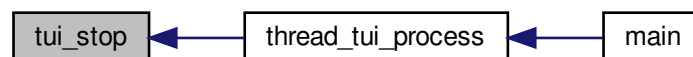


3.4.2.4 tui_stop()

```
void tui_stop ( )
```

HIFN Deinitializes the UI interface and panels.

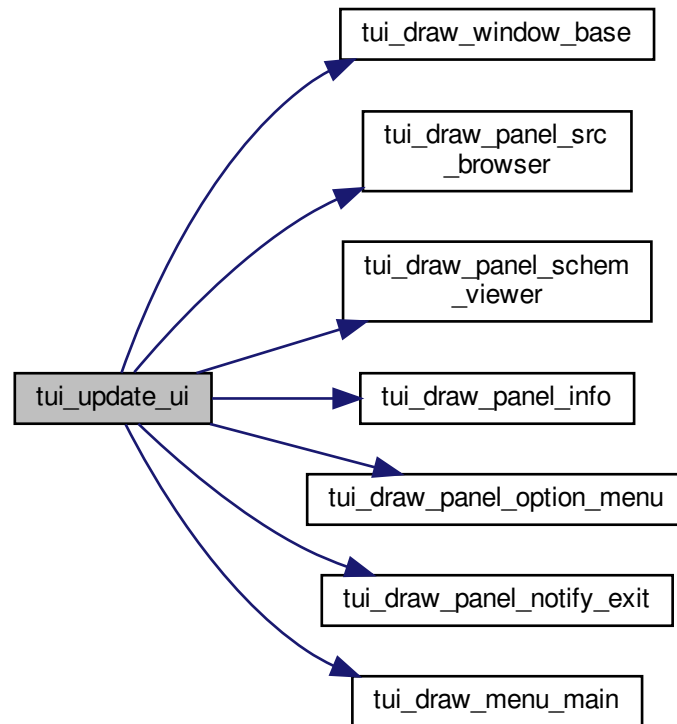
Here is the caller graph for this function:



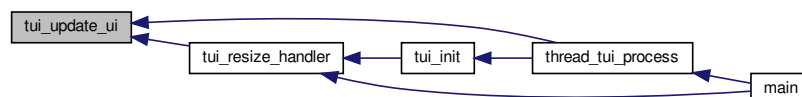
3.4.2.5 tui_update_ui()

```
void tui_update_ui ( )
```

Here is the call graph for this function:



Here is the caller graph for this function:

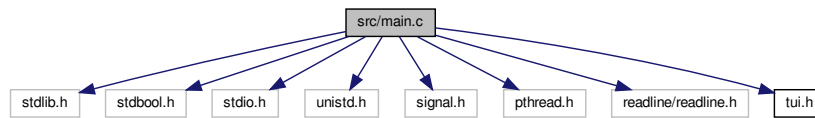


3.5 src/main.c File Reference

```
#include <stdlib.h>
#include <stdbool.h>
#include <stdio.h>
#include <unistd.h>
```

```
#include <signal.h>
#include <pthread.h>
#include <readline/readline.h>
#include "tui.h"
```

Include dependency graph for main.c:



Functions

- void [main_int_handler](#) (int signum)
Catches SIGINT, and flags an exit is requested.
- void * [thread_tui_process](#) (void *vargp)
Threaded function for TUI.
- int [main](#) (int argc, char *argv[])

Variables

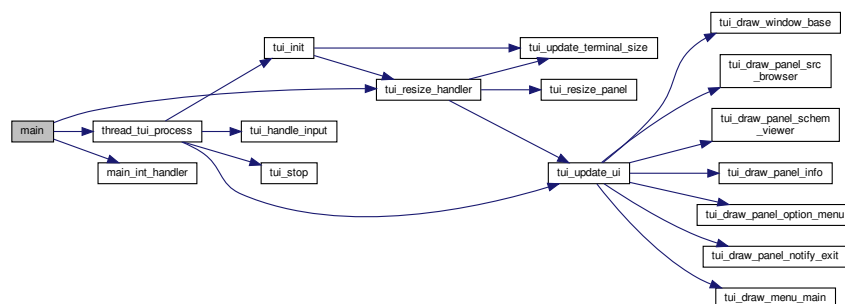
- pthread_t [tid_tui](#)
Declare TUI thread id storage.
- volatile bool [caught_sigint](#) = false
Declare bool for if we caught a signit.
- volatile bool [do_exit](#) = false

3.5.1 Function Documentation

3.5.1.1 main()

```
int main (
    int argc,
    char * argv[ ] )
```

Here is the call graph for this function:

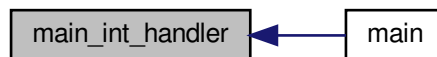


3.5.1.2 main_int_handler()

```
void main_int_handler (
    int signum )
```

Catches SIGINT, and flags an exit is requested.

Here is the caller graph for this function:

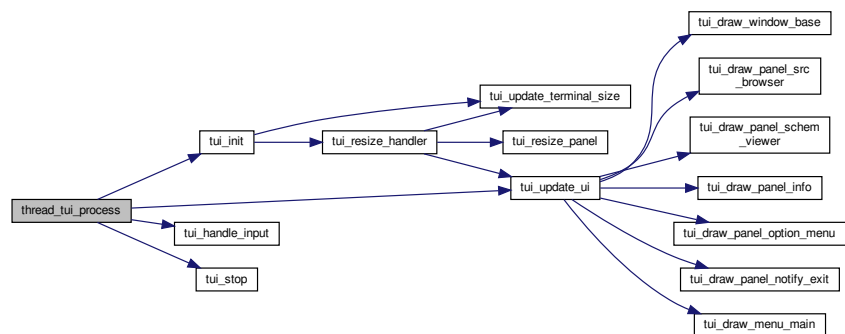


3.5.1.3 thread_tui_process()

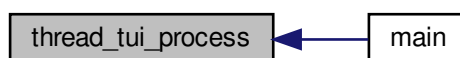
```
void* thread_tui_process (
    void * vargp )
```

Threaded function for TUI.

Here is the call graph for this function:



Here is the caller graph for this function:



3.5.2 Variable Documentation

3.5.2.1 caught_sigint

```
volatile bool caught_sigint = false
```

Declare bool for if we caught a signit.

3.5.2.2 do_exit

```
volatile bool do_exit = false
```

3.5.2.3 tid_tui

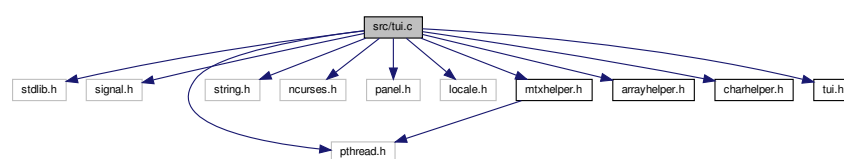
```
pthread_t tid_tui
```

Declare TUI thread id storage.

3.6 src/tui.c File Reference

```
#include <stdlib.h>
#include <signal.h>
#include <pthread.h>
#include <string.h>
#include <ncurses.h>
#include <panel.h>
#include <locale.h>
#include "mtxhelper.h"
#include "arrayhelper.h"
#include "charhelper.h"
#include "tui.h"
```

Include dependency graph for tui.c:



Functions

- void [tui_draw_window_base](#) ()
- void [tui_draw_panel_src_browser](#) ()
- void [tui_draw_panel_schem_viewer](#) ()
- void [tui_draw_panel_info](#) ()
- void [tui_draw_panel_option_menu](#) ()
- void [tui_draw_panel_notify_exit](#) ()
- int [tui_handle_input](#) ()
- void [tui_resize_panel](#) (PANEL *panel, int rows, int cols, int start_y, int start_x)
- void [tui_update_terminal_size](#) ()
- void [tui_resize_handler](#) (int sig)
- void [tui_init](#) ()
- *HIFN Initializes the UI interface, and panels.*
- void [tui_stop](#) ()
- *HIFN Deinitializes the UI interface and panels.*
- void [tui_draw_menu_main](#) ()
- void [tui_update_ui](#) ()

Variables

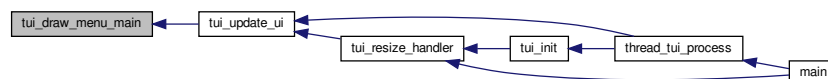
- WINDOW * [window_base](#)
- PANEL * [panel_src_browser](#)
- PANEL * [panel_schem_viewer](#)
- PANEL * [panel_option_menu](#)
- PANEL * [panel_info](#)
- PANEL * [panel_notify_exit](#)

3.6.1 Function Documentation

3.6.1.1 tui_draw_menu_main()

```
void tui_draw_menu_main ( )
```

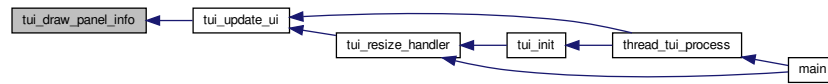
Here is the caller graph for this function:



3.6.1.2 tui_draw_panel_info()

```
void tui_draw_panel_info ( )
```

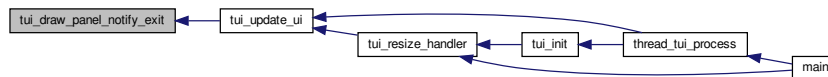
Here is the caller graph for this function:



3.6.1.3 tui_draw_panel_notify_exit()

```
void tui_draw_panel_notify_exit ( )
```

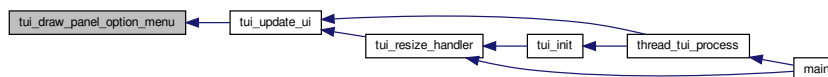
Here is the caller graph for this function:



3.6.1.4 tui_draw_panel_option_menu()

```
void tui_draw_panel_option_menu ( )
```

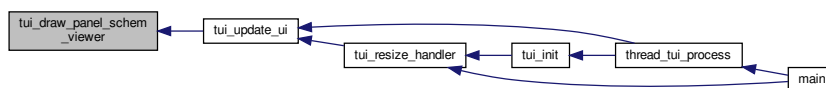
Here is the caller graph for this function:



3.6.1.5 tui_draw_panel_schem_viewer()

```
void tui_draw_panel_schem_viewer ( )
```

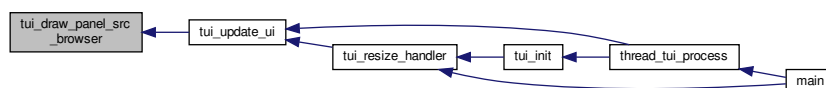
Here is the caller graph for this function:



3.6.1.6 tui_draw_panel_src_browser()

```
void tui_draw_panel_src_browser ( )
```

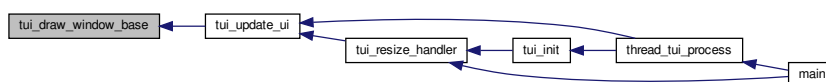
Here is the caller graph for this function:



3.6.1.7 tui_draw_window_base()

```
void tui_draw_window_base ( )
```

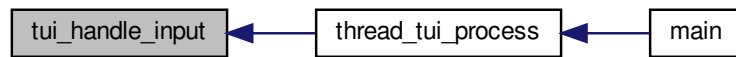
Here is the caller graph for this function:



3.6.1.8 tui_handle_input()

```
int tui_handle_input ( )
```

Here is the caller graph for this function:

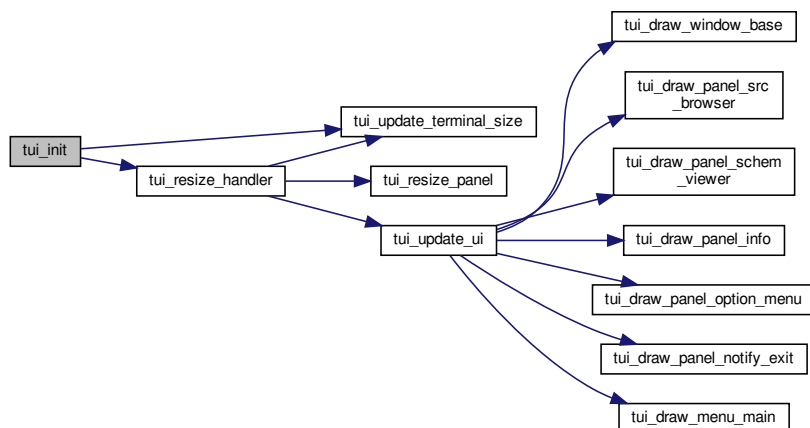


3.6.1.9 tui_init()

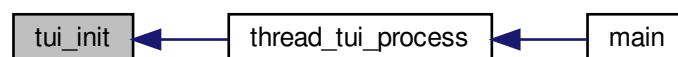
```
void tui_init ( )
```

HIFN Initializes the UI interface, and panels.

Here is the call graph for this function:



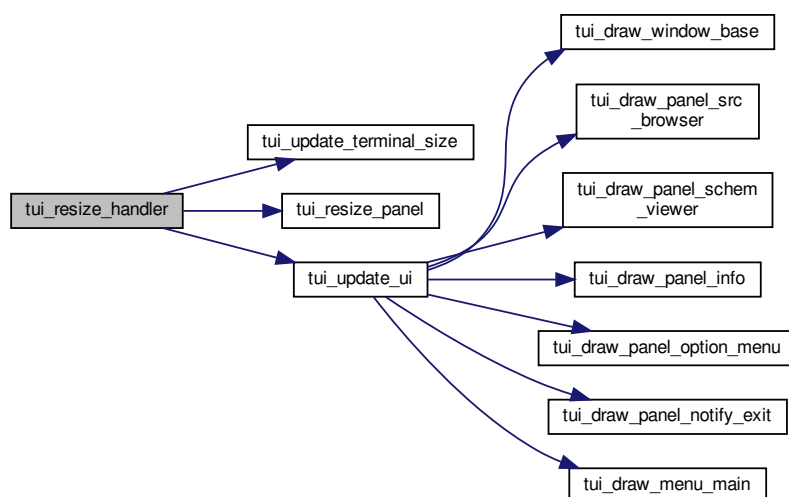
Here is the caller graph for this function:



3.6.1.10 tui_resize_handler()

```
void tui_resize_handler (
    int sig )
```

Here is the call graph for this function:



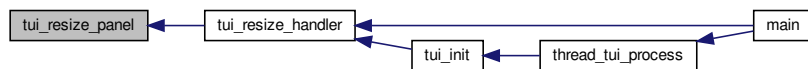
Here is the caller graph for this function:



3.6.1.11 tui_resize_panel()

```
void tui_resize_panel (
    PANEL * panel,
    int rows,
    int cols,
    int start_y,
    int start_x )
```

Here is the caller graph for this function:

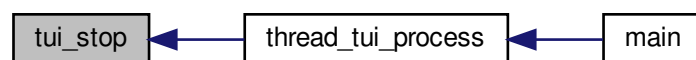


3.6.1.12 `tui_stop()`

```
void tui_stop ( )
```

HIFN Deinitializes the UI interface and panels.

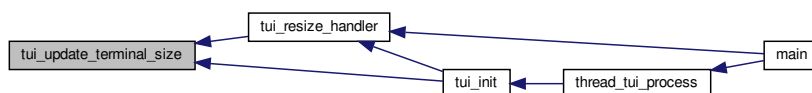
Here is the caller graph for this function:



3.6.1.13 `tui_update_terminal_size()`

```
void tui_update_terminal_size ( )
```

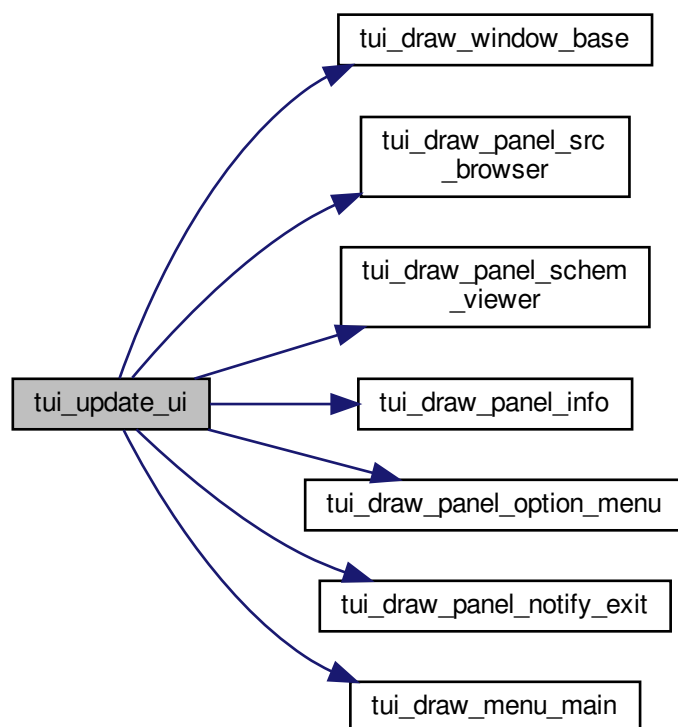
Here is the caller graph for this function:



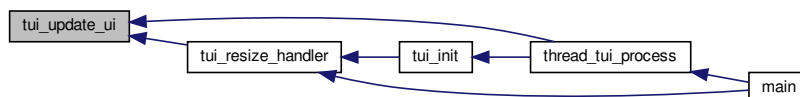
3.6.1.14 tui_update_ui()

```
void tui_update_ui ( )
```

Here is the call graph for this function:



Here is the caller graph for this function:



3.6.2 Variable Documentation

3.6.2.1 panel_info

PANEL* panel_info

3.6.2.2 panel_notify_exit

PANEL* panel_notify_exit

3.6.2.3 panel_option_menu

PANEL* panel_option_menu

3.6.2.4 panel_schem_viewer

PANEL* panel_schem_viewer

3.6.2.5 panel_src_browser

PANEL* panel_src_browser

3.6.2.6 window_base

WINDOW* window_base

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