My Project

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2.1 File List

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Class Documentation

3.1 sloop Struct Reference

define a simple element of Sloop.

`#include <sloop.h>`

Public Attributes

- int **fd**
- void * **user_data**
- sloop_callback_handler **handler**

3.1.1 Detailed Description

define a simple element of Sloop.

Sloop is used to define a simple element os the loop which contains the following informations :

- the file descriptor of the element.
- the callback handler which is called the this fd receives an event.
- the user data which will be included in the callback.

The documentation for this struct was generated from the following file:

- sloop.h

3.2 sloop_data Struct Reference

define data of sloop that will be used by the programmer.

`#include <sloop.h>`

Public Attributes

- int **max_fd**
- struct sloop_table **readfds**
- struct sloop_table **writefds**
- struct sloop_table **exceptfds**
- struct timeval **timeout**
- int **finished**
- struct sloop_table_timer **timer_d**

3.2.1 Detailed Description

define data of sloop that will be used by the programmer.

this data is user by the developper and contains the following informations :

- max_fd is a variable which contains the total number of fds.
- readfds and writefds and exceptfds are tables which are used in select to know if we are waiting for an event in the mode read , write or exception.
- timeout is time that the select wait for an event before it exit.
- finished a variable which indicate if the user want to shutdown the select process.
- timer_d is the table of timers affected to this sloop_data.

The documentation for this struct was generated from the following file:

- sloop.h

3.3 sloop_table Struct Reference

define a table of Sloop.

`#include <sloop.h>`

Public Attributes

- int **num_fd**
- struct sloop * **table**
- int **changed**

3.3.1 Detailed Description

define a table of Sloop.

the table is used to define a multiple of sloop elements. this table contains the following informations :

- num_fd used to define the number of element in the table.
- struct sloop ∗table is the table used to store the elements.
- this variable changed is used to see whether the table changed or not.

The documentation for this struct was generated from the following file:

- sloop.h

3.4 sloop_table_timer Struct Reference

define a table of sloop_timer.

`#include <sloop.h>`

Public Attributes

- int **num_timer**
- struct sloop_timer ∗ **timer**

3.4.1 Detailed Description

define a table of sloop_timer.

the table is used to define a multiple of sloop_timer elements. this table contains the following informations :

- num_timer used to define the number of element in the table.
- struct sloop_timer ∗timer is the table used to store the elements.

The documentation for this struct was generated from the following file:

- sloop.h

3.5 sloop_timer Struct Reference

defines a timer.

`#include <sloop.h>`

Public Attributes

- int **time_w**
- void * **user_data**
- sloop_callback_timer **handler**
- int **stop**
- int **id**

3.5.1 Detailed Description

defines a timer.

This timer is used to call a callbach functon in a specific time.

- time_w is the time on which the callback is called.
- the callback handler which is called the this fd receives an event.
- the user data which will be included in the callback.
- the variable stop is used to stop the timer.
- the last variable is the id of the timer.

The documentation for this struct was generated from the following file:

- sloop.h

Chapter 4

File Documentation

4.1 sloop.h File Reference

Header for the sloop functions.

```
#include <math.h> #include <sys/time.h> #include <sys/select.-
h> #include <stdlib.h> #include <stdio.h>
```

Classes

- struct sloop

  define a simple element of Sloop.
- struct sloop_table

  define a table of Sloop.
- struct sloop_timer

  defines a timer.
- struct sloop_table_timer

  define a table of sloop_timer.
- struct sloop_data

  define data of sloop that will be used by the programmer.

Typedefs

- typedef void(∗ **sloop_callback_handler**)(int fd, void ∗user_data)
- typedef void(∗ **sloop_callback_timer**)(void ∗user_data)
- typedef struct sloop_data **sloop_t**
- typedef struct sloop_table_timer **sloop_timer_t**

Enumerations

- enum sloop_mode { **SLOOP_RD**, **SLOOP_WR**, **SLOOP_EXCEPT** }

  Define the type of sloop mode.

Functions

- sloop_t * sloop_new ()

  function used to initialize the sloop_data.
- int sloop_timer_new (sloop_t *sloop_d, int msec, sloop_callback_timer handler, void *user_data)

  Function used to create a new timer.
- int sloop_add_fd (sloop_t *sloop_d, sloop_mode mode, int fd, sloop_callback_handler handler, void *user_data)

  function used to add a file descriptor to the sloop_data.
- int sloop_add_timer (sloop_t *sloop_d, int msec, sloop_callback_timer handler, void *user_data)

  function used to add timer to the sloop_data.
- int sloop_remove_fd (sloop_t *sloop_d, sloop_mode mode, int fd)

  function used to remove a file descriptor from the sloop_data.
- int sloop_remove_timer (sloop_t *sloop_d, int id)

  function used to remove a timer from the sloop_data.
- void sloop_read_fd (int fd)

  function used to read a single fd and to begin the process of select.
- void sloop_run_step (sloop_t *sloop_d)

  function used to begin the loop waiting for an event but only one time.
- void sloop_run (sloop_t *sloop_d)

  function used to begin the loop waiting for an event.
- int sloop_set_timeout (sloop_t *sloop_d, long msec)

  function used to set the timeout of the sloop_data.
- void sloop_destroy (sloop_t *sloop_d)

  function used to destroy the sloop_data.

4.1.1 Detailed Description

Header for the sloop functions.

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This is a header file for the sloop functions, it contains all the prototype of functions needed to develop an application using this loop.

4.1.2 Enumeration Type Documentation

4.1.2.1 enum sloop_mode

Define the type of sloop mode.

Sloop_mode is used to define whether you are using the loop for events comming to mode Read or write or for exceptions.

4.1.3 Function Documentation

4.1.3.1 int sloop_add_fd (sloop_t * *sloop_d,* sloop_mode *mode,* int *fd,* sloop_callback_handler *handler,* void * *user_data*)

function used to add a file descriptor to the sloop_data.

Parameters

sloop_d	sloop_data.
mode	the mode (SLOOP_RD,SLOOP_WR,SLOOP_EXCEPT).
fd	file descriptor.
handler	the callback function
user_data	the user data

Returns

int

4.1.3.2 int sloop_add_timer (sloop_t * *sloop_d,* int *msec,* sloop_callback_timer *handler,* void * *user_data*)

function used to add timer to the sloop_data.

Parameters

sloop_d	sloop_data.
msec	time in milisecondes
handler	the callback function
user_data	the user data

Returns

int

4.1.3.3 void sloop_destroy (sloop_t * *sloop_d*)

function used to destroy the sloop_data.

Parameters

sloop_d	sloop_data

Returns

void

4.1.3.4 sloop_t* sloop_new ( )

function used to initialize the sloop_data.

Parameters

NONE	

Returns

struct sloop_data.

4.1.3.5 void sloop_read_fd (int *fd*)

function used to read a single fd and to begin the process of select.

Parameters

fd	file descriptor

Returns

void

4.1.3.6 int sloop_remove_fd (sloop_t * *sloop_d,* sloop_mode *mode,* int *fd*)

function used to remove a file descriptor from the sloop_data.

Parameters

sloop_d	sloop_data.
mode	the mode (SLOOP_RD,SLOOP_WR,SLOOP_EXCEPT).
fd	file descriptor.

Returns

int

4.1.3.7 int sloop_remove_timer (sloop_t * *sloop_d,* int *id*)

function used to remove a timer from the sloop_data.

Parameters

sloop_d	sloop_data.
id	the identification of the timer.

Returns

int

4.1.3.8 void sloop_run (sloop_t * *sloop_d*)

function used to begin the loop waiting for an event.

Parameters

sloop_d	sloop_data

Returns

void

4.1.3.9 void sloop_run_step (sloop_t * *sloop_d*)

function used to begin the loop waiting for an event but only one time.

Parameters

sloop_d	sloop_data

Returns

void

4.1.3.10 int sloop_set_timeout (sloop_t * *sloop_d*, long *msec*)

function used to set the timeout of the sloop_data.

Parameters

sloop_d	sloop_data.
msec	time in milisecondes

Returns

int

4.1.3.11 int sloop_timer_new (sloop_t * *sloop_d*, int *msec*, sloop_callback_timer *handler*, void * *user_data*)

Function used to create a new timer.

Parameters

sloop_d	sloop_data.
msec	time in milisecondes
handler	the callback function
user_data	the user data

Returns

int