

Elevator project TTK4145

API Documentation

April 20, 2016

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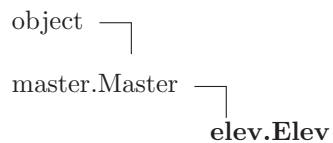
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1 Module elev

1.1 Variables

Name	Description
BUTTON_CALL_DOWN	Value: 1
BUTTON_CALL_UP	Value: 0
BUTTON_COMMAND	Value: 2
DIRN_DOWN	Value: -1
DIRN_STOP	Value: 0
DIRN_UP	Value: 1
ELEV_MODE	Value: 0
IDLE	Value: 0
MODEL	Value: 0
N_BUTTONS	Value: 3
N_ELEV	Value: 1
N_FLOORS	Value: 4
RUNNING	Value: 1
SIMULATOR	Value: 1
STOP_TIME	Value: 10
TIME_BETWEEN_FLOORS	Value: 5
--package--	Value: None

1.2 Class Elev



1.2.1 Methods

`__init__(self, mode)`
`x.__init__(...)` initializes `x`; see `help(type(x))` for signature
 Overrides: `object.__init__` `exitit`(inherited documentation)

`run(self)`
 Overrides: `master.Master.run`

`__exit__(self)`
 Overrides: `master.Master.__exit__`

`insert_task(self, floor)`

<code>next_dir(self)</code>

<code>movement_handler(self)</code>

<code>button_handler(self)</code>

Inherited from master.Master(Section 3.1)

`add_elevator()`, `best_elev()`, `broadcast()`, `cal_time()`, `closest_elev()`, `fastest_elev()`,
`print_system()`, `print_task_stack()`, `run_server()`, `send_backup_ip()`

Inherited from object

`__delattr__()`, `__format__()`, `__getattr__()`, `__hash__()`, `__new__()`, `__reduce__()`, `__reduce_ex__()`,
`__repr__()`, `__setattr__()`, `__sizeof__()`, `__str__()`, `__subclasshook__()`

1.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>__class__</code>	

2 Module main

2.1 Functions

<code>main()</code>

2.2 Variables

Name	Description
BUTTON_CALL_DOWN	Value: 1
BUTTON_CALL_UP	Value: 0
BUTTON_COMMAND	Value: 2
DIRN_DOWN	Value: -1
DIRN_STOP	Value: 0
DIRN_UP	Value: 1
ELEV_MODE	Value: 0
IDLE	Value: 0
MODEL	Value: 0
N_BUTTONS	Value: 3
N_ELEV	Value: 1
N_FLOORS	Value: 4
RUNNING	Value: 1
SIMULATOR	Value: 1
STOP_TIME	Value: 10
TIME_BETWEEN_FLOORS	Value: 5
__package__	Value: None

3 Module master

3.1 Class Master



Known Subclasses: elev.Elev

3.1.1 Methods

```
__init__(self)
```

x.__init__(...) initializes x; see help(type(x)) for signature

Overrides: object.__init__ extit(inherited documentation)

```
run(self)
```

```
__exit__(self)
```

```
add_elevator(self, ip, mode)
```

```
best_elev(self, floor)
```

```
closest_elev(self, floor)
```

```
fastest_elev(self, floor)
```

```
cal_time(self, elev_ip, floor)
```

```
broadcast(self)
```

```
run_server(self)
```

```
print_task_stack(elev)
```

```
print_system(self)
```

```
send_backup_ip(self)
```

Inherited from object

`__delattr__()`, `__format__()`, `__getattr__()`, `__hash__()`, `__new__()`, `__reduce__()`, `__reduce_ex__()`,
`__repr__()`, `__setattr__()`, `__sizeof__()`, `__str__()`, `__subclasshook__()`

3.1.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>__class__</code>	

4 Module network

4.1 Functions

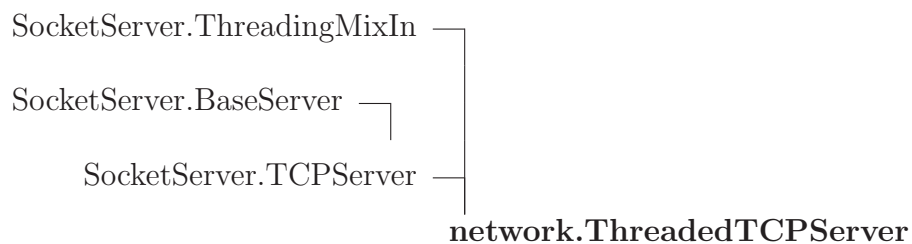
get_ip()

socket_setup(*port*)

4.2 Variables

Name	Description
BUTTON_CALL_DOWN	Value: 1
BUTTON_CALL_UP	Value: 0
BUTTON_COMMAND	Value: 2
DIRN_DOWN	Value: -1
DIRN_STOP	Value: 0
DIRN_UP	Value: 1
ELEV_MODE	Value: 0
IDLE	Value: 0
MODEL	Value: 0
N_BUTTONS	Value: 3
N_ELEV	Value: 1
N_FLOORS	Value: 4
RUNNING	Value: 1
SIMULATOR	Value: 1
STOP_TIME	Value: 10
TIME_BETWEEN_FLOORS	Value: 5
__package__	Value: None

4.3 Class ThreadedTCPServer



4.3.1 Methods

Inherited from SocketServer.ThreadingMixIn

`process_request()`, `process_request_thread()`

Inherited from SocketServer.TCPServer

`__init__()`, `close_request()`, `fileno()`, `get_request()`, `server_activate()`, `server_bind()`, `server_close()`, `shutdown_request()`

Inherited from SocketServer.BaseServer

`finish_request()`, `handle_error()`, `handle_request()`, `handle_timeout()`, `serve_forever()`, `shutdown()`, `verify_request()`

4.3.2 Class Variables

Name	Description
<code>allow_reuse_address</code>	Value: True
<code>daemon_threads</code>	Value: True
<i>Inherited from SocketServer.TCPServer</i>	
<code>address_family</code> , <code>request_queue_size</code> , <code>socket_type</code>	
<i>Inherited from SocketServer.BaseServer</i>	
<code>timeout</code>	

4.4 Class *ClientHandler*

SocketServer.BaseRequestHandler —
network.ClientHandler

4.4.1 Methods

setup(*self*)

Overrides: SocketServer.BaseRequestHandler.setup

handle(*self*)

Overrides: SocketServer.BaseRequestHandler.handle


```
finish(self)
```

Overrides: SocketServer.BaseRequestHandler.finish

```
send_msg(self, msg_type, data)
```

Inherited from SocketServer.BaseRequestHandler

```
_init__()
```

4.5 Class Client

4.5.1 Methods

```
_init__(self, host, server_port, elev)
```

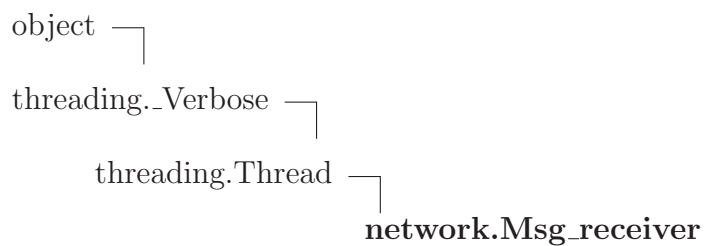
```
run(self)
```

```
handle_msg(self, msg)
```

```
disconnect(self)
```

```
send_msg(self, msg_type, data, ip)
```

4.6 Class Msg_receiver



4.6.1 Methods

`__init__(self, client, connection)`

This constructor should always be called with keyword arguments. Arguments are:

group should be `None`; reserved for future extension when a `ThreadGroup` class is implemented.

target is the callable object to be invoked by the `run()` method. Defaults to `None`, meaning nothing is called.

name is the thread name. By default, a unique name is constructed of the form "Thread-N" where N is a small decimal number.

args is the argument tuple for the target invocation. Defaults to `()`.

kwargs is a dictionary of keyword arguments for the target invocation. Defaults to `{}`.

If a subclass overrides the constructor, it must make sure to invoke the base class constructor (`Thread.__init__()`) before doing anything else to the thread.

Overrides: `object.__init__` `exitit`(inherited documentation)

`run(self)`

Method representing the thread's activity.

You may override this method in a subclass. The standard `run()` method invokes the callable object passed to the object's constructor as the target argument, if any, with sequential and keyword arguments taken from the `args` and `kwargs` arguments, respectively.

Overrides: `threading.Thread.run` `exitit`(inherited documentation)

Inherited from `threading.Thread`

`__repr__()`, `getName()`, `isAlive()`, `isDaemon()`, `is_alive()`, `join()`, `setDaemon()`, `setName()`, `start()`

Inherited from `object`

`__delattr__()`, `__format__()`, `__getattr__()`, `__hash__()`, `__new__()`, `__reduce__()`, `__reduce_ex__()`, `__setattr__()`, `__sizeof__()`, `__str__()`, `__subclasshook__()`

4.6.2 Properties

Name	Description
<i>Inherited from <code>threading.Thread</code></i>	
<code>daemon</code> , <code>ident</code> , <code>name</code>	
<i>Inherited from object</i>	
<code>__class__</code>	

4.7 Class `Msg_parser`

4.7.1 Methods

```
__init__(self, master, client_handler)
```

```
parse(self, data)
```

```
parse_external(self, data)
```

```
parse_queue_update(self, data)
```

```
parse_floor_update(self, data)
```

```
parse_request_backup(self, data)
```

5 Module states

5.1 Functions

master()

backup (<i>elev</i> , <i>backup</i>)

slave (<i>elev</i>)

5.2 Variables

Name	Description
<code>--package--</code>	Value: None

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