

NAME

parent – CHSM parent class

SYNOPSIS

```
namespace Concurrent_Hierarchical_State_Machine {

    class parent : public state {
    public:
        typedef state value_type;
        typedef value_type* pointer;
        typedef value_type const* const_pointer;
        typedef value_type& reference;
        typedef value_type const& const_reference;

        bool                empty() const;
        reference           front();
        const_reference     front() const;

        class iterator {
        public:
            iterator();

            reference operator* () const;
            pointer   operator->() const;

            iterator& operator++();
            iterator  operator++(int);

            friend bool operator==( iterator const&, iterator const& );
            friend bool operator!=( iterator const&, iterator const& );
        };
        iterator begin();
        iterator end();

        class const_iterator {
        public:
            const_iterator();

            const_reference operator* () const;
            const_pointer   operator->() const;

            const_iterator& operator++();
            const_iterator  operator++(int);

            friend bool
            operator==( const_iterator const&, const_iterator const& );
            friend bool
            operator!=( const_iterator const&, const_iterator const& );
        };
        const_iterator begin() const;
        const_iterator end() const;

        // inherited
        bool active() const;
        virtual void deep_clear();
    };
};
```

```
virtual bool enter( event const &trigger, state* = 0 );  
virtual bool exit ( event const &trigger, state* = 0 );  
char const* name() const;  
parent* parent_of() const;  
};  
  
}
```

DESCRIPTION

A parent *is-a* **CHSM::state(3)** that serves as the base class for **CHSM::cluster(3)** and **CHSM::set(3)**. It is a container class for child states.

Member Functions

`bool empty() const`

Returns true only if it contains no child states.

`reference front()`

`const_reference front() const`

Returns a reference to the first child state specified in the CHSM description. For clusters, this corresponds to the default child state.

Iterators

The iterator classes iterate over the child states in the order specified in the CHSM description. They are in the STL style.

SEE ALSO

CHSM::cluster(3), **CHSM::set(3)**, **CHSM::state(3)**, **chsm-c++(4)**, **iterator(STL)**

AUTHORS

Paul J. Lucas <paul@lucasmail.org>

Fabio Riccardi <fabio.riccardi@mac.com>