Project 13 (Timer ADT)

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This program will be used to measure the length of time between two events.

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1.00

The specifics of this project match those of the book C++ Data Structures - A Laboratory Course (3rd Edition) Project 13. This implementation is designed to compare the performance of search and sorting routines, and the performance implications of C++ constructs. This implementation may however be used to measure the time between two points in a program.

Class Index

Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Class Index

Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

File Index

File List

Here is a list of all documented files with brief descriptions:

Class Documentation

binarySearch Class Reference

Inheritance diagram for binarySearch:

IMAGE

Public Member Functions

bool **operator()** (int searchValue, const vector< int > &keys) const

---

Detailed Description

Definition at line 34 of file search.cpp.

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

1 search.cpp

linearSearch Class Reference

Inheritance diagram for linearSearch:

IMAGE

Public Member Functions

bool **operator()** (int searchValue, const vector< int > &keys) const

---

Detailed Description

Definition at line 21 of file search.cpp.

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

2 search.cpp

Search Class Reference

Inheritance diagram for Search:

IMAGE

Detailed Description

Definition at line 17 of file search.cpp.

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

3 search.cpp

STLSearch Class Reference

Inheritance diagram for STLSearch:

IMAGE

Public Member Functions

bool **operator()** (int searchValue, const vector< int > &keys) const

---

Detailed Description

Definition at line 56 of file search.cpp.

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

4 search.cpp

TestVector Class Reference

Public Member Functions

TestVector (int size)
TestVector (const TestVector &rhs)
TestVector & **operator++** ()
TestVector **operator++** (int ignored)
int **operator[]** (int loc) const

Detailed Description

Definition at line 9 of file testvector.h.

The documentation for this class was generated from the following files:

5 testvector.h
6 testvector.cpp

Timer Class Reference

Public Member Functions

Timer ()

The default constructor that initializes the internal timer values, so that the timer is ready to measure time.

void start () throw (runtime_error)

Starts the timer.

void stop () throw (logic_error)

Stops the timer.

double getElapsedTime () const throw (logic_error)

Returns the length of the time interval in seconds.

Detailed Description

Definition at line 13 of file Timer.h.

Member Function Documentation

double Timer::getElapsedTime () const throw (logic_error)

Returns the length of the time interval in seconds.

Precondition:

The beginning and end of a time interval have been marked.

Exceptions:

The	clock has not been started and/or stopped.

The length of time interval in seconds. Investigate the weird reason why I can't simply return the arithmetic in d, but instead have to place it into a variable first.

Definition at line 69 of file Timer.cpp.

void Timer::start () throw (runtime_error)

Starts the timer.

Marks the beginning of a time interval.

Precondition:

The clock function is working correctly.

Exceptions:

Returns:

The	clock is not working properly.

void Timer::stop () throw (logic_error)

Stops the timer.

Marks the end of a time interval.

Precondition:

The beginning of a time interval has been marked.

Exceptions:

Definition at line 38 of file Timer.cpp.

The	clock has not been started.

The documentation for this class was generated from the following files:

7 Timer.h
8 Timer.cpp
9 Timer.cs

File Documentation

Timer.cpp File Reference

```
#include "Timer.h"
```

Detailed Description

Definition in file Timer.cpp.

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