Lab 13: Performance Test

Generated by Doxygen 1.7.6.1

Thu Oct 3 2013 15:50:53

Contents

Chapter 1

Class Index

1.1 Class List

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

Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

Chapter 3

Class Documentation

3.1 Timer Class Reference

`#include <Timer.h>`

Public Member Functions

- Timer ()
- void start () throw (runtime_error)
- void stop () throw (logic_error, runtime_error)
- double getElapsedTime () const throw (logic_error)

3.1.1 Constructor & Destructor Documentation

3.1.1.1 Timer::Timer ( )

The default constructor for the timer class. This constructor initializes all data members to 0 or equivalent values.

3.1.2 Member Function Documentation

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

Computes the time measured by the Timer class after a complete start/stop cycle.

Utilizes stored beginTime and duration values to return an elapsed time in seconds. This function will throw a logic error if an elapsed time is solicited, but the timer is still being run (that is, the timer has not been stopped).

3.1.2.2 void Timer::start ( ) throw (runtime_error)

Starts the timer for the Timer class.

Uses "wall clock" functionality to get a beginning time. This time is then stored in the beginTime data member. Will throw a runtime error if the gettimeofday function fails.

3.1.2.3 void Timer::stop ( ) throw (logic_error, runtime_error)

Stops the timer in the Timer class.

Uses the "wall clock" functionality to record a stopping time in the duration data member. This time will be compared to the timer's start time to compute and elapsed time. Will throw a logic error if the the timer has not been started. Throws a runtime error if the gettimeofday function fails.

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

- Timer.h
- Timer.cpp

Chapter 4

File Documentation

4.1 testtimer.cpp File Reference

```
#include "Timer.h" #include <iostream> #include <stddef.-
h> #include <sys/time.h> #include <cstdio>
```

Functions

- double getElapsed (timeval &t1)
- int main (int argc, char **argv)

4.1.1 Function Documentation

4.1.1.1 double getElapsed (timeval & *t1*)

4.1.1.2 int main (int *argc,* char ** *argv*)

4.2 Timer.cpp File Reference

```
#include "Timer.h" #include "sys/time.h"
```

4.3 Timer.h File Reference

```
#include <ctime> #include <stdexcept> #include <iostream> ×
#include <sys/time.h>
```

Classes

- class Timer

4.3.1 Detailed Description

Author

Terence Henriod