Lab 4

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1.1 Class List

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2.1 File List

Here is a list of all files with brief descriptions:

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Class Documentation

3.1 Timer Class Reference

`#include <Timer.h>`

Public Member Functions

- Timer ()

  this functions sets the timer flag to false at initialization
- void start () throw (runtime_error)

  this function checks to see if the timer flag is true, else it sets it to true and then records the begin time
- void stop () throw (logic_error)

  this function checks to see if the timer flag is false, else it sets it to false and then records the duration
- double getElapsedTime () const throw (logic_error)

  this function checks to see if the timer flag is true, else it finds the difference of start and finish time, then puts them into a variable called total, and then returns it; the logic is borrowed from the example "toddiff" function, that was given to us for this assignment

3.1.1 Constructor & Destructor Documentation

3.1.1.1 Timer::Timer ( )

this functions sets the timer flag to false at initialization

Precondition

none

Postcondition

sets the timer flag to false

Returns

none

Parameters

none	

3.1.2 Member Function Documentation

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

this function checks to see if the timer flag is true, else it finds the difference of start and finish time, then puts them into a variable called total, and then returns it; the logic is borrowed from the example "toddiff" function, that was given to us for this assignment

Precondition

none

Postcondition

returns the difference between the start and finish time that has been put into a double variable called, total

Returns

returns the double variable, total

Parameters

none	

3.1.2.2 void Timer::start ( ) throw runtime_error)

this function checks to see if the timer flag is true, else it sets it to true and then records the begin time

Precondition

none

Postcondition

changes the timer flag to true and records the begin time

Returns

none

Parameters

none	

3.1.2.3 void Timer::stop ( ) throw logic_error)

this function checks to see if the timer flag is false, else it sets it to false and then records the duration

Precondition

none

Postcondition

changes the timer flag to false and records the duration

Returns

none

Parameters

none	

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

- Timer.h
- Timer.cpp

Chapter 4

File Documentation

4.1 Timer.cpp File Reference

this is an implementation file for a timer using timeofday()

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

4.1.1 Detailed Description

this is an implementation file for a timer using timeofday()

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4.2 Timer.h File Reference

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

Classes

- class Timer

4.2.1 Detailed Description

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Date

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