Lab 4

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

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File Index

2.1 File List

Here is a list of all files with brief descriptions:

Timer.cp	p							
	This is an implementation file for a timer using timeofday()	 	 					 9
Timer.h		 _	 					 g

File Index

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

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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

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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

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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()

Author

Christopher Eichstedt

4.2 Timer.h File Reference

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

Classes

• class Timer

4.2.1 Detailed Description

Author

Christopher Eichstedt

Date

09/25/17

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