CIS 227 Assignment 1

Assignment Details

Convert Assignment 0 to utilize a class structure in portable .h and .cpp files

Exit the program only on user demand

Team Roles

Lead Programmer – Jesse Hamman

UX/UI Programmer – Joseph Barron

Functional Programmer - Joe-Oudemolen

Program – 70

UX/UI – 35

Function - 35

Documentation – 30

Total Possible Points – 100

**Version 0.0.0**

| REVISION HISTORY | | | |
| --- | --- | --- | --- |
| DATE | VERSION | DESCRIPTION | AUTHOR |
| 01/21/2021 | 0.0.1 | This program will calculate the hypotenuse of a triangle, the area of a trapezoid, or the volume of a rectangle based on the data entered by a user | Joe Barron, Joe Oudemolen, Jesse Hamman |
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# INTRODUCTION

## PURPOSE

Identify and describe scope of product whose technical specifications are being documented and describe desired outcome.

This program is to be used to calculate the three different measurements: hypotenuse of a triangle, area of a trapezoid, and volume of a rectangle. The program is also separated into a .h file and .cpp files, to make is easier for others to use.

## DOCUMENT CONVENTIONS

Describe any naming or structural conventions employed throughout document and how they benefit reader.

The naming conventions are straigforward and the variable name describe exactly what that variable holds.

## REFERENCES

List any referenced document names or links.

**<https://www.cplusplus.com/>**

**Assignment1Class.cpp**

**Assignment1.h**

**Assignment0.cpp**

# DESCRIPTION

## FEATURES

List main features with brief description.

The main features of this program include a main menu, which a user can select an option from, and then each of the calculations to reach an answer.

## USER OVERVIEW

Define groups and describe user characteristics.

This program is for any group or user seeking to find the answers to 3 mathematical equations.

## ASSUMPTIONS / DEPENDENCIES

Detail all assumed factors (not known facts) that could potentially impact technical specifications set forth. Include external factors.

This program will assume the user is using the same type of units for a specific calculation and that the units are already converted to be the same if need be.

# SYSTEM FEATURES

## SYSTEM FEATURE 1

|  |  |
| --- | --- |
| **DESCRIPTION AND PRIORITY** | Calculate the hypotenuse of a triangle |
| **STIMULUS / RESPONSE SEQUENCES** | Inputs must be obtained from the user |
| **FUNCTIONAL REQUIREMENTS** | For this feature to properly function, numbered inputs must be received, and the input must already be in the desired units. |

## SYSTEM FEATURE 2

|  |  |
| --- | --- |
| **DESCRIPTION AND PRIORITY** | Calculate the area of a trapezoid |
| **STIMULUS / RESPONSE SEQUENCES** | Inputs must be obtained from the user |
| **FUNCTIONAL REQUIREMENTS** | For this feature to properly function, numbered inputs must be received, and the input must already be in the desired units. |

## SYSTEM FEATURE 3

|  |  |
| --- | --- |
| **DESCRIPTION AND PRIORITY** | Calculate the volume of a rectangle |
| **STIMULUS / RESPONSE SEQUENCES** | Inputs must be obtained from the user |
| **FUNCTIONAL REQUIREMENTS** | For this feature to properly function, numbered inputs must be received, and the input must already be in the desired units. |

# REQUIREMENTS OF EXTERNAL INTERFACE

## USER INTERFACES

Describe product / user interface characteristics, including standards, style guides, constraints, functionality, and sample screens if applicable.

The user interface is laid out in a numbered fashion that allows the user to simply choose an option by entering the number corresponding to that option. It also allows a user to exit the program from the main menu.

# APPENDICES

## APPENDIX A: GLOSSARY OF TERMS

Define all terms and unique acronyms employed throughout document and specific to project.

The following terms are used as variables to hold the values of the dimensions of the shape:

Side1, Side2, Length, Width, Height

## APPENDIX B: ANALYSIS DOCUMENTATION

List file / document names / provided links to all diagrams, models, additional findings pertinent to technical specification development.

Assignment1.h

Assignment0.cpp

Assignment1Class.cpp

## APPENDIX C: ISSUES

List all unresolved issues, TBDs, pending decisions, findings required, conflicts, etc.

| ISSUES | | |
| --- | --- | --- |
| ID | DESCRIPTION | PARTY RESPONSIBLE |
| 001 | Entering a letter instead of a number causes an infinite loop |  |
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