Design Document and Test Plan

Name of team members who collaborated on the design and test plan:

1. Name (*first last*): Aarav Chowbey
2. Name (*first last*): Devon Dominick

Name of programming challenge for which you submit this document: Areas Calculation

# Pseudocode

*(See Ch. 1.6 in our textbook for an example of how to write detailed pseudocode)*

Cout the 4 options along with their numbers

Ask user to input a menu option

Use cin to input the user’s choice

The choice will then go through a switch statement.

If user picks 1

Ask user to input length

Based on length calculate area by doing (length \* length)

Output answer to user

If user picks 2

Ask user to input radius

Based on radius, calculate area by doing (pi \* (radius\*radius))

output answer to user

If user picks 3

Ask user to input height

Ask use to input base length

Based height and length, calculate area by doing ((height \* length) / 2 )

Output answer to user

If user picks 4

Exit program and do nothing

If user doesn’t pick 1-4

Cout the invalid input error message

# Test Plan

*(See Ch. 5.13 in our textbook for an example of how to write a test plan)*

|  |  |  |  |
| --- | --- | --- | --- |
| **Test #** | **Purpose** | **Input** | **Expected Output** |
| 1 | Test input validation | 5 | “You entered an...” |
| 2 | Test quitting | 4 | Program quits |
| 3 | Test choosing triangle | 3 | Asks for height/base |
| 4 | *Test finding area of circle* | 2, 3 | “Area = 28.27” |
| 5 | *Test finding area of a square* | 1, 5 | “Area = 25” |
| … | *(Feel free to add more test cases)* |  |  |