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| Homework Assignment: Module 3 Analysis | |

## Problem Statement:

Create an application to calculate the area of 3 shapes: a rectangle, triangle, and circle. Have the user choose between 4 options and if they choose option 1, they calculate for a rectangle. If they choose 2, a triangle. 3 is the circle, and 4 quits the application. Any other value should throw an error.

## Sample Softcopy:

## Constant List: (Note constants are denoted by const keyword or #define; leave blank if no constants are defined):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Identifier | Description | Data Type | Value | Usage | Destination |
|  |  |  |  |  |  |

## Variable List:

## (Note: variable names and datatypes must match EXACTLY with what you have in your program)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Identifier | Description | Data Type | Source | Usage | Destination |
| operation | Which operation to use | Integer | Keyboard | Chooses which operation to do in the switch statement | N/A |
| num1 | Holds the first number inputted | Double | Keyboard | Used in the calculation step for calculating sq/ft | N/A |
| num2 | Holds the second number inputted | Double | Keyboard | Used in the calculation step for calculating sq/ft | N/A |

## Algorithm/Pseudo Code (must be in outline form):

## (Note: All variables from your code and your calculations must be included in your Algorithm/Pseudo Code)

1. Define Variables
2. Display Title Block
3. Ask for which menu item to use
4. Get input from user
5. Use appropriate operation
6. Display operation text
7. Get input from user
8. Display operation text
9. Get input from user
10. Calculate sq/ft
11. Display Area to screen
12. Exit the Program

## Data Tracing Chart:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Ref. to Algorithm | Input | | Calculated | |
| 3. | operation | =1 | Switch(1) for rectangle |  |
| 7. | num1 | =5 |  |  |
| 9. | num2 | =2 | num1\*num2 | Area = 10 sq/ft |

## Test Softcopy:

