**Problem Statement**

-To create an assembly language program that displays results according to user input.

-The program takes in 2 variables (Length and width of rectangle) and uses the information in addition with the provided values of two sides of the triangle 20 meters and 15 meters respectively to generate the total area.

**Input**

-Decimal number Length1

-Decimal number Width1

**Output**

-Area of the two shapes

**Solution**

-We first use the value Length1 the user entered to calculate the area of the triangle

-We use the following formula to find the total length of 3 sides of the formula and divide it by 2:

***s = (s1 + s2 + s3)/2****(s1 = 20,s2 = 15 , s3 = Length1)*

-We then use the following formula to calculate the total area of the triangle:



-We then calculate the area of the rectangle by using the following formula:

***area of rectangle = Width1 \* Length1***

-Finally, we add both values together to get our final answer

***Total area = area of triangle + area of rectangle***

**Strengths of my solution:**

-Able to obtain the desired result

-Able to function quickly and efficiently

**Limitation of my solution:**

-Unable to calculate in float format thus the remainder is tossed away(ex.0.000)

**Additional notes:**

The maximum length of the third side of the triangle user input Length1 can only be from 15 to 35 meters.

**Reflection**

I Soh Ming Le was in charge completing question 2 of our group project. From the experience, I was able to further my knowledge on assembly language due to the hands-on approach. Below contains a list of the knowledge I obtained from the project.

*-How to create functions in ARM Assembly.*

*-How to allocate and reuse registers.*

*-How to call external functions(ex.printf,scanf).*

*-How to get the square root of a value without the use of the sqroot function in C.*

*-How to declare variables.*

*-How to use a while loop*

Overall, I have gained confidence from doing question 2 of the project which will propel me to eagerly tackle similar problems in the future.