

The assignment will be similar to an assignment used in many CS116 classes.

You will write a function which receives three parameters, each being the length of triangle sides P, Q, and R respectively. You will test the parameters for various conditions, and provide a return value which indicates the type of triangle:

0 = not a valid triangle

1 = isosceles triangle

2 = equilateral triangle

3 = right triangle

4 = scalene triangle

The input parameters will be passed on the stack. The return value must be placed in register 1.

Test Driver Program

You should use the following code to test your function:

```

; Lab 5 calling program
ADR    R12,myStorage ;
SUB     SP,SP,#12
MOV     R5,#22      ; side P
STR     R5,[SP,#0]
MOV     R5,#26      ; side Q
STR     R5,[SP,#4]
MOV     R5,#26      ; side R
STR     R5,[SP,#8]
BL      L5
STR     R1,[R12,#0]
B       Done        ;end
; Your code goes here.
L5      ORR     R0,R0,R0
        MOV     R1,#0      ; Set your return value 0-4 before returning
        MOV     PC,LR
Done     end ;
myStorage DCD     0
```

Test Data

You should modify the parameters in the driver program to include all five conditions, e.g. values of 26,26, and 26 for equilateral triangles, 24,25, and 26 for scalene triangles, and so forth.

Program Heading

Your program must start with the following two lines:

Replace nnn with your section number, 17648 or 27936. Replace last, first, and date completed with your last and first name and the date you completed the assignment.

GradingCorrect program heading = 5 pointsCorrectly determine invalid triangle = 7 pointsCorrectly determine isosceles triangle = 7 pointsCorrectly determine equilateral triangle = 7 pointsCorrectly determine right triangle = 7 pointsCorrectly determine scalene triangle = 7 points