

Digital assignment 2

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Question:

Get the three angles of a triangle as input.

find the count of the type of the triangle.

Continue the process for 5 times.

If the sum of the three angles is greater than 180 then prompt for correct values. (the sum of all internal angles of a triangle is always equal to 180°). Keep the count of the wrong entries also.

Acute Angled Triangle (all three angles less than 90°)

Right-Angled Triangle (one angle that measures exactly 90°)

Obtuse Angled Triangle (one angle that measures more than 90°)

Sample i/p:

60

70

50

40

50

90

40

40

100

30

30

120

90

60

30

Sample o/p:

Acute Angled Triangle: 1

Right Angled Triangle: 2

Obtuse Angled Triangle: 2

Wrong Entries: 0

Second Sample i/p:

60

70

50

40

50

90

40

40

100

30

30

120

90

90

30

Wrong Entry try again

90

30

60

Sample o/p:

Wrong Entry try again

Acute Angled Triangle: 1

Right Angled Triangle: 2

Obtuse Angled Triangle: 2

Wrong Entries: 1

Answer:

```
#include <stdio.h>
int main() {
    int i, j, a, b, c, sum, acute = 0, right = 0, obtuse = 0,
    wrong = 0;
    for (i = 1; i <= 5; i++) {
        printf("Enter the three angles of triangle
%d:\n", i);
        scanf("%d %d %d", &a, &b, &c);
        sum = a + b + c;
        if (sum > 180) {
            printf("Wrong Entry try again\n");
            wrong++;
            i--;
            continue;
        }
        if (a < b) {
            j = a;
            a = b;
            b = j;
        }
    }
}
```

```
    if (a < c) {
        j = a;
        a = c;
        c = j;
    }
    if (a*a == b*b + c*c) {
        printf("Right-Angled Triangle\n");
        right++;
    } else if (a*a < b*b + c*c) {
        printf("Acute Angled Triangle\n");
        acute++;
    } else {
        printf("Obtuse Angled Triangle\n");
        obtuse++;
    }
}

printf("\nAcute Angled Triangle: %d\n", acute);
printf("Right Angled Triangle: %d\n", right);
printf("Obtuse Angled Triangle: %d\n", obtuse);
printf("Wrong Entries: %d\n", wrong);
return 0;
}
```