Digital Assignment - 2

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First 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;

}