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Chapter 6

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Calculating an average, loop structure

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Please use this option only if you find any issues or mistakes in the content. If you have any queries or questions regarding the subject matter, then please use "Ask a tutor".

You have completed this exercise

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- (1) For statement done
- (2) Factorial done
- (3) Calculating an average, loop structure done



Write a program that asks for the students' exam scores (using integers 4 to 10) and calculates the average. The program must accept scores until entry is terminated by a negative integer. Finally, the program prints out the number of scores and the calculated average with two decimal places of precision.

Hint:

You can write your program using either the while or do...while statement.

Example output:

```
The program calculates the average of scores you enter.  
End with a negative integer.  
Enter score (4-10):7  
Enter score (4-10):8  
Enter score (4-10):9  
Enter score (4-10):10  
Enter score (4-10):4  
Enter score (4-10):4  
Enter score (4-10):5  
Enter score (4-10):-1  
You entered 7 scores.  
Average score: 6.71
```

The output of the program must be exactly the same as the example output (the most strict comparison level)

• [program.c](#)

```
1 #include <stdio.h>
2
3 int main()
4 {
5     int i = 0;
6     float sum = 0.0;
7     float average;
8     float x = 0.0;
9
10    printf("The program calculates the average of scores you enter.\n");
11    printf("End with a negative integer.\n");
12
13    while(1) {
14
15        printf("Enter score (4-10):");
16        scanf("%f", &x);
17
18        if(x < 0)
19            break;
20
21        sum += x;
22        i++;
23
24    }
25
26    average = sum / i;
27
28    printf("You entered %d scores.\n", i);
29    printf("Average score: %.2f\n", average);
30
31
```

Position: Ln 1 Ch 1

Full screen (Esc to exit)

Reset

Save

Run