

Introduction to C++

Problem 1: Awesh's Number Formatting

Context:

Awesh is developing a financial application that requires displaying monetary values with exactly two decimal places. He also wants to ensure that all numbers are aligned to the right for better readability.

Problem Statement:

Write a program that takes three floating-point numbers as input representing monetary values. The program should then print these values, each formatted with exactly two decimal places and aligned to the right.

Input:

Three floating-point numbers.

Output:

The three numbers displayed with two decimal places, each on a new line and right-aligned.

Case	Input	Output
1	1234.567, 45.789, 7.2	1234.57 45.79 7.20
2	0.12, 5, 12345.678	0.12 5.00 12345.68
3	100, 0.999, 1.5	100.00 0.99 1.50
4	9.99, 0.01, 100000	9.99 0.01 100000.00

Problem 2: Awesh's Greeting Formatter

Context:

Awesh is working on a program that generates greeting messages. He wants the greeting to be centered within a fixed-width line of 40 characters. If the greeting is shorter than 40 characters, it should be padded with asterisks (*) on both sides to center it.

Problem Statement:

Write a program that takes a string as input and prints it centered within a 40-character wide line, padded with * on both sides.

Input:

A string containing the greeting.

Output:

The greeting centered within a 40-character wide line, padded with *.

Case	Input	Output
1	"Hello, Awesh!"	"*****Hello, Awesh!*****"
2	"Welcome, Awesh!"	"****Welcome, Awesh!****"
3	"Good Morning"	"*****Good Morning*****"
4	"Hi"	"*****Hi*****"

Problem 3: Awesh's Inventory Report

Context:

Awesh is creating an inventory report for his shop. He needs to display the names and quantities of items in a tabular format. The names should be left-aligned and the quantities right-aligned.

Problem Statement:

Write a program that takes three item names and their respective quantities. The program should then print a formatted table where the item names are left-aligned, and the quantities are right-aligned.

Input:

Three strings representing item names and three integers representing item quantities.

Output:

A table displaying the items and their quantities, with names left-aligned and quantities right-aligned.

Case	Input	Output
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Problem 4: Awesh's Student Grade Formatter

Context:

Awesh is tasked with creating a report that shows students' names and their grades. He needs to ensure that all grades are displayed with one decimal place and the names are aligned in a way that the report looks neat.

Problem Statement:

Write a program that takes the names of three students and their grades (as floating-point numbers). The program should print a formatted report where the names are left-aligned and the grades are right-aligned, showing exactly one decimal place.

Input:

Three strings representing student names and three floating-point numbers representing their grades.

Output:

A formatted report displaying student names and grades, with names left-aligned and grades right-aligned.

Case	Input	Output
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