

Code2Grow: 60 day's -1 Mission, Master C

Submission Template

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Date:23/10/2025 **Day #:** 2

Challenge Title: “The Smart Bill Splitter”

1. Problem Understanding

Briefly explain the challenge in your own words (2–3 sentences):

The challenge is to calculate how much each friend pays for a dinner bill that includes a fixed tax and tip. One friend forgot his wallet, so the remaining two share his portion equally. No loops or conditionals are allowed — only arithmetic and logical expressions must be used.

2. Approach / Algorithm

Explain your approach or logic before coding:

- ☐ Input the base meal cost.
- ☐ Compute tax = 5% of meal cost and tip = 10% of meal cost.
- ☐ Calculate total bill = meal + tax + tip.
- ☐ Normally, each person would pay total / 3, but since one friend can't pay, his share is split equally between the other two.
 - Each paying person's amount = $(\text{total} / 3) + (\text{total} / 3) / 2 = \text{total} / 2$.
 - Friend 3 pays 0.
- ☐ Display total and each person's share using formatted output.

3. Source Code



day2.pdf

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4. Sample Input & Output

Provide at least 1 example input and corresponding output:

Input: Enter meal cost: 900

Output: Total bill: 1035.00

Each person should pay as follows:

You: 517.50

Friend 2: 517.50

Friend 3: 0.00

5. Test Cases & Results

List any additional test cases and results:

No. Input Expected Output (You / Friend2 / Friend3)

1 900 517.50 / 517.50 / 0.00

2 600 345.00 / 345.00 / 0.00

3 1500 862.50 / 862.50 / 0.00

6. Reflection / Learnings

I learned how to perform multi-step financial calculations using only arithmetic expressions. This exercise strengthened my understanding of operator precedence, floating-point precision, and how logical restrictions can encourage cleaner mathematical reasoning. Avoiding conditionals and loops helped me focus on simplifying formulas and expression evaluation.

Instructor Comments / Feedback:

Signature of Student

Signature of Invigilator

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Y.sai

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