

Code2Grow: 60 Days, 1 Mission, Master C

(Day 1-Challenge)

Saturday, 18 October 2025

Concerned Teacher: Dr. Yasir Afaq
Subject: Fundamentals of C Programming
Course: B.Tech First Year
Section: C

Challenge Title: *"The Salary Slip Generator"*

Focus: Operators, Expressions, Logical Evaluation

Restrictions: No decisions (if, else, ?:, switch) and no loops (for, while, do-while)

Scenario:

You are working in a small company that wants to automatically generate a salary slip for its employees. You've been asked to compute the Gross Salary based on allowances and deductions but you must achieve it using only expressions and operators, without any control statements.

Problem Statement:

Write a C program that reads:

- basic_salary (float)
- hra_percent, da_percent, and tax_percent (float)

Your program should calculate and display:

1. $\text{hra} = \text{basic_salary} * (\text{hra_percent} / 100)$
2. $\text{da} = \text{basic_salary} * (\text{da_percent} / 100)$
3. $\text{tax} = \text{basic_salary} * (\text{tax_percent} / 100)$
4. $\text{gross_salary} = \text{basic_salary} + \text{hra} + \text{da} - \text{tax}$

Also, evaluate whether gross_salary is above ₹50,000 using a **logical expression** and print **1 for True or 0 for False**, without using any conditional statement.

Input Format

Enter basic salary: 40000
Enter HRA%: 10
Enter DA%: 15
Enter TAX%: 5

Expected Output:

HRA = 4000.00
DA = 6000.00
TAX = 2000.00

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Gross Salary = 48000.00

Is Gross Salary above 50000? 0

Constraints:

1. No use of conditional statements (if, else, switch, ternary ?:)
2. No use of loops (for, while, do-while)
3. Only **expressions**, **operators**, and **logical evaluation** allowed
4. Use printf() and scanf() for all I/O operations

Concepts Reinforced

1. Arithmetic operators
 2. Logical operators
 3. Expression evaluation & precedence
 4. Variable manipulation
 5. Output formatting using `printf()`
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Bonus Tas:

Extend the program to print the **Net Monthly Salary** assuming 12 working months per year.