Starts: 17/9/2025 at 2:15 PM IST (Duration: 1 hour)   **Total marks: 10**

Instructions

- All programs should be compatible with GNU C.

- Late submissions will attract marks deduction.

- You are advised to compile the code before submitting it to WeLearn. If a code does not compile at our end, marks will be deducted for the problem.

- Each program should follow a strict naming convention: **QNo.c** (e.g. Q1.c, Q2a.c etc.). Programs not adhering to the convention will not be evaluated.

- All codes (.c files) should be submitted in a single zipped folder to WeLearn.

- You should put appropriate comments in the code.

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1. **(Marks: 6)** Name functions as `Laddu`, `Rosogolla` and `Shrikhand`. A call to that function indicates that you have consumed one more unit of that item. So, every time you call a function, a message will be printed indicating the number of times you have had the delicacy. E.g., if you call `Rosogolla`, it will print "I bet you loved the Rosogolla! This is your Rosogolla number 5 !!" (assuming this is your 5th call of the function). Please implement this scheme using the C programming language by using

   (a) **(Marks: 3)** global variables,
   (b) **(Marks: 3)** static variables.

2. **(Marks: 4)** Under the new tax regime, given the gross total income (T) of a taxpayer, the slab-wise income tax rates are given in Table 1.

Gross total income slab	Tax rate
₹0 - ₹2,50,000	Nil
₹2,50,001 - ₹5,00,000	5% of gross total income exceeding ₹2,50,000
₹5,00,001 - ₹7,50,000	₹12,500 + 10% of gross total income exceeding ₹5,00,000
₹7,50,001 - ₹10,00,000	₹37,500 + 15% of gross total income exceeding ₹7,50,000
₹10,00,001 - ₹12,50,000	₹75,000 + 20% of gross total income exceeding ₹10,00,000
₹12,50,001 - ₹15,00,000	₹1,25,000 + 25% of gross total income exceeding ₹12,50,000
Above ₹15,00,000	₹1,87,500 + 30% of gross total income exceeding ₹15,00,000

Table 1: Income tax rates

Suppose T = ₹20,92,000. So, using Table 1, the intermediate income tax payable (II) = ₹1,87,500 + 30% of gross total income exceeding ₹15,00,000 = ₹1,87,500 + 30% of ₹5,92,000 = ₹1,87,500 + ₹1,77,600 = ₹3,65,100. Cess (C) is calculated as 4% of intermediate income tax payable (II). So, the income tax payable (I) is given by I = II + C, which for our example is ₹3,65,100 + 4% of ₹3,65,100 = ₹3,79,704.

Please take gross total income (T) as input from a taxpayer (from the terminal), determine the income tax payable (I) applying `if-else-if`, and print I on the terminal.