

COP 3223 Program #6: Pizza Shack Taxes

All three of this week's programs build upon each other. Nonetheless, please turn in all three versions of the program as separate programs with the names designated.

Program A: Basic Taxes (tax.c)

In the United States, personal income taxes work in a graduate manner. Simply speaking, we have tax brackets. For each income range, there is a corresponding percentage of tax you pay, and as the income ranges increase, the percentage of tax for that bracket increases. For this program, you will implement the following fictitious tax bracket:

Income Range	Tax Percentage
[0, 10000]	0%
[10000, 40000]	10%
[40000, ∞)	20%

Basically, what this means is that the first \$10,000 of your income is not taxed, the next \$30,000 of it is taxed at 10%, and if you have more income, the rest of it is taxed at 20%. For example, if someone's income is 20,000, they would pay no tax for the first \$10,000 and \$1,000 on the next \$10,000 they earned, for a total of \$1,000 tax. If someone's income is \$60,000, then would pay no tax for the first \$10,000, \$3,000 for the next \$30,000 of income and \$4,000 for the last \$20,000 of income for a total of \$7,000 in tax. We will use this model to approximate taxes for Pizza Shack.

For this program, ask the user to enter their business income and print out their corresponding tax. You may assume that the income entered will be a positive integer in dollars, less than or equal to 100,000,000. Please print out the tax in the format shown below to 2 decimal places.

Sample Run (User input in bold and italics)

What your income in dollars?

60000

You will pay \$7000.00 in tax.

Program B: Business Deductions (tax2.c)

In typical personal taxes, we can take “deductions” for certain items. A deduction is an expenditure on items that the government deems shouldn’t be taxed. Thus, before we apply the tax table as specified in program A, in this program we will subtract out some deductions for business expenditures. A real business probably has many line item deductions, but we will only make our program implement three items that can typically be deducted.

In this program, please ask the user to enter the following:

- 1) The income of the business.
- 2) The rent paid for the business.
- 3) The number of miles driven for business purposes.
- 4) Amount of business dinners.

We will assume that for each mile driven we can deduct 60 cents from our income and that for each business dinner, we can deduct \$100 from our income for tax purposes. Please create the following two constants to use for these purposes:

```
#define COST_PER_MILE 0.60
#define COST_PER_DINNER 100
```

If after subtracting out all of these deductions the taxable income dips below 0, we simply assess no tax.

Input Specification

1. The income of the business will be a positive integer (in dollars) less than or equal to 100,000,000.
2. The rent paid for the business will be a non-negative integer (in dollars) less than or equal to 100,000.
3. The number of miles driven for business purposes will be a non-negative integer less than or equal to 10,000.
4. The number of business dinners will be a non-negative integer less than 100.

Output Specification

Please print out the taxable income and tax in the format shown below to 2 decimal places.

Sample Program Run (User Input in Bold and Italics)

What is your business income in dollars?

100000

How much rent did you pay this year?

30000

How many miles did you drive for business purposes?

2500

How many business dinners did you have?

7

Your taxable income was \$67800.00.

Your total in tax is \$8560.00.

Note: Please come up with several of your own test cases.

Program C: Final Taxes (finaltax.c)

Typically, some money is withheld from personal taxes and then either the government pays you a refund if you overpaid, or you pay the extra that you owe the government if they didn't withhold enough money to begin with. For this version of the taxes, ask the user how much money was withheld. Then express how much they still owe in taxes, or how much they'll receive in a refund, or if they are perfectly squared away. This last options is highly unlikely in real life, but we'll make it an option for this program for practice purposes.

The only added piece of input to this program will be the amount of money withheld for taxes. For the rest of the input, follow the previous specification.

Input Specification

1. The amount of money withheld for taxes will be a non-negative integer (in dollars) less than or equal to 100,000,000.

Output Specification

Print out a statement with one of the three following formats:

You owe \$X.XX in taxes still.

You will receive a refund of \$X.XX for your taxes.

You are perfectly squared away with the IRS!

Based on whether the user owes money, will get a refund, or has paid the exact correct amount in taxes.

Sample Program Run (User Input in Bold and Italics)

What is your business income in dollars?

100000

How much rent did you pay this year?

30000

How many miles did you drive for business purposes?

2500

How many business dinners did you have?

7

How much money was withheld for taxes in dollars?

8000

You owe \$560.00 in taxes still.

Deliverables

Please submit three separate **.c files** for your solutions to these problems via WebCourses by the designated due date:

Program A: **tax.c**

Program B: **tax2.c**

Program C: **finaltax.c**