CMPT120 - Program 5 (**Prog5YourLastName.py**)
Due: Tuesday, Oct. 8th, before 1:30 pm. (Submitted via iLearn and printed)
On my desk (in the classroom) beginning of class

The purpose of this program is to master file input (along with conditionals and loops). This program will compute taxes based on the following rules. (Use variables to store each calculated value.)

1) Taxable income is equal to gross income minus the standard deduction minus $1,600 for each exemption. The standard deduction is $4,250. Remember that **taxes are not owed when taxable income is less than zero**. (If taxable income is less than zero, then no taxes are owed.)

2) The tax rate is computed from the following table based on filing status and taxable income:

Filing status	**Taxable income**	**Tax rate (for entire amount)**
Single	less than $15,000	14%
	$15,000 - $50,000	22%
	more than $50,000	31%
Married filing jointly	less than $25,000	12%
	$25,000 - $135,000	20%
	more than $135,000	29%
Head of household	less than $30,000	13%
	$30,000 - $70,000	21%
	more than $70,000	30%

3) The total tax due is the taxable income times the tax rate.

For a taxpayer, the input will consist of the following (**in this order!**):
Taxpayer ID -- an integer,
Filing Status – single character,
S for Single,
M for Married filing jointly,
H for Head of household (*do* allow lowercase, too)
Gross Income – a float (negative allowed, representing a loss)
Number of Exemptions -- an integer.

The program computes the taxes owed and prints out the taxpayer number, filing status (using words, not single characters), taxable income, tax rate, and tax amount owed. (Use an **if-elif** statement on Filing Status, then a nested **if-elif** to determine the tax rate.) Remember to use mnemonic variable names, to prompt the user for input, and to properly label and format the output (use a dollar sign, 2 digits after the decimal point, etc., on output).

Look on the back of this page!

Our program will allow for multiple taxpayers. This means you'll need a "big" loop, which will have as its body the code you write for 1-3, plus a bit more. Your program will read in taxpayer data for multiple taxpayers. You'll still print out information about each individual taxpayer.

You will also want to keep track of the following values:

- the **number of taxpayers** processed,
- the **highest tax amount,**
- the **taxpayer ID of the highest tax amount,**
- the **total amount of taxes paid,** and
- the **average tax amount.**

(**HINT**: Which of these can you determine *inside* the big loop and which of these must you wait until *after* the big loop is finished?) The program then prints a summary including the **number of taxpayers** processed, the **highest tax amount,** the **taxpayer ID of the highest tax amount,** the **total amount of taxes paid,** and the **average tax amount (in this order!).** Of course, you'll want to label and properly format these, too! ☺

This program will use file input. Prompt the user for the name of the input file. The first line of the input file will contain the number of taxpayers, followed by four lines of input for each taxpayer. For example:

```
3
1456
S
50000.00
6
2345
M
65000.00
3
983
H
55000.00
4
```