**3460:209 PROGRAMMING PROJECT 2: PIRATE’S CAFE**

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| [http://www.greenyourope.net/wp-content/uploads/pirates-around-a-table2.jpg](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=HUpCfU5fqKC4yM&tbnid=mX2cw7QG9-tHUM:&ved=0CAUQjRw&url=http://www.greenyourope.net/2012/06/07/what-can-greens-learn-from-pirates/&ei=IMgoUoqaONKs4AOItYDQDQ&bvm=bv.51773540,d.dmg&psig=AFQjCNG-5QVKFm4mL2miRwQ6n-v7FTkL7Q&ust=1378490754361911) | You've just feasted on a truly delicious meal of spam and eggs and a couple of pints of Davey Jones’s ale. Unfortunately, you are on board a pirate ship so payment is a little tricky. You need to calculate not only the cost of your meal, but also the governor’s tax, the captain’s tax, and a tip for the ship mates serving you. You also must pay in silver ducats, not American dollars. If you don’t pay, you’ll be walking the plank. |

## Step 1. Input

* Ask the user for the cost of their food.
* Ask the user how much ale they drank (number of pints).

## Step 2. Cost of eating on a pirate ship

* A pint of ale is USD$4.50.
* Taxes:
  + Governor’s tax is 6% on both the meal and the ale. This keeps the king’s army from harassing your ship too much.
  + Captain’s tax is 8% on the ale only. He’s a pirate and the captain. Pay it and consider buying him a pint, too, just to be on the safe side.
  + Ship mate’s tip for swabbing your mess off the deck is 10% on the food only. (No respectable pirate would spill good ale.)
  + Pirate’s retirement fund is ½% of the pre-tax total.
* Silver prices vary but we’ll assume USD$24 per ounce. You have a bag full of ¼-ounce ducats (so each is worth USD$6) that cannot be divided, so once you have the bill in dollars you must compute the number of coins to leave and round up to a whole number.

## Step 3. Output

* Calculate and output as an itemized bill:
  + Total pre-tax bill (food + ale consumed) in dollars.
  + Governor’s tax in dollars.
  + Captain’s tax in dollars.
  + Ship mate’s tip in dollars.
  + Retirement fund.
  + Total bill in dollars.
  + Total number of silver coins to leave.

For example, if the meal was $13.75 and 5 pints of ale were consumed, your output should look something like this:

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| ---------------------------------  The Galley of  The Feared Raider of the Cuyahoga  ---------------------------------  Meal $ 13.75  Ale $ 22.50  ------  Subtotal $ 36.25  Gov tax $ 2.18  Capt tax $ 1.80  Mate tip $ 1.38  Retirement fund $ .18  ------  Total $ 41.79  Payment 7 ducats |

While not required I highly recommend including an inventive name for the ship for your personal amusement. Consult *http://www.seventhsanctum.com/generate.php?Genname=pirateshipnamer* if you can’t come up with one on your own.

**Program and submission details:**

* Your input and output should look good.
* Don’t worry about precision of the numbers. We’ll discuss in class.
* Your code should be neat and documented appropriately. For example, use a blank line between logical sections of code.
* You code should be documented with a header stating your name and the nature of the program.
* Your output can be creative, but it must also be neat. For example, put a blank line between the user input and the output. See the sample above as a guide.

Submission Instructions – for projects

On the student Subversion repository, navigate to **Projects/Project1.** Create programs formatted under the name of the project.

**Don’t forget to update and commit. Use Lab 1 as a reference guide.**

**We will not grade a commit made after 11:59 p.m. on Monday, February 9, 2015.**

*Last updated 9.5.2013. Based on original material by K. Liszka.*