

# Python Basics Review

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Write programs that accomplish each task. Use appropriate variable names and prompts for user input when necessary. Include a header (comments) for each program, consisting of your name, student number, date, and brief description of the program, like the example below.

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# J. Garvin (123456)
# 2020-09-30
# Given two positive integers, determine their sum.
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1. Given a temperature in Celsius,  $C$ , convert it to degrees using the formula  $F = \frac{9}{5}C + 32$ .
2. The final height,  $f$  metres, of a ball after  $t$  seconds, thrown from initial height,  $h$ , with initial velocity  $v$ , is given by the equation  $f = -4.9t^2 + vt + h$ . Calculate the final height of a ball, rounded to one decimal place, given values for  $t$ ,  $v$  and  $h$ .
3. Obtain a value between 0 and 100 from the user, representing some value of money in cents. Determine how many quarters, dimes, nickels, and pennies will be needed to efficiently make that change. For example, 57 cents can be made using 2 quarters, 1 nickel and 2 pennies. Hint: try using the quotient ( $//$ ) and remainder ( $\%$ ) operations.
4. Read a non-negative integer from the user, representing some number of seconds, and display it as hours, minutes and seconds. For example, a value of 11 239 would represent 3 hours, 7 minutes and 19 seconds.
5. McGarvin's is a popular fast food chain. Their signature menu items are Hangry Meals (\$4.95/ea), BBB (Bacon, bacon and bacon) Sandwiches (\$5.35/ea), and the Big Garv burger (\$3.25/ea). Have the user input the quantities of each item sold, then calculate the subtotal of all items. Calculate the tax (13% HST), and the final price after tax is applied, both rounded to two decimal places. Display all calculated values as a bill of sale.