| Unit 2 Elementary Programming Problems [Learning Plan Index - Python](https://docs.google.com/document/d/1B5yWb6wCSRhqD42iWxCi7bmLPY2EqvU6pbiEQT0zs20/edit?usp=sharing)    *Unit 02 of Python Programming - Elementary Programming Problems* | |
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| Learning Targets  This unit we will…  Create a basic program that uses variables, user input and some basic mathematical processes to output results to the user.  I can…   * Use the input function to get input from a user * Combine the eval function with the input function to convert input to an int * Use basic mathematical operations to manipulate user input to generate the proper output. * Use the time module to return the current time. * Use the datetime module to get the current year.   Vocabulary: input, eval, int, float, variables, comments, assignment, assignment operators, numeric operations, time, datetime. | |
| Learn About It!  *You can explore some, or all of these resources. If you want to see a resource again, go for it!*  [Learning Plan Index - Python](https://docs.google.com/document/d/1B5yWb6wCSRhqD42iWxCi7bmLPY2EqvU6pbiEQT0zs20/edit?usp=sharing) *The Colab documents review the concepts of each unit with code you can run and modify.* | |
| Evidence of Learning  *Complete the following programming exercises.*  [Grading Rubric](https://docs.google.com/document/d/1shjqolaw_5tSX9T5OJ2FZuBeon7K3hDrYEJ5m1ltSEw/edit?usp=sharing) | |
| Unit Programs  Review [Colab - Comments, History, Variables, Input, Eval](https://colab.research.google.com/drive/1US4A7rzI67MB6jh50goc3ikpsqzQavOM) and [Colab - Numeric Operations, Augmentation, Time](https://colab.research.google.com/drive/1HRz-faYlskr00lXHmTN6DGdnWHKDfeEe) then do the program problems listed below. There are tips, sample code, and links to sample code that you will use within the Colab documents. There will be one set of problems to do which can be done in one file, there is a picture of what your output should look like below. Name the file **Unit02\_YourLastName.py**, if you do this set of problems in [repl.it](https://repl.it/) name the repl.it Unit02\_YourLastName and turn the share link into the classroom.  **Unit02\_YourLastName**   1. Year of Birth (25 points) - ask the user what their age will be on their birthday this year. Then using import datetime and variable.year return to the user the year of their birth as well as: the number of days, hours and minutes they will have been alive on their birthday. In your calculations you do not have to account for leap years. 2. Sum of digits (25 points) - ask the user to input a number from 0 to 999 and then return to the user the sum of the three digits they entered. 3. Initial deposit (25 points) -     Get input from the user for:   1. Desired final account balance 2. The annual interest rate the money will earn 3. The number of years as an integer that the money will be invested   Output the amount of the initial deposit required to achieve the final account balance. For full credit (-2) format the output with a dollar sign and two decimal places.   1. Current time (25 points) - Import time (not datetime), using time.time() and output the current EST time. Look at the sample code in the colab document ([Colab - Numeric Operations, Augmentation, Time](https://colab.research.google.com/drive/1HRz-faYlskr00lXHmTN6DGdnWHKDfeEe)) on how to import time, how to call time, and how to manipulate the results of time to format it into the current time. Doing an output of military time is ok.   Sample output of what your program should look like is shown in the image below. Make sure you have a comment block at the top of your program with your name, the date and a list of the programs that are being run in the program. Also make sure to comment your variables saying what the value is they are holding.  ############################################################################  # Name : Date: #  # Unit 2 Problems #  #. Age calculator, sum of digits, initial deposit, current time. #  ############################################################################  When your code works and is commented, turn it into the classroom. | |
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