**Homework1:**

**Due date: 9/26/2018 before class**

**Please submit through blcakboard**

**Money Counting Game:**

**Create a change counting game that gets the user to enter the number of coins required to make exactly one dollar. The program should prompt the user to enter the number of pennies, nickels, dimes, and quarters. If the total value of the coins entered is equal to one dollar, the program should congratulate the user for winning the game. Otherwise, the program should display a message indicating whether the amount entered was more than or less than one dollar.**

**# Hints**

**# Declare global variables (constants) for each type of coins**

**PENNY\_VALUE = 1**

**NICKEL\_VALUE = 5**

**..................**

**..................**

**..................**

**# Declare some local variables and initialize with zero value**

**numPennies = 0**

**numNickels = 0**

**...............**

**...............**

**...............**

**...............**

**# Get number of pennies, nickels, dimes, and**

**# quarters from the user.**

**numPennies = int(input('Enter the number of pennies: '))**

**........................................................**

**........................................................**

**........................................................**

**# Sum the pennies, nickels, dimes and quarters**

**# to obtain total cent value.**

**totalCentValue = (numPennies \* PENNY\_VALUE) + \**

**(........................) + \**

**(........................) + \**

**..............................**

**..............................**

**..............................**

**# Calculate the total value in dollars**

**# Determine whether user won the game (if statement: if total value is > 1.0**

**message**

**elif <1.0**

**message**

**else**

**message)**

**homework2:**

**Due date: 9/26/2018 before our class**

**Please submit through blackboard**

**Write a program that asks the user to enter the amount s/he has budgeted for a month. A loop should**

**then prompt the user to enter each of the expenses for the month and keep a running total. When the loop finishes, the program should display the amount that the user is over or under budget.**

**# Hints**

**# Declare variables to store the budget amount, amount spent, difference, and total.**

**budget = 0.0**

**difference = 0.0**

**total = 0.0**

**spent = 1.0 #initialize for while loop**

**# Get the budgeted amount from the user (has to be a float)**

**<your code>**

**# Get the total amount spent from the user (while statement starts, make sure to enter exit criteria)**

**# Determine whether the user is over or under budget, and display the result (use formatting: 2f)**

**print what was the budgeted amount**

**print what was the amount spent**

**if budget > total:**

**calculate the difference**

**print a statement**

**elif budget < total:**

**calculate the difference**

**print a statement**

**else:**

**print a statement**

**Assignment#3**

**Due date: 9/3/2018**

**A business has to file monthly sales tax report listing the total sales for the month,**

**and the amount of state and county sales tax collected. The state sales tax rate is 5% and**

**the county sales tax rate is 2.5%. Write a program that asks the user to enter the total sales**

**for the month. From this figure, the application should calculate and display the following:**

**a) the amount of county sales tax**

**b) the amount of state sales tax**

**c) the total sales tax**

**Homework4. Due date: 10/10/2018 before our class.**

**Write a program that writes four random integers in range 1-100 on a file named 'num.txt'.**

**Write try-except block to handle at least two standard python error (any two errors).**

**Hints: you have to 'import random' package and use one of its methods to generate integer numbers in range 1-100. Use the try-except blocks where suitable.**

**import random**

**def main():**

**# Local variables**

**numberOfRandoms = 4**

**randomNumber = 0**

**# Open output file.**

**outputFile = open('num.txt', 'w')**

**# Write random numbers to the file.**

**for .............. # for loop in range (numberOfRandoms):**

**randomNumber = ........... # use the method that generates random numbers(1, 100)**

**# Write it on to the file.**

**# Close the file.**

**# Call the main function.**

**main()**

[**https://www.daniweb.com/programming/software-development/threads/467260/program-to-write-and-read-from-a-txt-file**](https://www.daniweb.com/programming/software-development/threads/467260/program-to-write-and-read-from-a-txt-file)

**Programming assignment5: Lists**

**Due date: 10/17/2018, 6:10pm.**

**Write a program that generates a seven random numbers, each in a range of 0 to 9, and assign each number to a list element.**

**a) Find the lowest number in the list, print it.**

**b) Find the highest number in the list, print it.**

**c) Find the total of the numbers in the list, print it.**

**b) Find the average of the numbers, print it.**

**Then write another loop that displays the contents of the list.**

**Your output will be somewhat similar to this: 0, 3, 7, 7, 4, 5, 3**

**Hint: use end='' in your print statement**

**Exam:** [**http://www.slader.com/textbook/9780133582734-starting-out-with-python-3rd-edition/43/**](http://www.slader.com/textbook/9780133582734-starting-out-with-python-3rd-edition/43/)

**Homework6: Class & Object Oriented Programming**

**Due date: 11/14/2018 by 6:10pm**

**================================================**

**Write a class named Information, which holds the following data attributes:**

**name, address, age, and phone number**

**It shoudl have appropriate accessor (get) and mutator (set) methods.**

**Then write a program that creates two instances (objects) of class Information.**

**The instances (objects) could be person1 and person2. Display the information.**

**Name the file for class as: information.py and the program with objects of information as testinformation.py**

**If necessary, you can combine the two files into one for submission purpose.**

**For the test program, after creating the objects create a function to display the information like:**

**def display\_info(info):**

**print('Name: ', info.get\_name())**

**..................**

**...................**

**Homework8: Inheritance and Polymorphosim**

**Due date: 11/28/2018 by 9:00am**

**================================================**

**Write a class named "Person" with data attributes for a person's name, address and phone number. Next write a class named "Customer" that is a subclass of the Person class. The customer class should have a data attribute for customer number and a boolean data attribute indicating whether the customer wishes to be on a mailing list. Demonstrate at least one instance of the Customer class in a simple program displaying a customer info.**

**You can work on multiple files but copy your program on a single file and submit.**