

BIN 500 – Assignment 3

Due date: December 2, 2019

Late policy: For each assignment, 20 points deduction will be applied for one day late, and 10 points additional deduction for each extra day.

Use python to implement the required methods to solve the problems below. Please submit your python program codes (.py files) to ODTUclass. Please do not forget adding comments to your code. Remind that the instructor has the right to request a demo of the codes at any point and can determine the final score based on the demo performance.

- 1) Use the list in the supplied Python script to create dictionaries that will be used as phonebooks. Notice that the first item in the list denotes the headers of each data type. After creating appropriate dictionary/dictionaries, prepare three functions that will help the user. Your program should start by asking the user which function that he/she wants to use and then should continue with the selected function. Please do not forget to add explanations for each function so that the user can select easily.

Function 1 – Requires a first name from the user, then prints the number of people having that first name with the list of their full names.

Function 2 – Requires a full name from the user and prints all the information about that person. If the name entered by the user is not found in the phonebook, the function should inform the user.

Function 3 (Special Function) – Here, create a function that you would like to add to the capabilities of your phonebook. If the user selects this function, you should explain what this function does before asking for inputs if there is any required.

- 2) Create a dictionary so that each letter in the alphabet is denoted as its position in the alphabet. For example, 1 is A and 5 is E. Using your dictionary, prepare a function which will accept a ciphered sentence and return its deciphered version. In the ciphered sentence, letters are separated by a single space while words are separated by double spaces. Use your function to decipher the question at the bottom.

Then, create a reverse function which ciphers a given word/sentence based on the same rules (single space for letters, double spaces for words) and returns it. Be careful about upper and lower cases. After finding out the question, use your function to cipher your answer to the question and print it.

'9 6 25 15 21 3 15 21 12 4 20 9 13 5 20 18 1 22 5 12 23 8 5 14 23 15 21 12 4 25 15 21 7 15 1 14 19 23 5 18 23 9 20 8 12 5 20 20 5 18 19 23 5 4 15 14 20 8 1 22 5 14 21 13 2 5 18 19'