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## 

**Experiment 2:**

**Strings, Lists, Tuples, and Dictionaries**

CPE106L (Software Design Laboratory)

**Member 1: Dionis A. Padilla**

Group No.:

Section:

## **PreLab**



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| **Readings, Insights, and Reflection**  Note: All text in red should be removed in the final lab report. Change the font color from RED to black.  < **What to Include?**  Readings include: METIS books, pertinent websites. Provide below your Insights and Reflection. Paragraph format> |
| ***<Include ISBNs and pages of used METIS books and pertinent urls>***  **Insights and Reflections**  ***<Write the LastName of the group members***  ***Example: Padilla and Dela Cruz (Chapter 4 – Strings)***  ***>***  Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.  ***<Write the LastName of the group members***  ***Example: Padilla and Dela Cruz (Chapter 4 – Strings)***  ***>***  Curabitur pretium tincidunt lacus. Nulla gravida orci a odio. Nullam varius, turpis et commodo pharetra, est eros bibendum elit, nec luctus magna felis sollicitudin mauris. Integer in mauris eu nibh euismod gravida. Duis ac tellus et risus vulputate vehicula. Donec lobortis risus a elit. Etiam tempor. Ut ullamcorper, ligula eu tempor congue, eros est euismod turpis, id tincidunt sapien risus a quam. Maecenas fermentum consequat mi. Donec fermentum. Pellentesque malesuada nulla a mi. Duis sapien sem, aliquet nec, commodo eget, consequat quis, neque. Aliquam faucibus, elit ut dictum aliquet, felis nisl adipiscing sapien, sed malesuada diam lacus eget erat. Cras mollis scelerisque nunc. Nullam arcu. Aliquam consequat. Curabitur augue lorem, dapibus quis, laoreet et, pretium ac, nisi. Aenean magna nisl, mollis quis, molestie eu, feugiat in, orci. In hac habitasse platea dictumst. > |

**Answers to Questions**

Your **answers** here… (Don’t include the questions)

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## **InLab**



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[**What to Include?]**

* **Objectives** (See Lab guide).

Examples:

1. **Debug** the sample programs on tuples, dictionary, etc.
2. **Use** Anaconda (or Python Virtual Environment) and Linux terminal in running python statements.
3. **Use** Visual Studio Code in debugging.
4. **Compare (Discuss the difference)** C++ and Python data structures.

(**Avoid** these verbs: To know, to understand)

1. Objective 1
2. Objective 2

* **Tools Used** 
  + Anaconda (or Python Virtual Environment)
  + Ubuntu Linux Virtual Machine
  + Visual Studio Code
* **Procedure.**
* Steps Performed with edited screenshots of tools used (Example: Using Anaconda, sample run, debugging with **DISCUSSIONS** (DON’T copy and paste from the reference METIS book and/or official websites)**.** Use the source in the Lab Guide.
* Use the given Data Files
* **DO not include source in your screengrabs nor include in your lab report the given source codes as shown below… but you may include code snippet and debugging display.**

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| **DO NOT include this complete sample codes in your LAB REPORT discussion.**  """  File: mode.py  Prints the mode of a set of numbers in a file.  """  fileName = input("Enter the file name: ")  f = open(fileName, 'r')    # Input the text, convert its to words to uppercase, and  # add the words to a list  words = []  for line in f:  wordsInLine = line.split()  for word in wordsInLine:  words.append(word.upper())  # Obtain the set of unique words and their  # frequencies, saving these associations in  # a dictionary  theDictionary = {}  for word in words:  number = theDictionary.get(word, None)  if number == None:  # word entered for the first time  theDictionary[word] = 1  else:  # word already seen, increment its number  theDictionary[word] = number + 1  # Find the mode by obtaining the maximum value  # in the dictionary and determining its key  theMaximum = max(theDictionary.values())  for key in theDictionary:  if theDictionary[key] == theMaximum:  print("The mode is", key)  break |

* **IMPORTANT**: Figure numbers and brief description.

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| Discussion here…. **DON’T forget to mention the image in the screengrabs**.  As shown in Figure 1…. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat .  Figure 1. Using conda command to display created environments. There are seven conda environments.  Figure 2. Debugging error message showing ‘FileNotFoundError’ exception  Discussion here…. DON’T forget to mention the image in the screengrabs.  Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim… **as shown in Figure 2**.  Figure 3. Class diagram of Student class showing attributes and operations  Discussion here for screenshot #3…. DON’T forget to mention the image in the screengrabs.  Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim… **as shown in Figure 3**.  More discussions here…  Example: **Compare** C++ and Python data structures.  **Use the particular chapter, pages of the METIS book as well as the reference urls. Does not have to contain a screengrab.**  Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.  Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum. |

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## **PostLab**



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**Text in RED are to be removed in the final lab report**

**Programming Problems** (Leaders will assign each member to work on)

Includes edited screenshots of tools used (Using Anaconda, Git Terminal, and Visual Studio Code sample run, debugging with **DISCUSSIONS** (DON’T copy and paste from the ebook)**.** Use the source in the Lab Guide. You may include source codes of Roth. **IMPORTANT**: Figure numbers and labels.

***<Discussions here…>***

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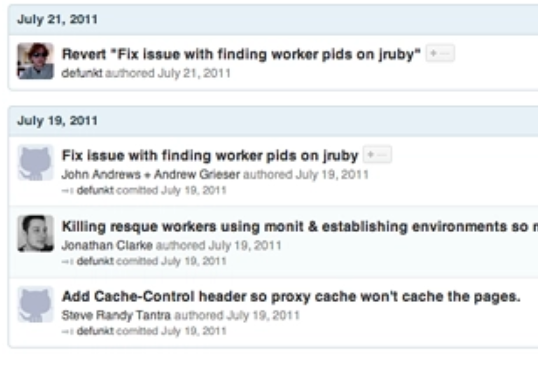


Figure 2. Adding commit message.

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