UNIVERSITY OF EMBU

2020/2021 ACADEMIC YEAR

FIRST SEMESTER EXAMINATION

BACHELOR OF SCIENCE (COMPUTER SCIENCE) & BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)

CSC 217: WEP PROGRAMMING & APPLICATIONS

CAT I/ASSIGNMENT 1

In the first two weeks of the CSC 217 Web Programming and Applications, students in the Computer course and those in the IT course were combined. Each week the lecturer records the attendance at least twice: 30 minutes after the lesson starts, in a file named *CSC_217_attendance_ week1_30.txt* and just before the lesson ends, in a file named *CSC_217_attendance_ week1_end.txt,* for week one attendance. Because the attendance is taken at an instance of time, by taking two recordings, the instructor does not want to disadvantage those students who might have left, or had problems logging in. Therefore, making two records will capture students who at least were eager to attend the lesson. The instructor, has to submit at least 12 files of attendance to management at the end of the course. He wants to automate the process and is seeking your assistance (perhaps he is too busy or too lazy to do it himself) by writing a Python program to accomplish the following tasks. (The two files are attached)

a) Write a python function named **csc_217_attendance** that takes the two files *CSC_217_attendance_ week1_30.txt* and *CSC_217_attendance_ week1_end.txt* and returns a single file named *CSC_217_attendance_ week1.txt* that is a combination of the contents of the two files. The returned file should not have any record appearing twice, and no records in either *CSC_217_attendance_ week1_30.txt* and *CSC_217_attendance_ week1_end.txt* should be omitted. **(10 marks)**
b) Write a Python function named **csc_217_Seperated** that calls the **csc_217_ attendance** function and creates two files *CSC_217_Computer.txt* and

CSC_217_IT.txt, which contains the list of attendance for students doing Computer and students doing IT, respectively. **(10 marks)**

c) Now, at this point we have managed to separate computer science students and IT students into two separate files. However, some students were not keen enough to follow instructions on how they should use their username. The instructions were clear that students should use their username that starts with their adminission number followed by an underscore then their names, eg. 141/3432/2019_James_Chibole. Your mission is correct this mistake using a Python function.
   i. For Computer Science student, write a Python function named **csc_217_Computer** that take in the *CSC_217_Computer.txt* file and formats it into the correct standard.
   ii. For IT student, write a Python function named **csc_217_IT** that take in the *CSC_217_IT.txt* file and formats it to the correct standard.

   Example of the correct standard is *141/3432/2019_James_Chibole* and remember to remove any duplicate entries.
   (10 marks)

d) Yet, still there are students who only provided their first name as *141/3432/2019_James* or those who only logged in using their admission number alone. White a python function named **CSC_217_formated** that uses the *CSC_217_Computer.txt* for computer science students and the *CSC_217_IT.txt* for IT students and replaces the underscore between the admission number and the student name with a comma and space, and the underscore between first name and last name with a space. Eg. *141/3432/2019_James_Chibole* should be converted to *141/3432/2019, James Chibole.* Further for students who only provided their registration number, the first and last name should be name "Computer" and year of registration e.g 2019 for Computer students and "IT" and year of registration e.g 2019, for the IT student list, respectively.

   The output/return for this function should be a file named, *CSC_217_Computer_Week1_final.txt* for the computer science students and CSC_217_IT_Week1_final.txt for the IT students. **(10 marks)**

Submitting the Assignment

Student should submit the assignment in the 9th week of the course presentation. Create a local respiratory on your computer and once you are through use *git push* command to send it to GitHub for everyone to see. Your code should be different from other student and if the code is the same, the student who first posted it in their GitHub account will be deemed to have done it, and the copied one will receive a zero mark! Once you are through with the assignment copy the GitHub respiratory link of the answer to Moodle platform. I will create a discussion forum where students will post

their link (Currently, I am having problems logging into the Moodle platform). Start doing the assignment once we are through with the topic on Python.

Please try your level best to think about the tasks and what is expected, sometimes even days before seeking for assistance from your colleagues or stackoverflow. Please, do not ask for code, ask for how you can accomplish a task and write the code yourself as that is the only way your code will be different from others.

Programming is not about individual work, however, collaboration should be limited to “how should I do this?” not “assist me with the code.” You are nowhere near learning if you are doing the later. Remember the objective is to learn and acquire programming skills, which comes with sheer determination and persistance.

NB: Maybe we should write the first function together in class to give you a hint and feel of what is expected. Let me know.

Thank you and success.

Mr. Chibole, P. J.