Assignment No.3

You have the following data related to student’s attendance (the data is stored in a CSV - comma separated file). Few lines of this files is as follows,

ABDUL RAUF,F2020065165,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P

ABDUL HANNAN,F2020065009,P,P,P,A,P,P,P,P,A,P,P,P,P,P,P,P,P,P,P

AHMAD HASSAN KHAN,F2020065163,P,A,P,A,P,A,P,P,P,P,P,A,-,-,-,-,-,-,-

The data consists of student name and student ID and then its attendance status. Here ‘P’ means Present and ‘A’ means Absent, and ‘-‘ means nothing.

Your job is to write code to calculate the total ***present*** and ***absent*** of each student (there are 37 students in the class), and also their corresponding percentage (%). The output of the above data would be,

**Output:**

{ F2020065165: ['ABDUL RAUF', 'Present : 19/19-->(100.00)%']}

{ F2020065009: ['ABDUL HANNAN', 'Present : 17/19-->(89.47)%', 'Absent : 2/19-->(10.52)%']}

{ F2020065163: ['AHMAD HASSAN KHAN', 'Present : 8/12-->(66.67)%', 'Absent : 4/12-->(33.33)%']}

Here you have a dictionary, which consists of key (student id) and a list. This list consists of student name, it total present 19/19 (means out of 14 classes, student is present in 14 classes), and there is no absent, so no need to add it. There are 19 classes/lectures so far, but if attendance status is ‘-‘ (as show in 3rd example above) , then total attendance will change from 19 to 12, ( ‘-‘ status will not count anything).

The file ***attendance.py*** is provided, which consists of some incomplete code. This code is reading the ***attendance.csv*** (you must change the path of the file in the code) file and then put the result into a list as follows,

Lst = [“ABDUL RAUF, F2020065165, P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P”,

“ABDUL HANNAN,F2020065009 P,P,P,A,P,P,P,P,A,P,P,P,P,P,P,P,P,P,P”,

“AHMAD HASSAN KHAN, F2020065163, P,A,P,A,P,A,P,P,P,P,P,A,-,-,-,-,-,-,-”, …….]

**Your job**

You will do the code as follows,

1. First you must take every element of of Lst (list declared above) and split it. This split element would look like this [ABDUL RAUF,F2020065165, P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P] .
2. You will write a function “*prepare\_report*”, which will take above split element and pass it to this function. In this function you will take first two element from this list (*name*, and *ID*), through slicing, and then reverse these two (name and ID), and it must be done within one line
3. Next you will also take another slice from the split element and the slice will consists of result status ([P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P]), this will be done within prepare\_report function.
4. Next (in the same function), you will store the first sliced element (ID and name) into dictionary, where ID will be the key and name will be the value.
5. Now you will write a function *present\_absent\_report*, which will take the 2nd sliced list ([P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P,P]) and count total “Present” and “Absent” (while ignore the ‘-‘). You must use dictionary to do so. Your result will look like {“Present”:17}. You will return this dictionary.
6. Next you will process the two dictionaries ({'F2020065009','ABDUL HANNAN'} and {'Present’: 17, 'Absent’: 2}) to final report as shown below,

{'F2020065009': ['ABDUL HANNAN', 'Present : 17/19-->(89.47)%', 'Absent : 2/19-->(10.52)%']}

Note: These steps are also written in *attendance.py*. It would be clearer from there

**Your final output will looks like this**:

{ F2020065165: ['ABDUL RAUF', 'Present : 19/19-->(100.00)%']}

{ F2020065009: ['ABDUL HANNAN', 'Present : 17/19-->(89.47)%', 'Absent : 2/19-->(10.52)%']}

{ F2020065163: ['AHMAD HASSAN KHAN', 'Present : 8/12-->(66.67)%', 'Absent : 4/12-->(33.33)%']}

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Note: in case of copying or plagiarism, zero will be given to both or all the candidates who are involve in plagiarism. Also, after dead line no assignment will be accepted