

CS384 2022 Assignment 6 - Attendance Report Generator.

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Python 3.8.10 Install Instruction <https://pastebin.com/nvibxmjw>

Deadline: 25th Oct, 2022. 23:59. All of your git repos shall be pulled after that. That will be the version which will be checked.

Warning: Sharing is Caring is good for cat videos. Sharing of program may lead to plagiarism and would effect in 0 to both.

Doubts: All Doubts relating to CS384 2022 Assignment shall be posted on Google Form

https://docs.google.com/forms/d/e/1FAIpQLSdS5liTGIRaluDIDARL7FH-XwN4oBJ1ZvE8f5cPcMaxftK44w/viewform?usp=sf_link

I will respond to the queries here:

<https://docs.google.com/spreadsheets/d/1QiKySHoGXoG8h0UhG7saDMI7eV4yOqK2LCTY2bt-Lys/edit?usp=sharing>

Please avoid email / wa / dm

So common doubts can be solved and we shall be able to keep track in an organized manner.

Pull This Git Repo - https://github.com/Cs3842022/CS384_2022 and copy the tut06 to your repo folder.

Git Requirements: At least 5 git commits should be there with meaningful comments (at least 4 words)

The entire code must be into multiple try, except block: Multiple Try Except should be the part of the code, so that if there is an error in a new file, the program throws the exception and does not stop. Also the number of rows should be read such that files bigger/smaller than this should be able to run by your code.

Library Requirements: You can use csv, pandas, datetime or any other library / inbuilt module, but for evaluation you need to explain each line of code.

Problem Statement: For the course of CS384 the attendance was made online as conducting attendance for 221 students in a span of 60 minutes was not possible. The lecture is scheduled on Monday and Thursday from 2-3 p.m. Taking advantage of this freedom, the students actually marked the attendance outside these working hours. In this assignment, you are given a csv file consisting of the timestamp and the name and roll number concatenated. In addition you are given the registered course students for the Python course. Your job is to generate an attendance report.

The output shall consists of two files: a) individual_reports for each roll number. b) consolidated report for all roll numbers in a single file. Check the output folder for the files. So in a class of 221 students there will be 221 output files one for each student (save as ROLL.csv) and one consolidated file that will be consisting of all the 221 roll numbers and their attendance statistics.

The output template for the individual and consolidated csv will be like this:
(see attendance_report_consolidated.csv):

Roll
Name
total_lecture_taken
attendance_count_actual
attendance_count_fake
attendance_count_absent

Percentage ($\text{attendance_count_actual} / \text{total_lecture_taken}$) 2 digit decimal

attendance_count_fake = count of attendance marked outside Monday and Thursday from 2-3 p.m.
total_lecture_taken = Count the unique date that are mentioned in the csv file that fall on Mondays and thursdays because our lectures are held on those days only.

The code should be dynamic enough so that when the csv file actually increases towards the end of the semester we can generate the same attendance sheet every time. In addition you need to provide an option to email the attendance reports. The email should include the attachment "attendance_report_consolidated.csv". The destination email shall be cs3842022@gmail.com

Output 1: Generate individual ROLL.csv files as shown in output folder.

Output 2: Generate attendance_report_consolidated.csv file as shown in output folder, consisting of all the 221 numbers.

Output 3: Option for the user to email the "attendance_report_consolidated.csv" to destination email - cs3842022@gmail.com

Output 4: Roll numbers who have put attendance multiple times in a single day. Output to "attendance_report_duplicate.csv". In this file there is a column named "Total count of attendance on that day", so if a roll 1901ME99 has marked 2 attendance on that day, that column will contain 2.

Input Files: input_attendance.csv, input_registered_students.csv

Input File: attendance_report_consolidated.csv, attendance_report_duplicate.csv & all ROLL.csv