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AI LAB PROJECT

# Source Code:

import csv  
import random  
  
  
student\_ID, student\_name, course\_code, course\_name, student\_strength = [], [], [], [], []  
my\_course\_code, my\_course\_name, random\_num, random\_day, random\_date, start\_time, end\_time, randomTeacher = [], [], [], [], [], [], [], []  
rand = ["Monday", "Tuesday", "Wednesday", "Thursday", "Friday"]  
lists\_from\_csv, lists\_of\_course, lists\_of\_teacher = [], [], []  
temp = []  
  
file = open("actual\_dataset/studentCourse.csv", 'r') # get data of student course from studentCourses.csv file  
course\_read1 = csv.reader(file)  
for row in course\_read1:  
 temp.append(row)  
for i in range(len(temp)):  
 for index, item in enumerate(temp[i]):  
 if index == 0:  
 student\_ID.append(item)  
 if index == 1:  
 student\_name.append(item)  
 if index == 2:  
 course\_code.append(item)  
student\_ID.pop(0)  
student\_name.pop(0)  
course\_code.pop(0)  
  
for i in course\_code:  
 student\_strength.append(course\_code.count(i))  
  
# def read\_studentcourse():  
# file = open('studentCourse.csv', 'r') # get data of student course from studentCourses.csv file  
# course\_read1 = csv.reader(file)  
# for row in course\_read1:  
# temp.append(row)  
# for i in range(len(temp)):  
# for index, item in enumerate(temp[i]):  
# if index == 0:  
# student\_ID.append(item)  
# if index == 1:  
# student\_name.append(item)  
# if index == 2:  
# course\_code.append(item)  
  
  
  
def read\_courses():  
 # get data of courses from courses.csv file  
 file = open('actual\_dataset/courses.csv', 'r')  
 course\_read = csv.reader(file)  
 for row in course\_read:  
 lists\_of\_course.append(row)  
 for i in range(len(lists\_of\_course)):  
 for index, item in enumerate(lists\_of\_course[i]):  
 if index == 0:  
 my\_course\_code.append(item)  
 if index == 1:  
 my\_course\_name.append(item)  
  
  
def read\_teacher():  
 file = open('teachers.csv', 'r')  
 teacher\_read = csv.reader(file)  
 for row in teacher\_read:  
 lists\_of\_teacher.append(row)  
  
  
def randomDay():  
 for i in range(len(my\_course\_code)):  
 day = (random.randint(1, 10)) #random date for each exam  
 random\_num.append(day)  
 random\_num.sort()  
 for i in range(len(my\_course\_code)):  
 if random\_num[i] == 1:  
 random\_day.append(rand[0])  
 random\_date.append("1-04-2022")  
 if random\_num[i] == 2:  
 random\_day.append(rand[1])  
 random\_date.append("2-04-2022")  
 if random\_num[i] == 3:  
 random\_day.append(rand[2])  
 random\_date.append("3-04-2022")  
 if random\_num[i] == 4:  
 random\_day.append(rand[3])  
 random\_date.append("4-04-2022")  
 if random\_num[i] == 5:  
 random\_day.append(rand[4])  
 random\_date.append("5-04-2022")  
 if random\_num[i] == 6:  
 random\_day.append(rand[0])  
 random\_date.append("8-04-2022")  
 if random\_num[i] == 7:  
 random\_day.append(rand[1])  
 random\_date.append("9-04-2022")  
 if random\_num[i] == 8:  
 random\_day.append(rand[2])  
 random\_date.append("10-04-2022")  
 if random\_num[i] == 9:  
 random\_day.append(rand[3])  
 random\_date.append("11-04-2022")  
 if random\_num[i] == 10:  
 random\_day.append(rand[4])  
 random\_date.append("12-04-2022")  
  
def randomTime():  
 random\_num1 = []  
 for i in range(len(my\_course\_code)):  
 t = (random.randint(1, 8)) #random Time Slot for each exam  
 random\_num1.append(t)  
 for i in range(len(my\_course\_code)):  
 if random\_num1[i] == 1:  
 start\_time.append("9am")  
 end\_time.append("10am")  
 if random\_num1[i] == 2:  
 start\_time.append("10am")  
 end\_time.append("11am")  
 if random\_num1[i] == 3:  
 start\_time.append("11am")  
 end\_time.append("12pm")  
 if random\_num1[i] == 4:  
 start\_time.append("12pm")  
 end\_time.append("1pm")  
 if random\_num1[i] == 5:  
 start\_time.append("1pm")  
 end\_time.append("2pm")  
 if random\_num1[i] == 6:  
 start\_time.append("2pm")  
 end\_time.append("3pm")  
 if random\_num1[i] == 7:  
 start\_time.append("3pm")  
 end\_time.append("4pm")  
 if random\_num1[i] == 8:  
 start\_time.append("4pm")  
 end\_time.append("5pm")  
  
  
def random\_teacher():  
 for i in range(len(my\_course\_code)):  
 t = (random.randint(0, 31)) # random Teacher for each exam  
 randomTeacher.append(lists\_of\_teacher[t])  
  
  
def random\_sloution():  
 print("course code, course name, Date, Day, Start Time, End Time, Teacher")  
 for i in range(len(my\_course\_code)):  
 print(my\_course\_code[i], ', ', my\_course\_name[i], ', ', random\_date[i], ', ', random\_day[i], ', ', start\_time[i], ', ', end\_time[i], ', ', randomTeacher[i])  
  
  
import pandas  
  
# reading test\_courses.csv  
  
x\_courses = pandas.read\_csv("actual\_dataset/courses.csv", header=None)  
print("Course Id and Course Names")  
print(x\_courses)  
  
print("\n\n\n")  
courses = [list(row) for row in x\_courses.values]  
  
# reading test\_rooms.csv  
  
x\_rooms = pandas.read\_csv("actual\_dataset/rooms.csv", header=None)  
print("Room Name and Capacity")  
print(x\_rooms)  
  
print("\n\n\n")  
rooms = [list(row) for row in x\_rooms.values]  
  
# reading test\_studentCourse  
# course[0][0] == studentCourse[0][2]  
  
x\_studentCourse = pandas.read\_csv("actual\_dataset/studentCourses.csv", header=None)  
print("ID , StudentName , Course Code")  
print(x\_studentCourse)  
  
print("\n\n\n")  
studentCourse = [list(row) for row in x\_studentCourse.values]  
  
  
# reading test\_studentNames  
# studentNames[0][0] == studentCourse[0][1]  
  
x\_studentNames = pandas.read\_csv("actual\_dataset/studentNames.csv", header=0)  
print("StudentName")  
print(x\_studentNames)  
  
print("\n\n\n")  
studentNames = [list(row) for row in x\_studentNames.values]  
  
  
# reading test\_teachers  
  
x\_teachers = pandas.read\_csv("actual\_dataset/teachers.csv", header=0)  
print("TeacherName")  
print(x\_teachers)  
  
print("\n\n\n")  
teachers = [list(row) for row in x\_teachers.values]

read\_courses()  
read\_teacher()  
randomDay()  
randomTime()  
random\_teacher()  
random\_sloution()