import sys

import string

def loginCall(username,Pass):

Password=open("Main//pass.txt",'r')

Login=False

for i in Password:

st=i.rstrip()

tempPass=st.split()

if len(tempPass)==0:

continue

if(username==tempPass[1] and Pass==tempPass[3]):

Login=True

return Login

#Starting interface

print("\n\n\n\t\t\t\t\t\t\t\tWELCOME TO FACULTY LEAVE REQUEST SYSTEM\n\n\n\n\n")

trialLeft=3

while(trialLeft):

username=input("\t\t\t\t\t\t\t\t\tEnter username: ")

Pass=input("\t\t\t\t\t\t\t\t\tEnter password: ")

if loginCall(username,Pass):

os.system('cls' if os.name == 'nt' else 'clear')

break

Page 04

else:

print("Wrong username or password")

trialLeft-=1

print("trialLeft: ",trialLeft)

if(trialLeft==0):

print("All attempt wrong contact system administrator")

sys.exit()

#Main interface

print("\n\n\t\t\t\t\t\t\t\t\tFACULTY LEAVE REQUEST INTERFACE\n\n")

print("Welcome! {}".format(username))

schedule=open("Student\_Timetable//K18KH.txt",'r')

timeTable=[]

for i in schedule:

print(i)

tempTimeTable=i.split()

if len(tempTimeTable)==0 or tempTimeTable[0] not in ['MONDAY','TUESDAY','WEDNESDAY','THRUSDAY','FRIDAY']:

continue

timeTable.append(tempTimeTable)

schedule.close()

print("\n\t\t\t\t\t\t\t\t{} time table for K18RD\n".format(username))

file=open("Student\_Timetable//{}.txt".format(username),'r')

for i in file:

print(i)

#Day for leave

Day=input("Enter leave day (like TUESDAY): ")

#finding timeSlots for adjustment

TimeSlots=[]

fh=open("Student\_Timetable//{}.txt".format(username),'r')

for k in fh:

tempArr=k.split()

if len(tempArr)==0:

continue

if tempArr[0]==Day:

TimeSlots=[z for z,val in enumerate(tempArr) if val==username]

fh.close()

#finding available teachers for adjustment

Teachers=['Teacher\_A','Teacher\_B','Teacher\_C','Teacher\_D','Teacher\_E']

TeacherAvailable=[]

for i in Teachers:

if i==username:

continue

fh=open("Faculty\_Timetable//{}.txt".format(i),'r')

for k in fh:

tempArr=k.split()

if len(tempArr)==0:

continue

if tempArr[0]==Day:

for p in TimeSlots:

Page 05

if tempArr[p]=='B':

TeacherAvailable.append([tempArr.count('O'),p,i])

fh.close()

#Check for any left timeSlots

count=0

for x in TimeSlots:

for i in TeacherAvailable:

if i[1]==x:

count+=1

break

if len(TeacherAvailable)==0:

print("No Teachers available for adjustment")

print("Cannot apply for leave")

sys.exit()

elif count!=len(TimeSlots):

print("No Teachers available for adjustment for some lectures")

print("Cannot apply for leave")

sys.exit()

#Choose Teacher for adjustment according to less workload on teacher that day

TimeSlotsDic={1:'9-10',2:'10-11',3:'11-12',4:'12-1',5:'1-2',6:'2-3',7:'3-4',8:'4-5'}

TeacherAssigned=[]

for i in TimeSlots:

workload=[]

for t in TeacherAvailable:

if t[1]==i:

workload.append([t[0],t[1],t[2]])

workload.sort(reverse=True)

TeacherAssigned.append([workload[0][1],workload[0][2]])

print("\nTeacher for Adjustments for {0} slot from {1} with least Workload: ".format(Day,TimeSlotsDic[i]),workload[0][2])

#change the timetable

TeacherAssigned.sort()

schedule=open("Student\_Timetable//K18KH.txt",'r')

leave=open("Student\_Timetable//LEAVE.txt", 'w')

for i in schedule:

if Day in i:

if len(TeacherAssigned)==1:

line=i.replace(username,TeacherAssigned[0][1],1)

leave.write(line)

continue

elif len(TeacherAssigned)==2:

line=i.replace(username,TeacherAssigned[0][1],1).replace(username,TeacherAssigned[1][1],1)

leave.write(line)

continue

leave.write(i)

schedule.close()

leave.close()

#print adjusted timetable

print("\n\n\t\t\t\t\t\t\t\t\tAdjusted time table")

leave=open("Student\_Timetable//LEAVE.txt", 'r')

for i in leave:

print(i)

leave.close()

Page no 06

print("\n\n\t\t\t\t\t\t\t\t\t\tAdjustement Successful")