#!/usr/bin/env python3

#TASK 3,4 and 5

import pandas as pd

import csv

class Movie:

#Function to get a list of all movies rated agewise

def reference\_list(self):

with open('RatingsInputTask2.csv', 'r') as f:

reader = csv.reader(f)

reflist=[]

rowcount=0

for row in reader:

if rowcount!=0:

sublis=[int(row[2]),row[4],int(row[5])]

reflist.append(sublis)

rowcount+=1

return reflist

#Function for recommending movies

def movie\_recommendation(self,age,number,is\_file\_input):

reflist=self.reference\_list()

agematch,maxage,underage,count=0,0,1,0

c\_count=count

ratelist,movielist=[],[]

for i in reflist:

if i[0]>maxage: #to find maxage

maxage=i[0]

for i in reflist: #to find matching age

if i[0]==age:

agematch,underage=1,0

ratelist.append(i[2])

movielist.append(i[1])

if agematch==0: #if age doesn't match the list

for i in reflist: #nearby age

if age-i[0]<=5 and age-i[0]>-5:

ratelist.append(i[2])

movielist.append(i[1])

underage=0

if age > maxage: #if age is more than maxage

for i in reflist:

if i[0] == maxage:

ratelist.append(i[2])

movielist.append(i[1])

underage, agematch = 0, 0

if underage == 1: #if underage

print('You are underage!')

if underage==0:

for i in range(len(ratelist)): #sorting the list for all except underage

for j in range(i+1,len(ratelist)):

if ratelist[j]>ratelist[i]:

a,b=ratelist[j], movielist[j]

ratelist[j],movielist[j]=ratelist[i],movielist[i]

ratelist[i],movielist[i]=a,b

if is\_file\_input==False:

# Printing final output

print('\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_')

print('MOVIE RECOMMENDATION:')

for i in range(number):

if i > (len(movielist) - 1): break

if ratelist[i] > 2:

print(f'Movie:{movielist[i]},Rating:{ratelist[i]}')

count += 1

c\_count = count

if count < number:

print('\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_')

print(f'Peers of your age only find the above {count} movies worthy of rating greater than 2')

yn = input('Do you want to view the remaining recommendations of movies rated below 2? ')

print('\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_')

if yn == 'yes':

for i in range(count, len(ratelist)):

c\_count += 1

if i > (len(movielist) - 1):

if count >= i: print('There are no more movies rated by your peers yet :(')

break

if ratelist[i] <= 2:

print(f'Movie:{movielist[i]},Rating:{ratelist[i]}')

if c\_count < number: print('There are no more movies rated by your peers yet :(')

if is\_file\_input==True:

while len(movielist)>number: movielist.pop()

return movielist

#User Input function

def user\_input(self):

validity=1

age = int(input('Enter your age:'))

number = int(input('Enter number of movies:'))

if age < 0 or age > 130: # check age validity

print('Invalid age. Please enter again')

validity=0

main()

if validity==1:

self.movie\_recommendation(age, number, False)

def file\_input(self):

with open('NewUsers.csv', 'r') as f\_in, open('output.csv','w') as f\_out:

reader1=csv.reader(f\_in)

writer = csv.writer(f\_out)

i,rowcount=0,0

for row in reader1:

if rowcount == 0: writer.writerow(row)

if rowcount != 0:

age = int(row[1])

number = int(row[2])

movie\_list=self.movie\_recommendation(age, number,True)

row[3]=",".join(movie\_list)

writer.writerow(row)

rowcount += 1

def main():

MR = Movie()

MR.user\_input()

MR.file\_input()

if \_\_name\_\_=='\_\_main\_\_': main()