ADSD HW5 Chinook Optimization

import sqlite3

import time

conn = sqlite3.connect('Chinook.db')

c = conn.cursor()

start = time.time()

c.execute('SELECT Name,PL.PlaylistId, TrackId FROM Playlist AS PL JOIN PlaylistTrack AS PT ON PL.PlaylistId=PT.PlaylistId')

i =0

for row in c.fetchall():

i=i+1

if(row[2]<3):

print(row)

print('before filter, query number is: %d' %(i))

end = time.time()

beforeopt=end-start

print ("Before optimization the time is: %f s" %(beforeopt))

start = time.time()

c.execute('SELECT Name,PL.PlaylistId, TrackId FROM Playlist AS PL JOIN PlaylistTrack AS PT ON PL.PlaylistId=PT.PlaylistId WHERE PT.TrackId<3' )

i = 0

for row in c.fetchall():

i=i+1

print(row)

end = time.time()

firsttime = end-start

print('Use new query, query number is: %d'%(i))

print ('After optimization the time is: %f s'%(firsttime))

total = end-start

for m in range(0, 8):

start = time.time()

c.execute('SELECT Name,PL.PlaylistId, TrackId FROM Playlist AS PL JOIN PlaylistTrack AS PT ON PL.PlaylistId=PT.PlaylistId WHERE PT.TrackId<3' )

i = 0

for row in c.fetchall():

i=i+1

print(row)

end = time.time()

print('Use new query, query number is: %d'%(i))

print ('After optimization the time is:%f s'%(end-start))

total = total + end - start

print("The average time is:%f s, The first optimization time is:%f s, before optimization time is:%f s" %(total/10,firsttime, beforeopt))



