# Dance Mixer

This program simulates a dance mixer, the program takes the following arguments, the no. of leaders and the no. of folowers. The band plays music from a list. The leaders and followers, enter the queue, dance and leave the queue.

The algorithm is as follows,

1. Initialize semaphores. leaderQueue=Sempahore(0). FollowerQueue=Semaphore(0). Mutex=Semaphore(1)
2. In the band leader thread:

def band():

for music in list(['waltz', 'tango', 'foxtrot']):

mutex.acquire()

start\_music(music)

sleep(5)

end\_music(music)

mutex.release()

The band leader cycles through the list sending that as argument to start\_music and stop\_music methods. This thread is run every 5 s.

1. In the leader thread,

followerQueue.release()

leadercount+=1

leaderQueue.acquire()

dance()

Similarly followers thread is implemeneted

SDIVANJI-M-901B:CS450 sdivanji$ vi dance\_mixer.py

SDIVANJI-M-901B:CS450 sdivanji$ python dance\_mixer.py -l 3 -f 5

No. of leaders 3

No. of followers 5

\*\*Band leader started playing waltz \*\*

Leader 0 is entering floor

Follower 0 is entering floor

FollowerLeader 1 1 is entering floor

is entering floor

Leader 2Follower 2 is entering floor

is entering floor

Follower 3 is entering floor

temp is 4

leader 0 and follower 0 are dancing

follower 0 is leaving