

```
import threading
import queue

def startMicIO(quit_event, userInputQ, speakerOutputQ):
    try:
        startIO(quit_event, userInputQ, speakerOutputQ)
    except quit_event:
        pass

def startAudioProcessing(quit_event, userInputQ, processedAudioQ):
    try:
        audioProcessing(userInputQ, processedAudioQ)
    except quit_event:
        pass

def startClient(quit_event, speakerOutputQ, processedAudioQ):
    try:
        client(quit_event, speakerOutputQ, processedAudioQ)
    except quit_event:
        pass

def main():
    #init queues
    userInputQ = queue.Queue()
    processedAudioQ = queue.Queue()
    speakerOutputQ = queue.Queue()

    quit_event = Event()

    ioThread = Thread(target=startClient, args=(quit_event, userInputQ, speakerOutputQ))
    processingThread = Thread(target=startAudioProcessing, args=(quit_event, userInputQ, processedAudioQ))
    clientThread = Thread(target=startClient, args=(quit_event, speakerOutputQ, processedAudioQ))

    #start threads
    ioThread.start()
    processingThread.start()
    clientThread.start()

    while True:
        try:
            time.sleep(1)
        except KeyboardInterrupt:
            print('Stop RPi System')
            quit_event.set()
            break

    #clean up
    ioThread.join()
```

```
processingThread.join()  
clientThread.join()
```

```
if __name__ == '__main__':  
    main()
```