# CS5542 Big Data Apps and Analytics
# LAB ASSIGNMENT #10
# REPORT and SCREEN SHOTS

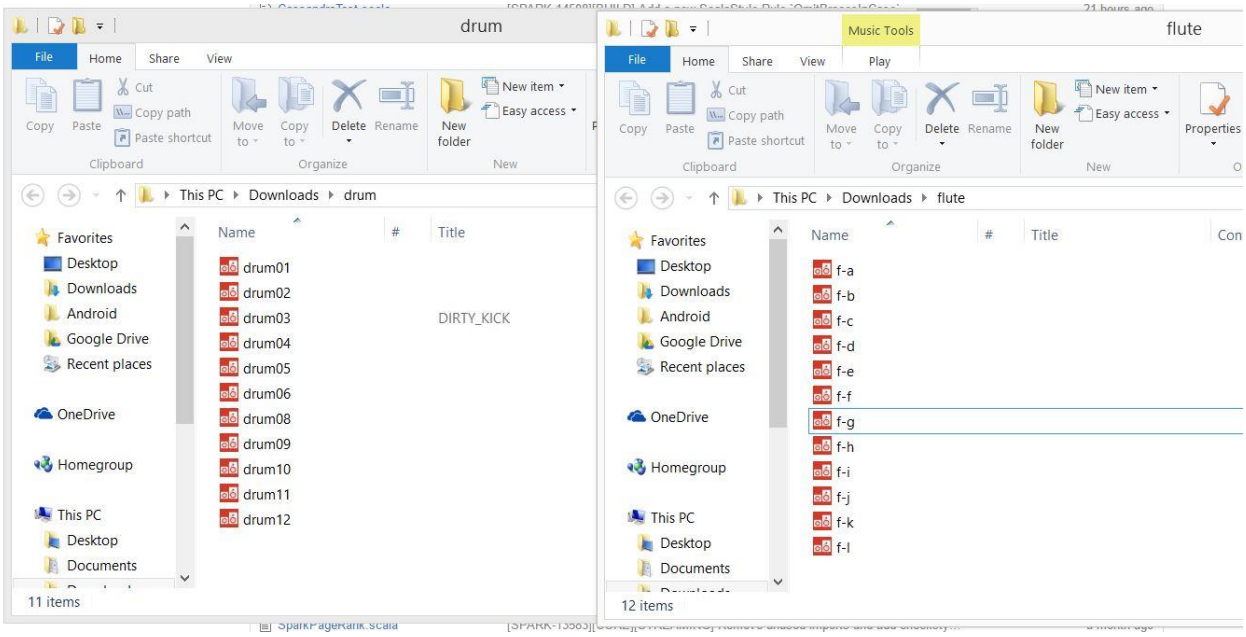
**1. Audio Classification and Smart Phone Notification**

**Extend your lab 7, 8, 9workfor a complete workflow integrating the following features**

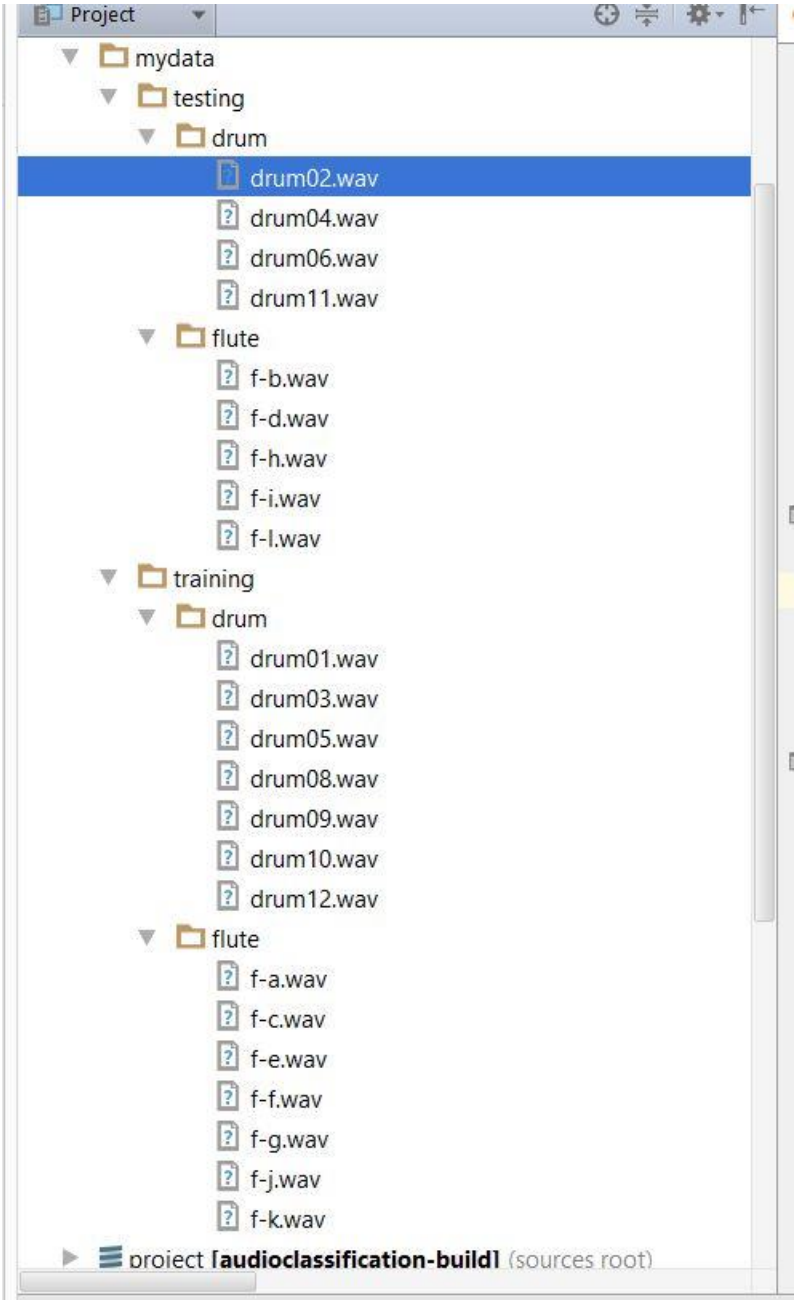
- **1) Audio collection based on the tags (related to your project)**
  - **a. Training Datasets (audio data from smart devices or online sound repositories such as https://www.freesound.org/)**
  - **b. Testing Datasets (audio data from smart devices)**
- **2) Audio Classification based on the categories related to your project**
- **3) Notification to smartphone/smartwatch**
- **4) Bonus points: Music Recommendation system (related to your own project)**
  - **a. make a recommendation based on user profile (e.g., preferences, location, gender, age)**
  - **b. Recommendation through smartphone/smartwatch using your ML application**

1) Audio Collection

Collected drum and flute data .

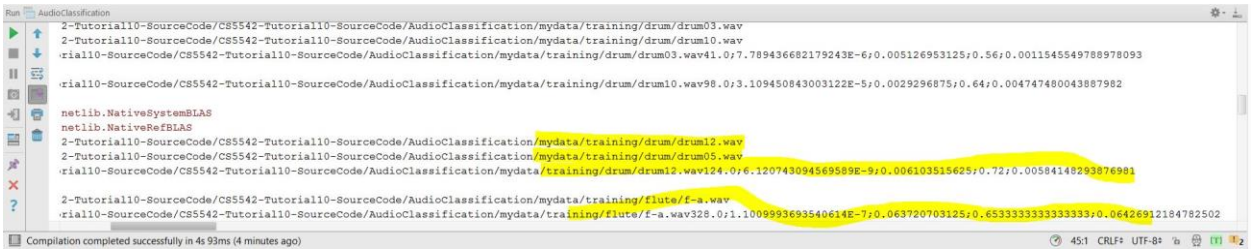



And divided into training and testing data


Project
mydata
testing
drum
drum02.wav
drum04.wav
drum06.wav
drum11.wav
flute
f-b.wav
f-d.wav
f-h.wav
f-i.wav
f-l.wav
training
drum
drum01.wav
drum03.wav
drum05.wav
drum08.wav
drum09.wav
drum10.wav
drum12.wav
flute
f-a.wav
f-c.wav
f-e.wav
f-f.wav
f-g.wav
f-j.wav
f-k.wav
project [audioclassification-build] (sources root)

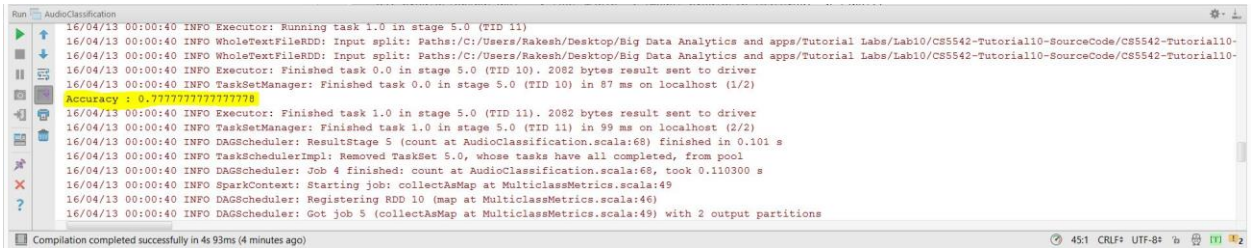
2. Audio Classification based on the categories related to your project

Training the drum and flute data
Generating features from Training audio data.




Generating features from Testing audio data.


Accuracy
77 percent




Confusion matrix
(5+2)/(5+2+2+0)=7/9=77.77%

3. Recommendation

Recommended when passed the flute Audio