**[Homework#17](https://bb-csuohio.blackboard.com/webapps/assignment/uploadAssignment?content_id=_6362385_1&course_id=_168060_1&group_id=&mode=view)**

Build a sound level detection app

* Extension of the audio capture app, do not save audio
* Use maximum amplitude, and display the sound level graphically using line chart or bar chart
* https://developer.xamarin.com/api/property/Android.Media.MediaRecorder.MaxAmplitude/

Solution:

Java code for handling mic and its permission,if permission given then it proceeds to recording and giving graph but if permission denied then app will close:

public void onRequestPermissionsResult(int requestCode, @NonNull String[] permissions,  
 @NonNull int[] grantResults) {  
 super.onRequestPermissionsResult(requestCode, permissions, grantResults);  
 if (requestCode == *REQUEST\_RECORD\_PERMISSION*) {  
 if (grantResults.length > 0 && grantResults[0] == PackageManager.*PERMISSION\_GRANTED*) {  
 initializeMediaRecorder();  
 startDataUpdates();  
 } else {  
 // Handle permission denied  
 }

Code to display the graph from voice produced:

<com.jjoe64.graphview.GraphView  
 android:id="@+id/graph"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />

Screenshot:

A screenshot of a phone

Description automatically generated A grid of white paper

Description automatically generated A graph with a line and numbers

Description automatically generated