Activity\_main.xml

*<?***xml version="1.0" encoding="utf-8"***?>*

<**android.support.constraint.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"**

**xmlns:app="http://schemas.android.com/apk/res-auto"**

**xmlns:tools="http://schemas.android.com/tools"**

**android:layout\_width="match\_parent"**

**android:layout\_height="match\_parent"**

**tools:context=".MainActivity"**>

<**Button**

**android:id="@+id/btnProgressBar"**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:layout\_marginTop="50dip"**

**android:text="Start Music"** />

</**android.support.constraint.ConstraintLayout**>

MainActivity.java

**package** com.example.jevitha.a20\_1\_asynctask\_filedownload;

**import** android.support.v7.app.AppCompatActivity;

**import** android.os.Bundle;

**import** java.io.BufferedInputStream;

**import** java.io.File;

**import** java.io.FileOutputStream;

**import** java.io.IOException;

**import** java.io.InputStream;

**import** java.io.OutputStream;

**import** java.net.URL;

**import** java.net.URLConnection;

**import** android.app.Activity;

**import** android.app.Dialog;

**import** android.app.ProgressDialog;

**import** android.media.AudioManager;

**import** android.media.MediaPlayer;

**import** android.media.MediaPlayer.OnCompletionListener;

**import** android.net.Uri;

**import** android.os.AsyncTask;

**import** android.os.Bundle;

**import** android.os.Environment;

**import** android.util.Log;

**import** android.view.View;

**import** android.widget.Button;

**import** android.widget.Toast;

**public class** MainActivity **extends** Activity {

*// Button to download and play Music*

**private** Button btnPlayMusic;

*// Media Player Object*

**private** MediaPlayer mPlayer;

*// Progress Dialog Object*

**private** ProgressDialog prgDialog;

*// Progress Dialog type (0 - for Horizontal progress bar)*

**public static final int** progress\_bar\_type = 0;

*// Music resource URL*

**private static** String file\_url = **"http://android.programmerguru.com/"** +

**"wp-content/uploads/2014/01/jai\_ho.mp3"**;

@Override

**public void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

*// Show Download Music Button*

btnPlayMusic = (Button) findViewById(R.id.btnProgressBar);

*// Download Music Button click listener*

btnPlayMusic.setOnClickListener(**new** View.OnClickListener() {

*// When Download Music Button is clicked*

**public void** onClick(View v) {

*// Disable the button to avoid playing of song multiple times*

*//btnPlayMusic.setEnabled(false);*

*// Downloaded Music File path in SD Card*

File file = **new** File(Environment.

*getExternalStorageDirectory*().getPath()+**"/jai\_ho.mp3"**);

*// Check if the Music file already exists*

**if** (file.exists()) {

Toast.makeText(getApplicationContext(), **"File already exist "** +

**"at "**+Environment.getExternalStorageDirectory().getPath() +

**" , playing Music"**, Toast.LENGTH\_LONG).show();

*// Play Music*

playMusic();

*// If the Music File doesn't exist in SD card (Not yet downloaded)*

} **else** {

Toast.makeText(getApplicationContext(), **"File doesn't exist "** +

**"under SD Card, downloading Mp3 from Internet"**,

Toast.LENGTH\_LONG).show();

*// Trigger Async Task (onPreExecute method)*

**new** DownloadMusicfromInternet().execute(file\_url);

}

}

});

}

*// Show Dialog Box with Progress bar*

@Override

**protected** Dialog onCreateDialog(**int** id) {

**switch** (id) {

**case** progress\_bar\_type:

prgDialog = **new** ProgressDialog(**this**);

prgDialog.setMessage(**"Downloading Mp3 file. Please wait..."**);

prgDialog.setIndeterminate(**false**);

prgDialog.setMax(100);

prgDialog.setProgressStyle(ProgressDialog.STYLE\_HORIZONTAL);

prgDialog.setCancelable(**false**);

prgDialog.show();

**return** prgDialog;

**default**:

**return null**;

}

}

*// Async Task Class*

**class** DownloadMusicfromInternet **extends** AsyncTask<String, String, String> {

*// Show Progress bar before downloading Music*

@Override

**protected void** onPreExecute() {

**super**.onPreExecute();

*// Shows Progress Bar Dialog and then call doInBackground method*

showDialog(progress\_bar\_type);

}

*// Download Music File from Internet*

@Override

**protected** String doInBackground(String... f\_url) {

**int** count;

**try** {

URL url = **new** URL(f\_url[0]);

URLConnection conection = url.openConnection();

conection.connect();

*// Get Music file length*

**int** lenghtOfFile = conection.getContentLength();

*// input stream to read file - with 10k buffer*

InputStream input = **new** BufferedInputStream(url.openStream(),10\*1024);

*// Output stream to write file in SD card*

OutputStream output = **new** FileOutputStream(Environment.getExternalStorageDirectory().getPath()+**"/jai\_ho.mp3"**);

**byte** data[] = **new byte**[1024];

**long** total = 0;

**while** ((count = input.read(data)) != -1) {

total += count;

*// Publish the progress which triggers onProgressUpdate method*

publishProgress(**""** + (**int**) ((total \* 100) / lenghtOfFile));

*// Write data to file*

output.write(data, 0, count);

}

*// Flush output*

output.flush();

*// Close streams*

output.close();

input.close();

} **catch** (Exception e) {

Log.e(**"Error: "**, e.getMessage());

}

**return null**;

}

*// While Downloading Music File*

**protected void** onProgressUpdate(String... progress) {

*// Set progress percentage*

prgDialog.setProgress(Integer.parseInt(progress[0]));

}

*// Once Music File is downloaded*

@Override

**protected void** onPostExecute(String file\_url) {

*// Dismiss the dialog after the Music file was downloaded*

dismissDialog(progress\_bar\_type);

Toast.makeText(getApplicationContext(), **"Download complete, playing Music"**, Toast.LENGTH\_LONG).show();

*// Play the music*

playMusic();

}

}

*// Play Music*

**protected void** playMusic(){

*// Read Mp3 file present under SD card*

Uri myUri1 = Uri.parse(**"file:///sdcard/jai\_ho.mp3"**);

mPlayer = **new** MediaPlayer();

mPlayer.setAudioStreamType(AudioManager.STREAM\_MUSIC);

**try** {

mPlayer.setDataSource(getApplicationContext(), myUri1);

mPlayer.prepare();

*// Start playing the Music file*

mPlayer.start();

mPlayer.setOnCompletionListener(**new** OnCompletionListener() {

**public void** onCompletion(MediaPlayer mp) {

*// TODO Auto-generated method stub*

*// Once Music is completed playing, enable the button*

btnPlayMusic.setEnabled(**true**);

Toast.makeText(getApplicationContext(), **"Music completed playing"**,Toast.LENGTH\_LONG).show();

}

});

} **catch** (IllegalArgumentException e) {

Toast.makeText(getApplicationContext(), **"You might not set the URI correctly!"**, Toast.LENGTH\_LONG).show();

} **catch** (SecurityException e) {

Toast.makeText(getApplicationContext(), **"URI cannot be accessed, permissed needed"**, Toast.LENGTH\_LONG).show();

} **catch** (IllegalStateException e) {

Toast.makeText(getApplicationContext(), **"Media Player is not in correct state"**, Toast.LENGTH\_LONG).show();

} **catch** (IOException e) {

Toast.makeText(getApplicationContext(), **"IO Error occured"**, Toast.LENGTH\_LONG).show();

}

}

}

*<?***xml version="1.0" encoding="utf-8"***?>*

<**manifest xmlns:android="http://schemas.android.com/apk/res/android"**

**package="com.example.jevitha.a20\_1\_asynctask\_filedownload"**>

<**uses-permission android:name="android.permission.INTERNET"** />

*<!-- Permission: Writing to SDCard -->*

<**uses-permission android:name="android.permission.WRITE\_EXTERNAL\_STORAGE"** />

<**application**

**android:allowBackup="true"**

**android:icon="@mipmap/ic\_launcher"**

**android:label="@string/app\_name"**

**android:roundIcon="@mipmap/ic\_launcher\_round"**

**android:supportsRtl="true"**

**android:theme="@style/AppTheme"**>

<**activity android:name=".MainActivity"**>

<**intent-filter**>

<**action android:name="android.intent.action.MAIN"** />

<**category android:name="android.intent.category.LAUNCHER"** />

</**intent-filter**>

</**activity**>

</**application**>

</**manifest**>