***//DEMO of External IO – Android***

*//Note: This is a companion class called Demo – Check Storage Class in Brightspace //that works well with this (External read/write) demonstration.*

*//Note: files are being created EXTERNALLY to the applications own folder so to find them you need to drill down though the devices data/data....  
  
//Note: External storage directories: These directories include both a dedicated location for storing  
//persistent files, and another location for storing cache data. Although it's possible for another app  
//to access these directories if that app has the proper permissions, the files stored in these directories  
//are meant for use only by your app. If you specifically intend to create files that other apps should be  
//able to access, your app should store these files in the shared storage part of external storage instead.  
  
//Note: Remember to add these to your AndroidManifest.xml  
//<uses-permission android:name = "android.permission.WRITE\_EXTERNAL\_STORAGE" />  
//<uses-permission android:name= "android.permission.READ\_EXTERNAL\_STORAGE" />***package** com.example.ExternalIO;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** android.os.\*;  
**import** android.content.Context;  
**import** android.media.MediaScannerConnection;  
**import** android.os.Bundle;  
**import** android.util.Log;  
**import** android.view.\*;  
**import** android.widget.\*;  
**import** java.io.\*;  
  
**public class** MainActivity **extends** AppCompatActivity {  
 Button **btnWriteExternal**;  
 Button **btnReadExternal**;  
 TextView **tv\_file\_content**;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 **btnWriteExternal** = findViewById(R.id.***btnWriteExternal***);  
 **btnReadExternal** = findViewById(R.id.***btnReadExternal***);  
 **tv\_file\_content** = findViewById(R.id.***tv\_file\_content***);  
  
 **btnWriteExternal**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
 **try** {  
 File testFile = **new** File(MainActivity.**this**.getExternalFilesDir(**null**), **"TestFile.txt"**);  
 **if** (!testFile.exists())  
 testFile.createNewFile();  
 BufferedWriter writer = **new** BufferedWriter(**new** FileWriter(testFile, **true** */\*append\*/*));  
 writer.write(**"This is a test file."**);  
 Toast.*makeText*(getApplicationContext(),**"Writing to External File"**,Toast.***LENGTH\_SHORT***).show();  
 writer.close();  
 MediaScannerConnection.*scanFile*(MainActivity.**this**,  
 **new** String[]{testFile.toString()}, **null**, **null**);  
 } **catch** (IOException e) {  
 Log.*e*(**"ReadWriteFile"**, **"Unable to write to the TestFile.txt file."**);  
 }  
 Log.*v*(**"ReadWriteFile"**, **"Write to TestFile.txt file."**);  
 }*//end try* });*//end Read Button Listener* **btnReadExternal**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
 String textToDisplay = **""**;  
 TextView FileContentTextView = (TextView) findViewById(R.id.***tv\_file\_content***);  
  
 File testFile = **new** File(MainActivity.**this**.getExternalFilesDir(**null**), **"TestFile.txt"**);  
 **if** (testFile == **null**) {  
 FileContentTextView.setText(textToDisplay);  
 **return**;  
 }  
  
 StringBuilder stringBuilder = **new** StringBuilder();  
 *// Reads the data from the file* BufferedReader reader = **null**;  
 **try** {  
 reader = **new** BufferedReader(**new** FileReader(testFile));  
 String line;  
  
 **while** ((line = reader.readLine()) != **null**) {  
 textToDisplay += line.toString();  
 textToDisplay += **"\n"**;  
 }  
 reader.close();  
 } **catch** (Exception e) {  
 Log.*e*(**"ReadWriteFile"**, **"Unable to read the TestFile.txt file."**);  
 }  
 Log.*v*(**"ReadWriteFile"**, **"Read from TestFile.txt file."**);  
  
 *// Set the text read from the file to the textview* FileContentTextView.setText(textToDisplay);  
 }  
 });  
  
 }*//end onCreate*}*//end Main Class*