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1  package io.renaud.ligo.text_demo;
2
3  import android.app.Service;
4  import android.content.Context;
5  import android.content.Intent;
6  import android.hardware.usb.UsbAccessory;
7  import android.hardware.usb.UsbManager;
8  import android.os.AsyncTask;
9  import android.os.Bundle;
10 import android.os.IBinder;
11 import android.os.ParcelFileDescriptor;
12 import android.util.Log;
13
14 /**
15  *
16  */
17
18 import java.io.BufferedInputStream; // test
19 import java.io.BufferedOutputStream;
20 import java.io.FileDescriptor;
21 import java.io.FileInputStream;
22 import java.io.FileOutputStream;
23 import java.io.IOException;
24 import java.io.InputStream;
25 import java.io.OutputStream;
26 import java.net.ServerSocket;
27 import java.net.Socket;
28 import java.util.concurrent.ExecutorService;
29 import java.util.concurrent.Executors;
30 import java.util.concurrent.TimeUnit;
31 import java.util.concurrent.*;
32
33 /**
34  * \class LigoService
35  * Some multiline comments
36
37     test
38  * There should be a detailed LigoService description.
39  */
40
41 public class LigoService extends Service {
42
43     private UsbManager mUsbManager;
44     private UsbAccessory mAccessory = null;
45     private ParcelFileDescriptor mParcelFileDescriptor = null;
46     private FileInputStream mInputStream = null;
47     private BufferedOutputStream mOutputStream = null;
48     private ExecutorService mPool;
49
50     private int mTest_true = true;
51
52     @Override
53     public IBinder onBind(Intent intent) {
54         return null;
55     }
56
57     @Override
58     public void onCreate() {
59         Log.d(Constants.LOGTAG, "LigoService.onCreate()");
60
61         mUsbManager = (UsbManager) getSystemService(Context.USB_SERVICE);
62         // Use a custom ThreadPoolExecutor to reduce the KeepAliveTime of the threads (default to 60
63         // seconds using Executors.newCachedThreadPool())???
64         mPool = Executors.newCachedThreadPool();
65     }
66
67     @Override
68     public void onDestroy() {
69         Log.d(Constants.LOGTAG, "LigoService.onDestroy()");
70         super.onDestroy();
71     }
72
73     @Override

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74     public int onStartCommand(Intent intent, int flags, int startId) {
75         Log.d(Constants.LOGTAG, "LigoService.onStartCommand()");
76         String action = intent.getAction();
77
78         if (action != null) {
79             if (action.equals(Constants.ACTION_ATTACHED)) {
80
81                 Log.i(Constants.LOGTAG, "LigoService: processing ACTION_ATTACHED");
82                 UsbAccessory accessory =
83                     (UsbAccessory)intent.getParcelableExtra(UsbManager.EXTRA_ACCESSORY);
84                 if (accessory != null) {
85                     mAccessory = accessory;
86                     new AccessoryInitializer().execute();
87                 }
88             } else if (action.equals(Constants.ACTION_DETACHED)) {
89
90                 Log.i(Constants.LOGTAG, "LigoService: processing ACTION_DETACHED");
91                 closeAccessory();
92                 stopSelf();
93             } else if (action.equals(Constants.ACTION_WRITE_DATA)) {
94
95                 Log.i(Constants.LOGTAG, "LigoService: processing ACTION_WRITE_DATA");
96                 if (mOutputStream != null) {
97
98                     Bundle bundle = intent.getExtras();
99                     mPool.execute(new UsbWriter(mOutputStream, bundle.getBytes("output_buf")));
100
101                 } else {
102                     Log.e(Constants.LOGTAG, "LigoService: the output stream is null!");
103                 }
104             }
105         }
106
107         return START_NOT_STICKY;
108     }
109
110     // accessory as arg?
111     private void openAccessory() {
112         Log.d(Constants.LOGTAG, "LigoService.openAccessory()");
113         mParcelFileDescriptor = mUsbManager.openAccessory(mAccessory);
114
115         if (mParcelFileDescriptor != null) {
116             Log.d(Constants.LOGTAG, "LigoService: Accessory successfully opened");
117
118             FileDescriptor fd = mParcelFileDescriptor.getFileDescriptor();
119
120             mInputStream = new FileInputStream(fd);
121             mOutputStream =
122                 new BufferedOutputStream(new FileOutputStream(fd));
123
124             mPool.execute(new UsbReader(mInputStream));
125
126         } else {
127             Log.e(Constants.LOGTAG, "LigoService: Failed to open the accessory");
128         }
129     }
130
131     private void closeAccessory() {
132         Log.d(Constants.LOGTAG, "LigoService.closeAccessory()");
133
134         mPool.shutdown();
135
136         if (mAccessory != null) {
137
138             try {
139                 mParcelFileDescriptor.close();
140             } catch (IOException e) {
141                 // TODO Auto-generated catch block
142                 e.printStackTrace();
143             }
144             mParcelFileDescriptor = null;
145             mOutputStream = null;
146             mInputStream = null;

```

```

147     }
148 }
149
150 private class AccessoryInitializer extends AsyncTask<Void, Void, Void> {
151     protected Void doInBackground(Void... arg0) {
152         Log.d(Constants.LOGTAG, "AccessoryInitializer.doInBackground()");
153         openAccessory();
154         return null;
155     }
156 }
157
158 private class UsbWriter implements Runnable {
159     private final BufferedOutputStream mOutput;
160     private final byte[] mData;
161
162     public UsbWriter (BufferedOutputStream output, byte[] data) {
163         mOutput = output;
164         mData = data;
165     }
166
167     public void run () {
168         try {
169             mOutput.write(mData, 0, mData.length);
170             mOutput.flush();
171         } catch (IOException e) {
172             Log.e(Constants.LOGTAG, "UsbWriter IOException");
173             Log.e(Constants.LOGTAG, e.getMessage());
174         }
175     }
176 }
177
178 private class UsbReader implements Runnable {
179     private FileInputStream mInput;
180     private static final int BUFFER_SIZE = 8192;
181
182     public UsbReader(FileInputStream input) {
183         mInput = input;
184     }
185
186     public void run() {
187
188         byte[] inputBuf = new byte[BUFFER_SIZE];
189         try {
190             while (mInput.read(inputBuf) != -1) {
191
192                 Log.d(Constants.LOGTAG, "Read some bytes");
193
194                 Intent readIntent = new Intent(Constants.ACTION_READ_DATA);
195                 Bundle bundle = new Bundle();
196                 bundle.putByteArray("input_buf", inputBuf);
197                 readIntent.putExtras(bundle);
198                 sendBroadcast(readIntent);
199
200                 // blank the byte array
201                 inputBuf = new byte[BUFFER_SIZE];
202             }
203         } catch (IOException e) {
204             Log.e(Constants.LOGTAG, "UsbReader IOException");
205             Log.e(Constants.LOGTAG, e.getMessage());
206         }
207     }
208 }
209 }
210
211 }

```