```
1: package com.delta.persistence;
 2:
 3: import android.app.Activity;
 4: import android.content.Context;
 5: import android.content.SharedPreferences;
 6: import android.os.Bundle;
 7: import android.util.Log;
 8: import android.view.Menu;
 9: import android.view.MenuItem;
10: import android.widget.ScrollView;
11: import android.widget.TextView;
12: import android.widget.Toast;
13:
14: import org.w3c.dom.Text;
15:
16: import java.io.FileInputStream;
17: import java.io.FileNotFoundException;
18: import java.io.FileOutputStream;
19: import java.io.IOException;
20:
21: public class PersistenceActivity extends Activity {
22:
23:
24:
        TextView readingView;
25:
        TextView appRestartsView;
26:
27:
        private int howManyTimesBeenRun = 0;
28:
        private static final String NUMBER OF TIMES RUN KEY = "NUMBER OF TIMES RUN KEY";
29:
30:
        @Override
31:
        protected void onCreate(Bundle savedInstanceState) {
32:
            super.onCreate(savedInstanceState);
33:
            setContentView(R.layout.activity_persistence);
34:
35:
            readingView = (TextView) findViewById(R.id.displayView);
36:
            appRestartsView = (TextView) findViewById(R.id.applicationRestarts);
37:
38:
            SharedPreferences sharedPreferences = getPreferences(Context.MODE_PRIVATE);
39:
40:
            //read
41:
            int defaultValue = 0;
42:
            howManyTimesBeenRun = sharedPreferences.getInt(NUMBER OF TIMES RUN KEY,defaultValue);
43:
44:
            //first time message
45:
            if(howManyTimesBeenRun == 0){
46:
                Toast.makeText(this, "Welcome to your new magic notepad!", Toast.LENGTH LONG).show();
47:
48:
            howManyTimesBeenRun++;
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49:
50:
            //write
51:
            SharedPreferences.Editor editor = sharedPreferences.edit();
52:
            editor.putInt(NUMBER OF TIMES RUN KEY, howManyTimesBeenRun);
53:
            editor.commit();
54:
55:
            appRestartsView.setText(String.valueOf(howManyTimesBeenRun));
56:
57:
58:
59:
60:
        @Override
61:
        protected void onPause() {
62:
            super.onPause();
63:
            saveTextFile(readingView.getText().toString());
64:
65:
66:
        @Override
67:
        protected void onResume() {
68:
            super.onResume();
69:
            readingView.setText(getTextFile());
70:
71:
72:
        private static final String DATA FILE = "my file";
73:
74:
        //Reading and Writing
75:
76:
        public String getTextFile() {
77:
78:
            FileInputStream fileInputStream = null;
79:
            String fileData = null;
80:
81:
            try{
82:
                fileInputStream = openFileInput(DATA FILE);
83:
                int size = fileInputStream.available();
84:
                byte[] buffer = new byte[size];
85:
                fileInputStream.read(buffer);
86:
                fileInputStream.close();
87:
                fileData = new String(buffer, "UTF-8");
88:
            }catch(FileNotFoundException e){
89:
                Log.e("FILE","Couldnt find that file");
90:
                e.printStackTrace();
            }catch(IOException e){
91:
92:
                Log.e("FILE","Error");
93:
                e.printStackTrace();
            }finally{
94:
95:
                try{
96:
                    if(fileInputStream != null){
```

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97:
                         fileInputStream.close();
 98:
 99:
                 }catch(IOException e){
100:
                     e.printStackTrace();
101:
102:
103:
             return fileData;
104:
105:
106:
107:
         public void saveTextFile(String content) {
108:
109:
             FileOutputStream fileOutputStream = null;
110:
111:
             try{
112:
                 fileOutputStream = openFileOutput(DATA_FILE,Context.MODE_PRIVATE);
113:
                 fileOutputStream.write(content.getBytes());
114:
             }catch(FileNotFoundException e){
115:
                 Log.e("FILE", "Couldnt find that file");
116:
                 e.printStackTrace();
117:
             }catch(IOException e){
118:
                 Log.e("FILE","IO Error");
119:
                 e.printStackTrace();
120:
             }finally{
121:
                 try{
122:
                     if(fileOutputStream != null){
123:
                         fileOutputStream.close();
124:
125:
                 }catch(IOException e){
126:
                     e.printStackTrace();
127:
128:
129:
130:
131:
         @Override
132:
         public boolean onCreateOptionsMenu(Menu menu) {
133:
134:
             // Inflate the menu; this adds items to the action bar if it is present.
             getMenuInflater().inflate(R.menu.persistence, menu);
135:
136:
             return true;
137:
138:
139:
         @Override
         public boolean onOptionsItemSelected(MenuItem item) {
140:
141:
             // Handle action bar item clicks here. The action bar will
             // automatically handle clicks on the Home/Up button, so long
142:
143:
             // as you specify a parent activity in AndroidManifest.xml.
144:
             int id = item.getItemId();
```

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