```java
1    package edu.seaaddicts.brockbutler.coursemanager;
2
3    import java.util.ArrayList;
4
5    import android.app.Activity;
6    import android.os.Bundle;
7    import android.util.Log;
8    import android.util.SparseBooleanArray;
9    import android.view.View;
10   import android.view.View.OnClickListener;
11   import android.widget.AdapterView;
12   import android.widget.AdapterView.OnItemSelectedListener;
13   import android.widget.ArrayAdapter;
14   import android.widget.Button;
15   import android.widget.LinearLayout;
16   import android.widget.ListView;
17   import android.widget.Spinner;
18   import edu.seaaddicts.brockbutler.R;
19
20   public class AddCourseActivity extends Activity {
21
22     private static final String TAG = "AddCourseActivity";
23
24     //private static final int DATE_DIALOG_ID = 0;
25     private static final int VISIBLE = 0;
26     //private static final int INVISIBLE = 4;
27     private static final int GONE = 8;
28
29     ArrayList<String> mLecs;
30     ArrayList<String> mLabs;
31     ArrayList<String> mTuts;
32     ArrayList<String> mSems;
33
34     ArrayList<Offering> mLecsOfferings;
35     ArrayList<Offering> mLabsOfferings;
36     ArrayList<Offering> mTutsOfferings;
37     ArrayList<Offering> mSemsOfferings;
38
39     private String mSubject;
40     private String mCode;
41
42     private Course mCourse;
43
44     private Button mSaveButton;
45     private Button mCancelButton;
46
47     private CourseHandler mCourseHandle;
48     ArrayList<Offering> mOfferings;
49
50     private Spinner mSubjectSpinner;
51     private Spinner mCodesSpinner;
52
53     private ListView mLecsListView;
54     private ListView mSemsListView;
55     private ListView mTutsListView;
56     private ListView mLabsListView;
57
58     @Override
59     protected void onCreate(Bundle savedInstanceState) {
60       super.onCreate(savedInstanceState);
61       setContentView(R.layout.activity_add_course);
62       mCourseHandle = new CourseHandler(this.getApplicationContext());
63       init();
64     }
65
66     /*
67      * Initialize all views and sets Button OnClickListeners.
68      */
69     private void init() {
70
71       mSaveButton = (Button) findViewById(R.id.add_course_save_button);
```

```java
 72        mCancelButton = (Button) findViewById(R.id.add_course_cancel_button);
 73
 74        mSubjectSpinner = (Spinner) findViewById(R.id.add_course_subjects_spinner);
 75        try {
 76          mSubjectSpinner.setAdapter(new ArrayAdapter<String>(this,
 77              android.R.layout.simple_spinner_dropdown_item,
 78              mCourseHandle.getSubjects()));
 79        } catch (Exception e) {
 80          e.printStackTrace();
 81        }
 82
 83        mCodesSpinner = (Spinner) findViewById(R.id.add_course_codes_spinner);
 84        mSubjectSpinner.setOnItemSelectedListener(new OnItemSelectedListener() {
 85          public void onItemSelected(AdapterView<?> arg0, View arg1,
 86              int arg2, long arg3) {
 87            try {
 88              mSubject = arg0.getItemAtPosition(arg2).toString();
 89              mCodesSpinner.setAdapter(new ArrayAdapter<String>(
 90                  AddCourseActivity.this,
 91                  android.R.layout.simple_spinner_dropdown_item,
 92                  mCourseHandle.getCodes(mSubject)));
 93            } catch (Exception e) {
 94              e.printStackTrace();
 95            }
 96          }
 97
 98          public void onNothingSelected(AdapterView<?> arg0) {
 99            // Do nothing.
100          }
101        });
102        mCodesSpinner.setOnItemSelectedListener(new OnItemSelectedListener() {
103
104          public void onItemSelected(AdapterView<?> arg0, View arg1,
105              int arg2, long arg3) {
106            mCode = arg0.getItemAtPosition(arg2).toString();
107            mCourse = mCourseHandle.getCourseOfferings(mSubject, mCode);
108            mOfferings = mCourse.mOfferings;
109
110            String s;
111            mLecs = new ArrayList<String>();
112            mLabs = new ArrayList<String>();
113            mTuts = new ArrayList<String>();
114            mSems = new ArrayList<String>();
115
116            mLecsOfferings = new ArrayList<Offering>();
117            mLabsOfferings = new ArrayList<Offering>();
118            mTutsOfferings = new ArrayList<Offering>();
119            mSemsOfferings = new ArrayList<Offering>();
120
121            for (int i = 0; i < mOfferings.size(); i++) {
122              s = mOfferings.get(i).mType;
123
124              // Some offerings don't have any of what we are looking for,
125              // so check length to make sure.
126              if (s.length() > 2) {
127                String ss = s.substring(0, 3).trim();
128                if (ss.equalsIgnoreCase("lec")) {
129                  mLecs.add(s + ", SEC " + mOfferings.get(i).mSection);
130                  mLecsOfferings.add(mOfferings.get(i));
131                } else if (ss.equalsIgnoreCase("lab")) {
132                  mLabs.add(s + ", SEC " + mOfferings.get(i).mSection);
133                  mLabsOfferings.add(mOfferings.get(i));
134                } else if (ss.equalsIgnoreCase("tut")) {
135                  mTuts.add(s + ", SEC " + mOfferings.get(i).mSection);
136                  mTutsOfferings.add(mOfferings.get(i));
137                } else if (ss.equalsIgnoreCase("sem")) {
138                  mSems.add(s + ", SEC " + mOfferings.get(i).mSection);
139                  mSemsOfferings.add(mOfferings.get(i));
140                }
141              }
142            }
```

```java
143
144            // Check if offerings available, and add ListView to display if
145            // so.
146            LinearLayout lec_lay = (LinearLayout) findViewById(R.id.layout_add_lecs);
147            LinearLayout lab_lay = (LinearLayout) findViewById(R.id.layout_add_labs);
148            LinearLayout tut_lay = (LinearLayout) findViewById(R.id.layout_add_tuts);
149            LinearLayout sem_lay = (LinearLayout) findViewById(R.id.layout_add_sems);
150
151            if (mLecs.size() > 0) {
152              lec_lay.setVisibility(VISIBLE);
153              mLecsListView = (ListView) findViewById(R.id.add_course_add_lecs);
154              mLecsListView.setAdapter(new ArrayAdapter<String>(
155                  getApplicationContext(),
156                  android.R.layout.simple_list_item_multiple_choice,
157                  mLecs));
158            } else {
159              lec_lay.setVisibility(GONE);
160            }
161            if (mLabs.size() > 0) {
162              lab_lay.setVisibility(VISIBLE);
163              mLabsListView = (ListView) findViewById(R.id.add_course_add_labs);
164              mLabsListView.setAdapter(new ArrayAdapter<String>(
165                  getApplicationContext(),
166                  android.R.layout.simple_list_item_multiple_choice,
167                  mLabs));
168            } else {
169              lab_lay.setVisibility(GONE);
170            }
171            if (mTuts.size() > 0) {
172              tut_lay.setVisibility(VISIBLE);
173              mTutsListView = (ListView) findViewById(R.id.add_course_add_tuts);
174              mTutsListView.setAdapter(new ArrayAdapter<String>(
175                  getApplicationContext(),
176                  android.R.layout.simple_list_item_multiple_choice,
177                  mTuts));
178            } else {
179              tut_lay.setVisibility(GONE);
180            }
181            if (mSemsOfferings.size() > 0) {
182              sem_lay.setVisibility(VISIBLE);
183              mSemsListView = (ListView) findViewById(R.id.add_course_add_sems);
184              mSemsListView.setAdapter(new ArrayAdapter<String>(
185                  getApplicationContext(),
186                  android.R.layout.simple_list_item_multiple_choice,
187                  mSems));
188            } else {
189              sem_lay.setVisibility(GONE);
190            }
191          }
192
193          public void onNothingSelected(AdapterView<?> arg0) {
194          }
195        });
196
197      mSaveButton.setOnClickListener(new OnClickListener() {
198        public void onClick(View v) {
199          Course c = new Course();
200          c.mSubject = mSubject;
201          c.mCode = mCode;
202          c.mInstructor = mCourseHandle.getCourseOfferings(mSubject,
203              mCode).mInstructor;
204
205          SparseBooleanArray sba1, sba2, sba3, sba4;
206          if (mLecsListView != null) {
207            sba1 = mLecsListView.getCheckedItemPositions();
208            for (int i = 0; i < mLecsListView.getCount(); i++) {
209              if (sba1.get(i) == true) {
210                c.mOfferings.add(mLecsOfferings.get(i));
211                Log.d(TAG, "Added: " + mLecsOfferings.get(i).mSubj
212                    + " " + mOfferings.get(i).mCode + ", Type "
213                    + mOfferings.get(i).mType + ", Section "
```

```
214                            + mOfferings.get(i).mSection
215                            + " to Offerings");
216                      }
217                    }
218                  }
219
220              if (mLabsListView != null) {
221                sba2 = mLabsListView.getCheckedItemPositions();
222
223                for (int i = 0; i < mLabsListView.getCount(); i++) {
224                  if (sba2.get(i) == true) {
225                    c.mOfferings.add(mLabsOfferings.get(i));
226                    Log.d(TAG, "Added: " + mLabsOfferings.get(i).mSubj
227                        + " " + mOfferings.get(i).mCode + ", Type "
228                        + mOfferings.get(i).mType + ", Section "
229                        + mOfferings.get(i).mSection
230                        + " to Offerings");
231                  }
232                }
233              }
234
235              if (mTutsListView != null) {
236                sba3 = mTutsListView.getCheckedItemPositions();
237
238                for (int i = 0; i < mTutsListView.getCount(); i++) {
239                  if (sba3.get(i) == true) {
240                    c.mOfferings.add(mTutsOfferings.get(i));
241                    Log.d(TAG, "Added: " + mTutsOfferings.get(i).mSubj
242                        + " " + mOfferings.get(i).mCode + ", Type "
243                        + mOfferings.get(i).mType + ", Section "
244                        + mOfferings.get(i).mSection
245                        + " to Offerings");
246                  }
247                }
248              }
249
250              if (mSemsListView != null) {
251                sba4 = mSemsListView.getCheckedItemPositions();
252
253                for (int i = 0; i < mSemsListView.getCount(); i++) {
254                  if (sba4.get(i) == true) {
255                    c.mOfferings.add(mSemsOfferings.get(i));
256                    Log.d(TAG, "Added: " + mSemsOfferings.get(i).mSubj
257                        + " " + mOfferings.get(i).mCode + ", Type "
258                        + mOfferings.get(i).mType + ", Section "
259                        + mOfferings.get(i).mSection
260                        + " to Offerings");
261                  }
262                }
263              }
264
265              if (c.mSubject != null) {
266                try {
267                  mCourseHandle.addCourse(c);
268                  Log.d("# ADDED OFFERINGS:", "" + c.mOfferings.size());
269                  for (int i = 0; i < c.mOfferings.size(); i++) {
270                    Log.d(TAG, "Added: " + c.mOfferings.get(i).mSubj
271                        + " " + mOfferings.get(i).mCode + ", Type "
272                        + mOfferings.get(i).mType + ", Section "
273                        + mOfferings.get(i).mSection
274                        + " to Offerings");
275                  }
276                  onBackPressed();
277                } catch (Exception e) {
278                  e.printStackTrace();
279                }
280              }
281            }
282          });
283
284      mCancelButton.setOnClickListener(new OnClickListener() {
```

```
285            public void onClick(View v) {
286                onBackPressed();
287            }
288        });
289    }
290 }
291
```