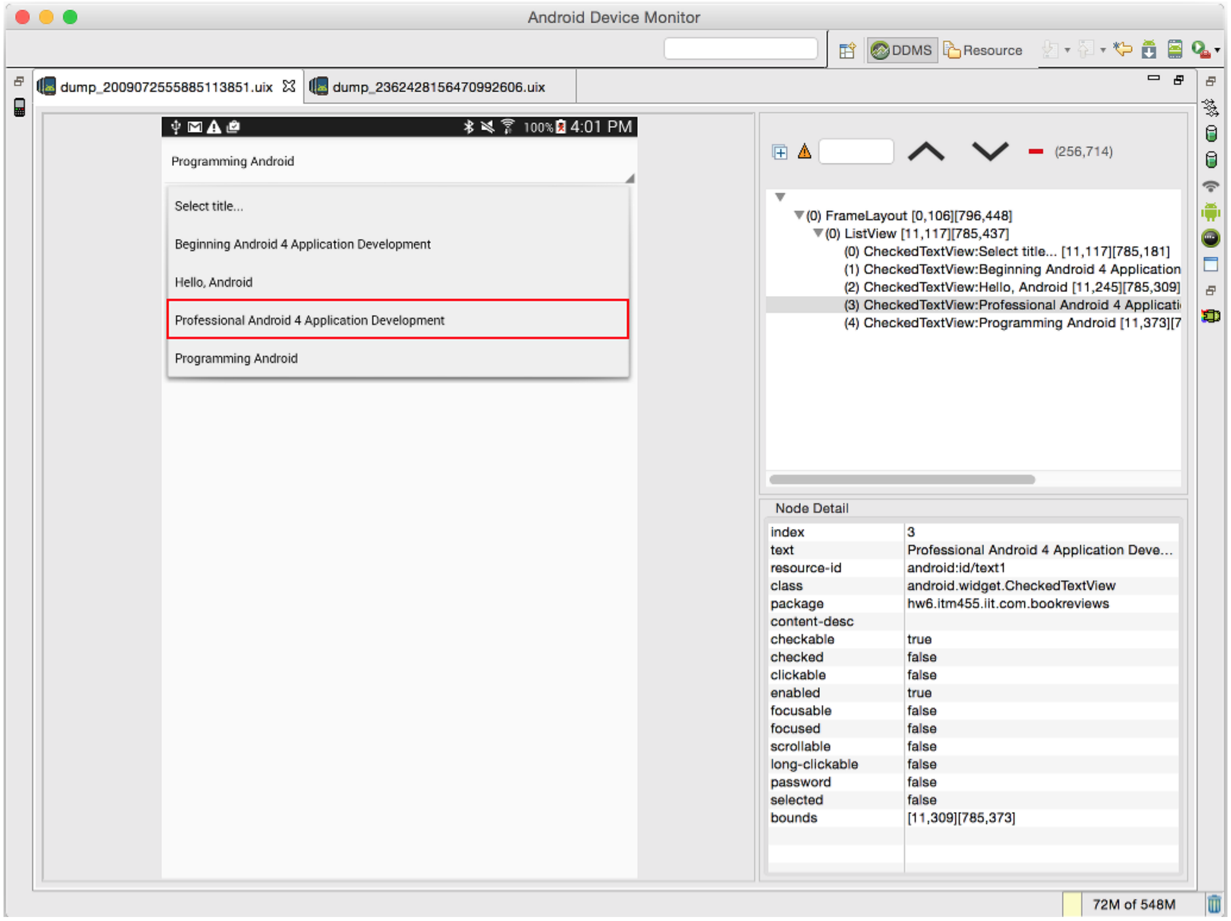
Github

The source code for this assignment, which discussed in this document, is published online @ https://github.com/bradyhouse/ITM455/tree/master/HW8.

Screenshots

Step 3 – Dropdown Menu



Programming Android

Select title...

Beginning Android 4 Application Development

Hello, Android

Professional Android 4 Application Development

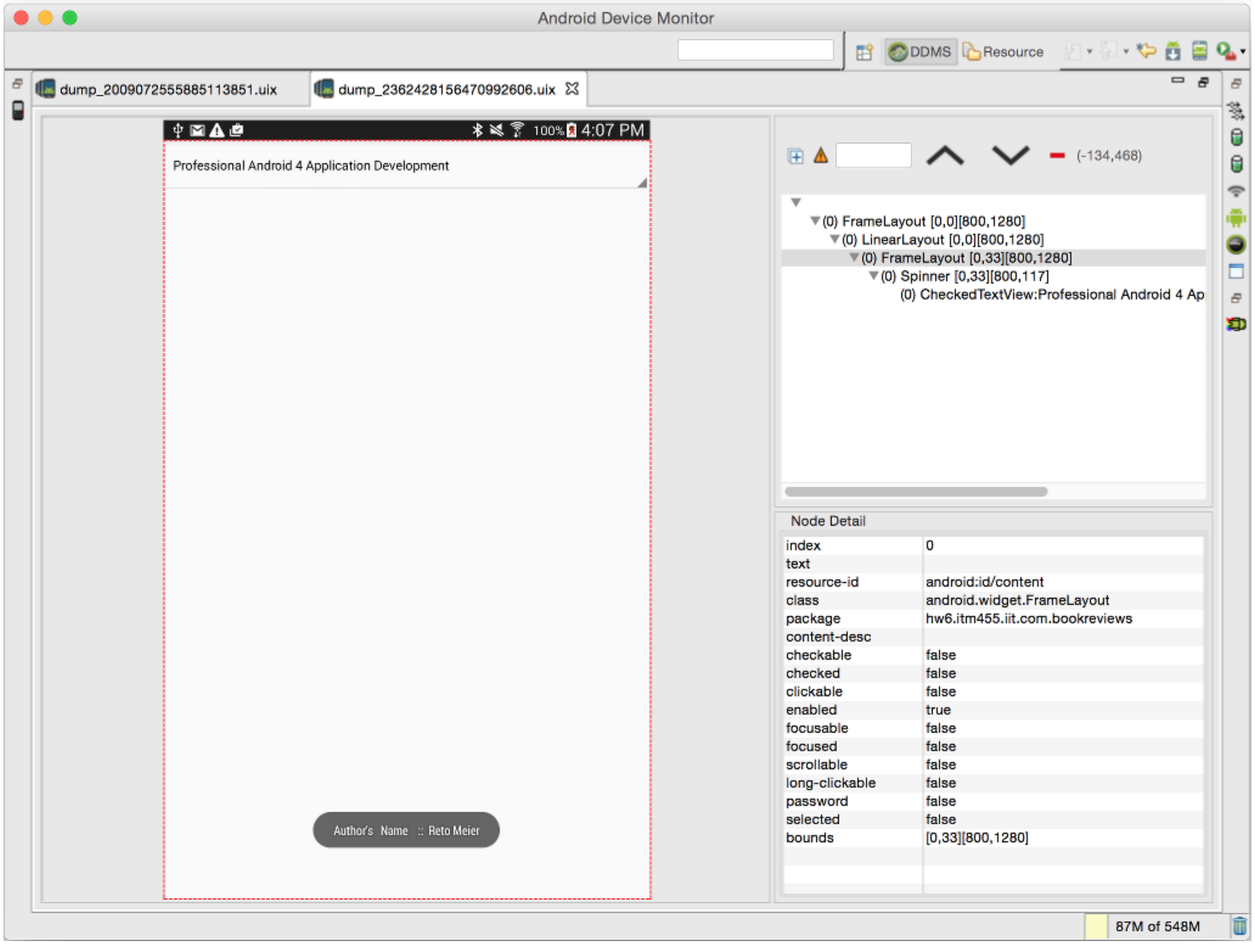
Programming Android

```
(0) FrameLayout [0,106][796,448]
  (0) ListView [11,117][785,437]
    (0) CheckedTextView:Select title... [11,117][785,181]
    (1) CheckedTextView:Beginning Android 4 Application
    (2) CheckedTextView:Hello, Android [11,245][785,309]
    (3) CheckedTextView:Professional Android 4 Applicati
    (4) CheckedTextView:Programming Android [11,373][7
```

Node Detail

index	3
text	Professional Android 4 Application Deve...
resource-id	android:id/text1
class	android.widget.CheckedTextView
package	hw6.itm455.iit.com.bookreviews
content-desc	
checkable	true
checked	false
clickable	false
enabled	true
focusable	false
focused	false
scrollable	false
long-clickable	false
password	false
selected	false
bounds	[11,309][785,373]

Step 3 –Item on Click

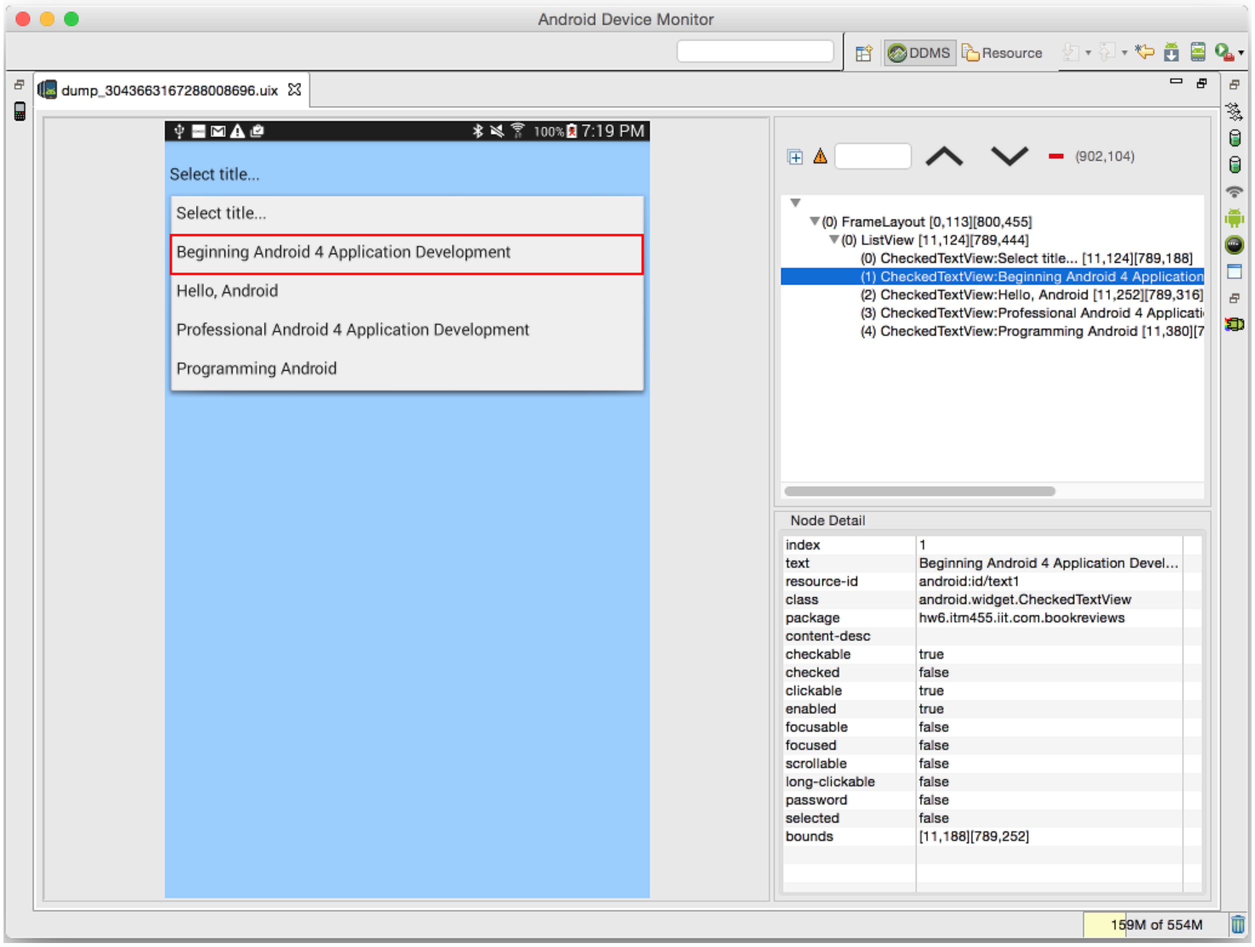

Android Device Monitor
DDMS
Resource
dump_2009072555885113851.uix
dump_2362428156470992606.uix
4:07 PM
Professional Android 4 Application Development
Author's Name :: Reto Meier
(-134,468)
87M of 548M

```
▼(0) FrameLayout [0,0][800,1280]
  ▼(0) LinearLayout [0,0][800,1280]
    ▼(0) FrameLayout [0,33][800,1280]
      ▼(0) Spinner [0,33][800,117]
          (0) CheckedTextView:Professional Android 4 Ap
```

Node Detail

index	0
text	
resource-id	android:id/content
class	android.widget.FrameLayout
package	hw6.itm455.iit.com.bookreviews
content-desc	
checkable	false
checked	false
clickable	false
enabled	true
focusable	false
focused	false
scrollable	false
long-clickable	false
password	false
selected	false
bounds	[0,33][800,1280]

Step 4 – Drop down menu



Select title...

Select title...

Beginning Android 4 Application Development

Hello, Android

Professional Android 4 Application Development

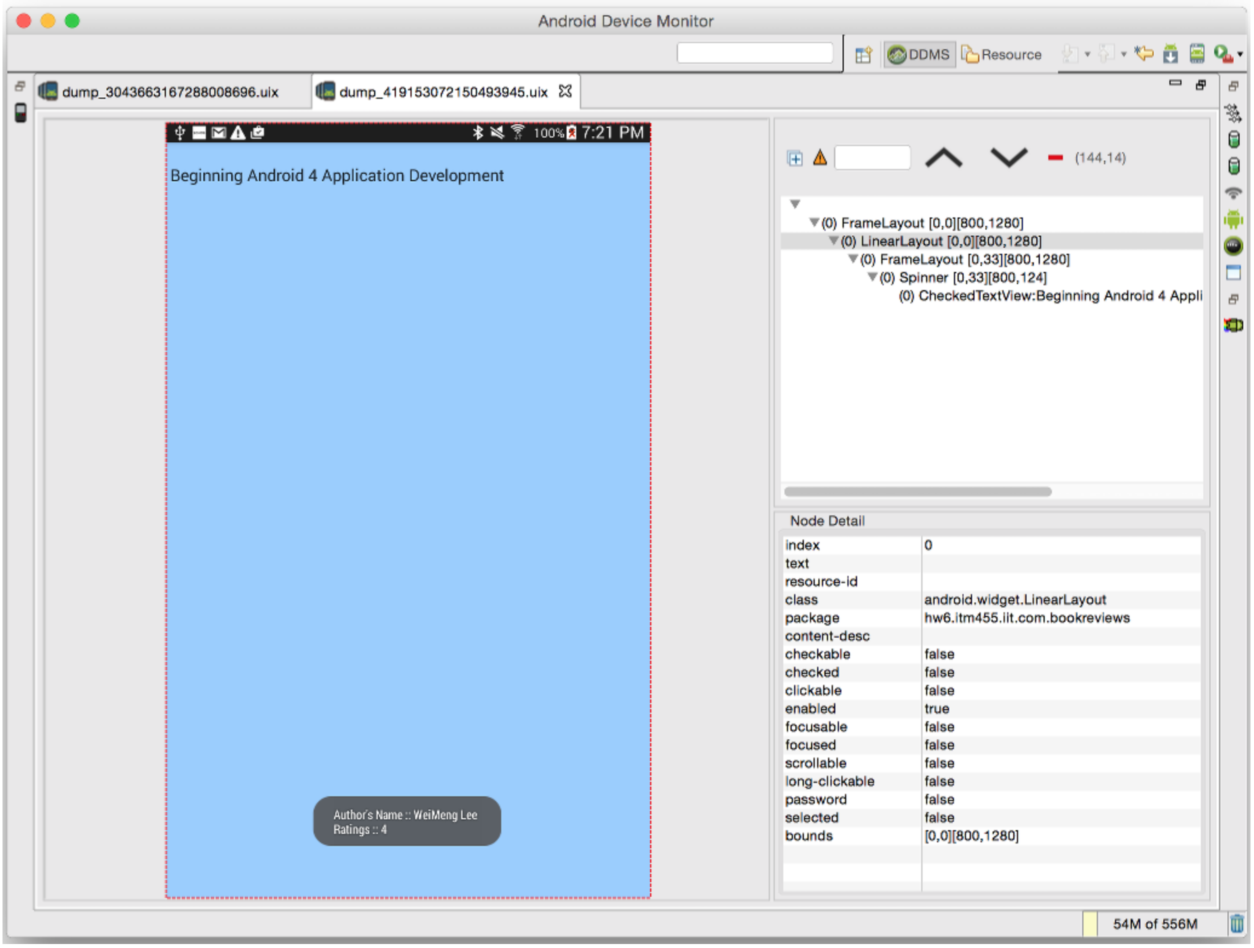
Programming Android

```
▼(0) FrameLayout [0,113][800,455]
  ▼(0) ListView [11,124][789,444]
      (0) CheckedTextView:Select title... [11,124][789,188]
      (1) CheckedTextView:Beginning Android 4 Application
      (2) CheckedTextView:Hello, Android [11,252][789,316]
      (3) CheckedTextView:Professional Android 4 Applicati
      (4) CheckedTextView:Programming Android [11,380][7
```

Node Detail

index	1
text	Beginning Android 4 Application Devel...
resource-id	android:id/text1
class	android.widget.CheckedTextView
package	hw6.itm455.iit.com.bookreviews
content-desc	
checkable	true
checked	false
clickable	true
enabled	true
focusable	false
focused	false
scrollable	false
long-clickable	false
password	false
selected	false
bounds	[11,188][789,252]

Step 4 – Item on Click



Beginning Android 4 Application Development

Author's Name :: WeiMeng Lee
Ratings :: 4

```
▼
  ▼(0) FrameLayout [0,0][800,1280]
    ▼(0) LinearLayout [0,0][800,1280]
      ▼(0) FrameLayout [0,33][800,1280]
        ▼(0) Spinner [0,33][800,124]
            (0) CheckedTextView:Beginning Android 4 Appli
```

index	0
text	
resource-id	
class	android.widget.LinearLayout
package	hw6.itm455.iit.com.bookreviews
content-desc	
checkable	false
checked	false
clickable	false
enabled	true
focusable	false
focused	false
scrollable	false
long-clickable	false
password	false
selected	false
bounds	[0,0][800,1280]

Source Code

MainActivity.java

```
package hw6.itm455.iit.com.bookreviews;

import java.util.ArrayList;
import java.util.Collections;
import java.util.Comparator;
import java.util.List;
import java.util.Set;

import android.app.Activity;
import android.graphics.Color;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.Spinner;
import android.widget.Toast;

public class MainActivity extends Activity implements View.OnClickListener,
AdapterView.OnItemSelectedListener {
    private Set<String> _set;
    private SqlHelper _db;
    private boolean _blnFlag = false;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.spinner);
        this._db = new SqlHelper(this);
        if (this._db.getAllBooks().size() == 0) {
            this._db.addBook(new Book("Hello, Android", "Ed Burnette", "1"));
            this._db.addBook(new Book("Professional Android 4 Application Development", "Reto
Meier", "3"));
            this._db.addBook(new Book("Beginning Android 4 Application Development", "WeiMeng
Lee", "4"));
            this._db.addBook(new Book("Programming Android", "Zigurd Mednieks", "1"));
        }
        List<Book> list = this._db.getAllBooks();
        ListView listContent = (ListView) findViewById(R.id.list);
        Spinner spinner;
        spinner = (Spinner) findViewById(R.id.spinner1);
        this._set = this._db.getTitle();
        List<String> blist = new ArrayList<String>(this._set);
        Collections.sort(blist, new Comparator<String>() {
            @Override
            public int compare(String lhs, String rhs) {
                return lhs.compareTo(rhs);
            }
        });
        blist.add(0, "Select title...");
        ArrayAdapter<String> adapter = new ArrayAdapter<String>(MainActivity.this,
                android.R.layout.simple_spinner_dropdown_item, blist);
        adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        spinner.setAdapter(adapter);
        spinner.setWillNotDraw(false);
        spinner.setOnItemSelectedListener(this);
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        getMenuInflater().inflate(R.menu.menu_main, menu);
        return true;
    }

    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        int id = item.getItemId();
        if (id == R.id.action_settings) {
            return true;
        }
        return super.onOptionsItemSelected(item);
    }

    @Override
    public void onClick(View v) {
        //  Auto-generated method stub
    }

    @Override
    public void onItemSelected(AdapterView<?> parent, View view, int position, long id) {
        if (this._blnFlag) {
            if (position > 0) {
                String title = parent.getItemAtPosition(position).toString();
                Toast.makeText(this, "Author's Name :: " + this._db.getAuthor(title) + "\n" +
                                "Ratings :: " + this._db.getRating(title),
                        Toast.LENGTH_LONG).show();
            }
        }
        this._blnFlag = true;
    }

    @Override
    public void onNothingSelected(AdapterView<?> parent) {
        //  Auto-generated method stub
    }
}
```

Book.java

```
package hw6.itm455.iit.com.bookreviews;

public class Book {
    private int id;
    private String title;
    private String author;
    private String rating;
    public Book() {
    }
    public Book(String title, String author, String rating) {
        super();
        this.title = title;
        this.author = author;
        this.rating = rating;
    }
    public int getId() {
        return id;
    }
    public void setId(int id) {
        this.id = id;
    }
    public String getTitle() {
        return title;
    }
    public void setTitle(String title) {
        this.title = title;
    }
    public String getAuthor() {
        return author;
    }
    public void setAuthor(String author) {
        this.author = author;
    }
    public void setRating(String rating) {
        this.rating = rating;
    }
    public String getRating() {
        return rating;
    }
    @Override
    public String toString() {
        return "Book [id=" + id + ", title=" + title + ", author=" + author
                + ", rating=" + rating + "]";
    }
}
```

SqlHelper.java

```
package hw6.itm455.iit.com.bookreviews;

import java.util.HashSet;
import java.util.LinkedList;
import java.util.List;
import java.util.Set;

import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import android.util.Log;

public class SqlHelper extends SQLiteOpenHelper {
    private static final String LOG_PREFIX = "BR-";
    private static final int DATABASE_VERSION = 1;
    private static final String DATABASE_NAME = "BookDB";
    private static final String TABLE_BOOKS = "books";
    private static final String KEY_ID = "id";
    private static final String KEY_TITLE = "title";
    private static final String KEY_AUTHOR = "author";
    private static final String KEY_RATING = "rating";

    public SqlHelper(Context context) {
        super(context, DATABASE_NAME, null, DATABASE_VERSION);
    }

    @Override
    public void onCreate(SQLiteDatabase db) {
        String CREATE_BOOK_TABLE = "CREATE TABLE books ( " +
                "id INTEGER PRIMARY KEY AUTOINCREMENT, " +
                "title TEXT, " +
                "author TEXT, " +
                "rating TEXT)";
        db.execSQL(CREATE_BOOK_TABLE);

    }

    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
        db.execSQL("DROP TABLE IF EXISTS books");
        this.onCreate(db);
    }

    public void addBook(Book book) {
        Log.d(this.LOG_PREFIX + "addBook", book.toString());
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues values = new ContentValues();
        values.put(KEY_TITLE, book.getTitle());
        values.put(KEY_AUTHOR, book.getAuthor());
        values.put(KEY_RATING, book.getRating());
        db.insert(TABLE_BOOKS,
                null,
                values);
        db.close();
    }

    public List<Book> getAllBooks() {
        List<Book> books = new LinkedList<Book>();
        String query = "SELECT * FROM " + TABLE_BOOKS;
        SQLiteDatabase db = this.getWritableDatabase();
        Cursor cursor = db.rawQuery(query, null);
        Book book = null;
        if (cursor.moveToFirst()) {
            do {
                book = new Book();
                book.setId(Integer.parseInt(cursor.getString(0)));
                book.setTitle(cursor.getString(1));
                book.setAuthor(cursor.getString(2));
                book.setRating(cursor.getString(3));
                books.add(book);
            } while (cursor.moveToNext());
        }
        Log.d(this.LOG_PREFIX + "getAllBooks()", books.toString());
        return books; // return books
    }

    public int updateBook(Book book, String newTitle, String newAuthor) {
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues values = new ContentValues();
        values.put("title", newTitle); // get title
        values.put("author", newAuthor); // get author
        int i = db.update(TABLE_BOOKS, //table
                values, // column/value
                KEY_ID + " = ?", // selections
                new String[]{String.valueOf(4)}); //selection args
        db.close();
        Log.d(this.LOG_PREFIX + "UpdateBook", book.toString());
        return i;
    }

    public void deleteBook(Book book) {
        SQLiteDatabase db = this.getWritableDatabase();
        db.delete(TABLE_BOOKS,
                KEY_ID + " = ?",
                new String[]{String.valueOf(book.getId())});
        db.close();
        Log.d(this.LOG_PREFIX + "deleteBook", book.toString());
    }

    public int getIds(Book book) {
        String selectQuery = "SELECT id FROM books";
        SQLiteDatabase database = this.getReadableDatabase();
        Cursor c = database.rawQuery(selectQuery, null);
        c.moveToFirst();
        int total = c.getCount();
        Log.d(this.LOG_PREFIX + "getIds", Integer.toString(total));
        return total;
    }

    public Set<String> getTitle() {
        Set<String> set = new HashSet<String>();
        String selectQuery = "select * from " + TABLE_BOOKS;
        SQLiteDatabase db = this.getReadableDatabase();
        Cursor cursor = db.rawQuery(selectQuery, null);
        if (cursor.moveToFirst()) {
            do {
                set.add(cursor.getString(1));
            } while (cursor.moveToNext());
        }
        cursor.close();
        db.close();
        return set;
    }
    public String getAuthor(String title) {
        StringBuilder s = new StringBuilder();
        String selectQuery = "select *   from    " + TABLE_BOOKS + "   where   title=?";
        SQLiteDatabase db = this.getReadableDatabase();
        Cursor cursor = db.rawQuery(selectQuery, new String[]{title});
        if (cursor.moveToFirst()) {
            do {
                s.append(cursor.getString(2));
            } while (cursor.moveToNext());
        }
        cursor.close();
        db.close();
        return s.toString();
    }
    public String getRating(String title) {
        StringBuilder s = new StringBuilder();
        String selectQuery = "select *   from    " + TABLE_BOOKS + "   where   title=?";
        SQLiteDatabase db = this.getReadableDatabase();
        Cursor cursor = db.rawQuery(selectQuery, new String[]{title});
        if (cursor.moveToFirst()) {
            do {
                s.append(cursor.getString(3));
            } while (cursor.moveToNext());
        }
        cursor.close();
        db.close();
        return s.toString();
    }
}
```

Layout

spinner.xml

```
<?xml version="1.0" encoding="utf-8"?>
    <Spinner xmlns:android="http://schemas.android.com/apk/res/android"
        android:id="@+id/spinner1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:drawSelectorOnTop="true"
        android:background="@color/skyBlue"
        android:paddingTop="20sp">
    </Spinner>
```

Values

strings.xml

```
<resources>
    <string name="app_name">BookReviews</string>
    <string name="icon_alt_text">book cover thumbnail</string>
    <string name="action_settings">Settings</string>
    <color name="red">#FF0000</color>
    <color name="green">#00FF00</color>
    <color name="skyBlue">#99CCFF</color>
    <color name="black">#000000</color>
</resources>
```

styles.xml

```
<resources>
    <style name="AppTheme" parent="Theme.AppCompat.Light.DarkActionBar">
        <item name="android:spinnerDropDownItemStyle">@style/SpinnerDropDownItem</item>
        <item name="android:spinnerItemStyle">@style/spinnerItemStyle</item>
        <item name="android:windowBackground">@color/skyBlue</item>
    </style>
    <style name="SpinnerDropDownItem">
        <item name="android:padding">6dip</item>
        <item name="android:textSize">15sp</item>
    </style>
    <style name="spinnerItemStyle">
        <item name="android:padding">6dip</item>
        <item name="android:textSize">12sp</item>
        <item name="android:textColor">@color/black</item>
        <item name="android:background">@color/skyBlue</item>
    </style>
</resources>
```