**Lecture 6: The iBookmark project**

In this project we want to create a “bookmark manager” to create and manage our favorite bookmarks. One activity should maintain an editable list of bookmarks, which can be clicked and show the respective page in a second activity. The initial code could be as follows. Please make sure you get that to work so we can expand on it during our next lectures.

**Layout file**

<LinearLayout xmlns:android=*"http://schemas.android.com/apk/res/android"*

 xmlns:tools=*"http://schemas.android.com/tools"*

 android:layout\_width=*"match\_parent"*

 android:layout\_height=*"match\_parent"*

 android:orientation=*"vertical"*

 android:paddingBottom=*"@dimen/activity\_vertical\_margin"*

 android:paddingLeft=*"@dimen/activity\_horizontal\_margin"*

 android:paddingRight=*"@dimen/activity\_horizontal\_margin"*

 android:paddingTop=*"@dimen/activity\_vertical\_margin"*

 tools:context=*".BookmarkActivity"* >

 <ListView

 android:id=*"@+id/id\_list"*

 android:layout\_width=*"match\_parent"*

 android:layout\_height=*"wrap\_content"*

 android:layout\_weight=*"1"* >

 </ListView>

</LinearLayout>

**Values file (strings.xml)**

<?xml version=*"1.0"* encoding=*"utf-8"*?>

<resources>

 <string name=*"app\_name"*>iBookmark</string>

 <string name=*"action\_settings"*>Settings</string>

 <string name=*"menu\_string\_add"*>Add</string>

</resources>

**Menu file**

<menu xmlns:android=*"http://schemas.android.com/apk/res/android"* >

 <item

 android:id=*"@+id/action\_settings"*

 android:orderInCategory=*"100"*

 android:showAsAction=*"never"*

 android:title=*"@string/action\_settings"*/>

 <item

 android:id=*"@+id/id\_menu\_add"*

 android:title=*"@string/menu\_string\_add"*

 android:showAsAction=*"ifRoom|withText"*

 android:icon=*"@android:drawable/ic\_menu\_add"*>

 </item>

</menu>

**Bookmark.java**

**package** org.mathcs.ibookmark;

**public** **class** Bookmark

{

 **private** String url;

 **private** String title;

 **public** Bookmark(String title, String url)

 {

 **super**();

 **this**.url = url;

 **this**.title = title;

 }

 **public** String getUrl()

 {

 **return** url;

 }

 **public** **void** setUrl(String url)

 {

 **this**.url = url;

 }

 **public** String getTitle()

 {

 **return** title;

 }

 **public** **void** setTitle(String title)

 {

 **this**.title = title;

 }

 **public** String toString()

 {

 **return** title + "[" + url + "]";

 }

}

**BookmarkView.java**

package org.mathcs.ibookmark;

import android.content.Context;

import android.util.TypedValue;

import android.widget.LinearLayout;

import android.widget.TextView;

public class BookmarkView extends LinearLayout

{

 private TextView url;

 private TextView title;

 public BookmarkView(Context context)

 {

 super(context);

 title = new TextView(context);

 url = new TextView(context);

 title.setTextSize(TypedValue.COMPLEX\_UNIT\_SP, BookmarkActivity.TEXT\_SIZE);

 url.setTextSize(TypedValue.COMPLEX\_UNIT\_SP, BookmarkActivity.TEXT\_SIZE\_SMALL);

 setOrientation(LinearLayout.VERTICAL);

 addView(title);

 addView(url);

 }

 public void setData(Bookmark item)

 {

 title.setText(item.getTitle());

 url.setText(item.getUrl()); }

}

**BookmarkAdapter.java**

package org.mathcs.ibookmark;

import java.util.ArrayList;

import android.content.Context;

import android.view.View;

import android.view.ViewGroup;

import android.widget.BaseAdapter;

public class BookmarkAdapter extends BaseAdapter

{

 private ArrayList<Bookmark> data;

 private Context context;

 public BookmarkAdapter(Context context)

 {

 super();

 this.context = context;

 data = new ArrayList<Bookmark>();

 }

 public void add(Bookmark item)

 {

 data.add(item);

 }

 public Bookmark get(int position)

 {

 return (Bookmark)data.get(position);

 }

 public void remove(int position)

 {

 data.remove(position);

 }

 @Override

 public int getCount()

 {

 return data.size();

 }

 @Override

 public Object getItem(int position)

 {

 return data.get(position);

 }

 @Override

 public long getItemId(int position)

 {

 return 0;

 }

 @Override

 public View getView(int position, View convertView, ViewGroup parent)

 {

 BookmarkView view = null;

 if (convertView != null)

 view = (BookmarkView)convertView;

 else

 view = new BookmarkView(context);

 view.setData(data.get(position));

 return view;

 }

}

**BookmarkActivity.java**

package org.mathcs.ibookmark;

import android.os.Bundle;

import android.app.Activity;

import android.content.Intent;

import android.view.Menu;

import android.view.MenuItem;

import android.view.View;

import android.widget.AdapterView;

import android.widget.ListView;

import android.widget.Toast;

public class BookmarkActivity extends Activity

{

 public final static String KEY\_URL = "url";

 public final static String DEFAULT\_URL = "http://www.shu.edu/";

 public final static int TEXT\_SIZE = 18;

 public final static int TEXT\_SIZE\_SMALL = 16;

 private BookmarkAdapter data;

 private ListView list;

 @Override

 protected void onCreate(Bundle savedInstanceState)

 {

 super.onCreate(savedInstanceState);

 setContentView(R.layout.activity\_bookmark);

 data = new BookmarkAdapter(this);

 list = (ListView)this.findViewById(R.id.id\_list);

 list.setAdapter(data);

 list.setOnItemClickListener(new AdapterView.OnItemClickListener()

 {

 @Override

 public void onItemClick(AdapterView<?> adapter,

 View view, int pos, long arg3)

 {

 startBookmark(pos);

 }

 });

 data.add(new Bookmark("Seton Hall Pirate", "http://pirate.shu.edu/"));

 data.add(new Bookmark("MathCS.org", "http://www.mathcs.org/"));

 }

 @Override

 public boolean onCreateOptionsMenu(Menu menu)

 {

 // Inflate the menu; this adds items to the action bar if it is present.

 getMenuInflater().inflate(R.menu.bookmark, menu);

 return true;

 }

 @Override

 public boolean onOptionsItemSelected(MenuItem item)

 {

 if (item.getItemId() == R.id.id\_menu\_add)

 {

 addBookmark();

 return true;

 }

 else

 return super.onOptionsItemSelected(item);

 }

 @Override

 public void onPause()

 {

 super.onPause();

 Toast.makeText(this, "Saving", Toast.LENGTH\_SHORT).show();

 }

 @Override

 public void onResume()

 {

 super.onResume();

 Toast.makeText(this, "Loading", Toast.LENGTH\_SHORT).show();

 }

 private void addBookmark()

 {

 data.add(new Bookmark("Rutgers", "http://www.vrutgers.edu/"));

 data.notifyDataSetChanged();

 }

 private void startBookmark(int position)

 {

 Intent intent = new Intent(this, UrlViewer.class);

 intent.putExtra(KEY\_URL, data.get(position).getUrl());

 startActivity(intent);

 }

}

**UrlViewer**

package org.mathcs.ibookmark;

import android.app.Activity;

import android.os.Bundle;

import android.webkit.WebView;

public class UrlViewer extends Activity

{

 private WebView web;

 private String url;

 protected void onCreate(Bundle savedInstanceState)

 {

 super.onCreate(savedInstanceState);

 web = new WebView(this);

 setContentView(web);

 url = getIntent().getStringExtra(BookmarkActivity.KEY\_URL);

 setTitle(url);

 web.loadUrl(url);

 }

}