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Lab 4: Parser

ITMD 455-02

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 \* 2-26-17  
 \* MainActivity.java  
 \* Lab 4  
 \* This program creates a SAX xml parser and dislays the parsed data.  
 \* Written by Deborah Barndt.  
 \*/***package** com.example.u2.parser;  
  
**import** android.app.ProgressDialog;  
**import** android.graphics.Color;  
**import** android.os.AsyncTask;  
**import** android.os.Bundle;  
**import** android.support.v7.app.AppCompatActivity;  
**import** android.view.View;  
**import** android.view.ViewGroup;  
**import** android.widget.RemoteViews;  
**import** android.widget.TextView;  
  
**import** org.xml.sax.InputSource;  
**import** org.xml.sax.XMLReader;  
  
**import** java.net.URL;  
  
**import** javax.xml.parsers.SAXParser;  
**import** javax.xml.parsers.SAXParserFactory;  
  
**import static** android.graphics.Color.***BLUE***;  
**import static** com.example.u2.parser.R.id.***parent***;  
  
**public class** MainActivity **extends** AppCompatActivity  
{  
 XMLGettersSetters **data**;  
 ProgressDialog **waitProgress**;  
 **int position**;  
 *// Called when the activity is first created.* @Override  
 **public void** onCreate(Bundle savedInstanceState)  
 {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
  
 **new** BackgroundTask().execute();  
 }  
  
 **public class** BackgroundTask **extends** AsyncTask<Void, Integer, Void>  
 {  
 @Override  
 **protected void** onPreExecute()  
 {  
 **super**.onPreExecute();  
 }  
  
 @Override  
 **protected void** onProgressUpdate(Integer...values)  
 {  
 **super**.onProgressUpdate(values);  
  
 **if**(**waitProgress** != **null**)  
 {  
 **waitProgress**.dismiss();  
 }  
 }  
  
 @Override  
 **protected void** onPostExecute(Void aVoid)  
 {  
 **super**.onPostExecute(aVoid);  
 viewUI();  
  
 **if**(**waitProgress** != **null**)  
 {  
 **waitProgress**.dismiss();  
 }  
 }  
  
 @Override  
 **protected** Void doInBackground(Void...params)  
 {  
 **try** {  
 **synchronized** (**this**)  
 {  
 saxParser();  
 }  
 }  
  
 **catch**(Exception e)  
 {  
 e.printStackTrace();  
 }  
  
 **return null**;  
 }  
 }  
  
 **private void** saxParser()  
 {  
  
 **try** {  
 *// Create a new instance of the SAX parser.* SAXParserFactory saxPF = SAXParserFactory.*newInstance*();  
 SAXParser saxP = saxPF.newSAXParser();  
 XMLReader xmlR = saxP.getXMLReader();  
  
 *// The URL of the XML.* URL url = **new** URL(**"http://www.papademas.net/cd\_catalog3.xml"**);  
  
 *// Create the Handler to handle each of the XML tags.* XMLHandler myXMLHandler = **new** XMLHandler();  
 xmlR.setContentHandler(myXMLHandler);  
 xmlR.parse(**new** InputSource(url.openStream()));  
 }  
  
 **catch**(Exception e)  
 {  
 System.***out***.println(e);  
 }  
  
  
 }  
 **private void** viewUI()  
 {  
 *// Get the view of the layout within the main layout, so that we can add TextViews.* View layout = findViewById(R.id.***layout***);  
  
 *// Create TextView Arrays to add the retrieved data to.* TextView title[];  
 TextView artist[];  
 TextView country[];  
 TextView company[];  
 TextView price[];  
 TextView year[];  
 TextView CD[];  
 **data** = XMLHandler.*data*;  
  
 *// This makes the TextView length the size of the TextView arrays by getting the size of the array.* CD = **new** TextView[**data**.getCD().size()];  
 title = **new** TextView[**data**.getTitle().size()];  
 artist = **new** TextView[**data**.getArtist().size()];  
 country = **new** TextView[**data**.getCountry().size()];  
 company = **new** TextView[**data**.getCompany().size()];  
 price = **new** TextView[**data**.getPrice().size()];  
 year = **new** TextView[**data**.getYear().size()];  
  
 *// Run a for loop to set all the TextViews with text until the size of the array is reached.* **for**(**int** i = 0; i < **data**.getTitle().size(); i++)  
 {  
 RemoteViews yourTextView = **null**;  
  
 *// Get the CDs that are only sold out.* **if**((**data**.getCD().get(i)).equals(**"yes"**))  
 {  
 title[i] = **new** TextView(**this**);  
 title[i].setText(**"\nTitle= "** + **data**.getTitle().get(i));  
  
 artist[i] = **new** TextView(**this**);  
 artist[i].setText(**"Artist= "** + **data**.getArtist().get(i));  
  
 country[i] = **new** TextView(**this**);  
 country[i].setText(**"Country= "** + **data**.getCountry().get(i));  
  
 company[i] = **new** TextView(**this**);  
 company[i].setText(**"Company= "** + **data**.getCompany().get(i));  
  
 price[i] = **new** TextView(**this**);  
 price[i].setText(**"Price= "** + **data**.getPrice().get(i));  
  
 year[i] = **new** TextView(**this**);  
 year[i].setText(**"Year= "** + **data**.getYear().get(i));  
  
 CD[i] = **new** TextView(**this**);  
 CD[i].setText(**"Sold out= "** + **data**.getCD().get(i) + **"\n\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"**);  
  
 ((ViewGroup)layout).addView(title[i]);  
 ((ViewGroup)layout).addView(artist[i]);  
 ((ViewGroup)layout).addView(country[i]);  
 ((ViewGroup)layout).addView(company[i]);  
 ((ViewGroup)layout).addView(price[i]);  
 ((ViewGroup)layout).addView(year[i]);  
 ((ViewGroup)layout).addView(CD[i]);  
 }  
  
 }  
  
 setContentView(layout);  
  
  
 }  
}