Android Application that makes use of RSS Feed

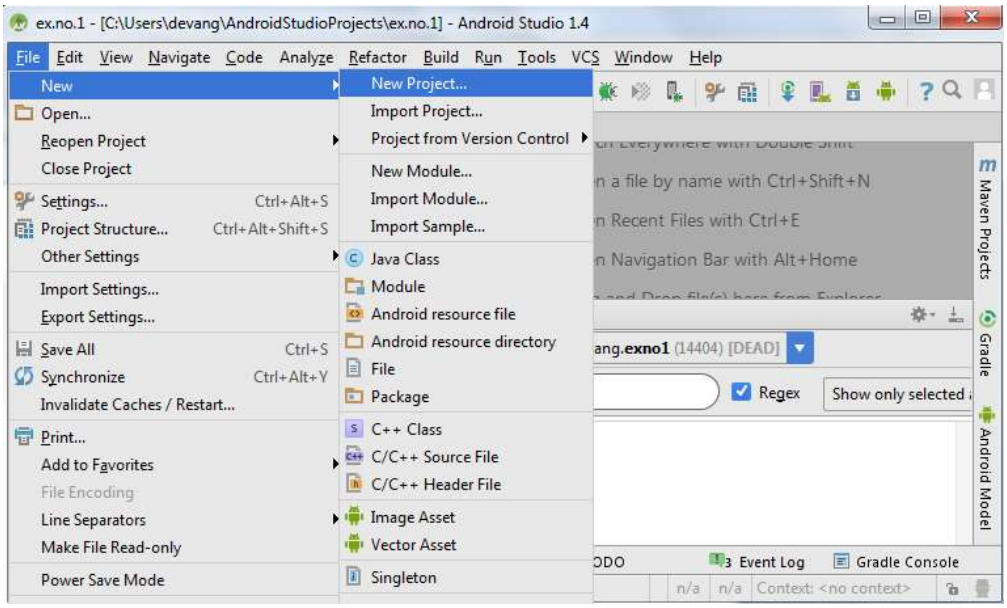
Aim:

To develop a Android Application that makes use of RSS Feed.

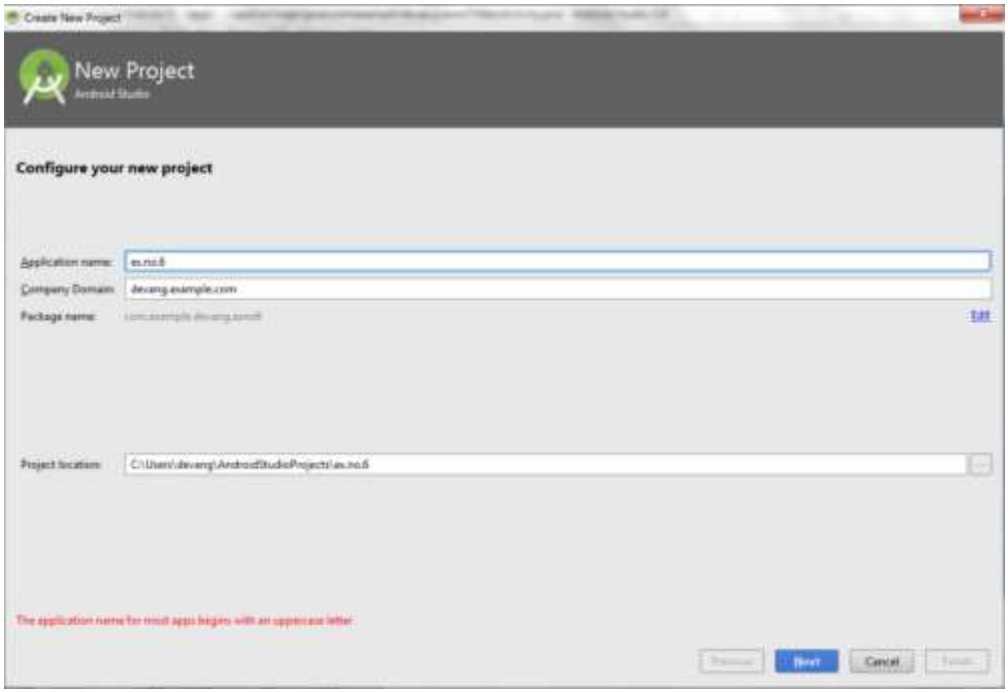
Procedure:

Creating a New project:

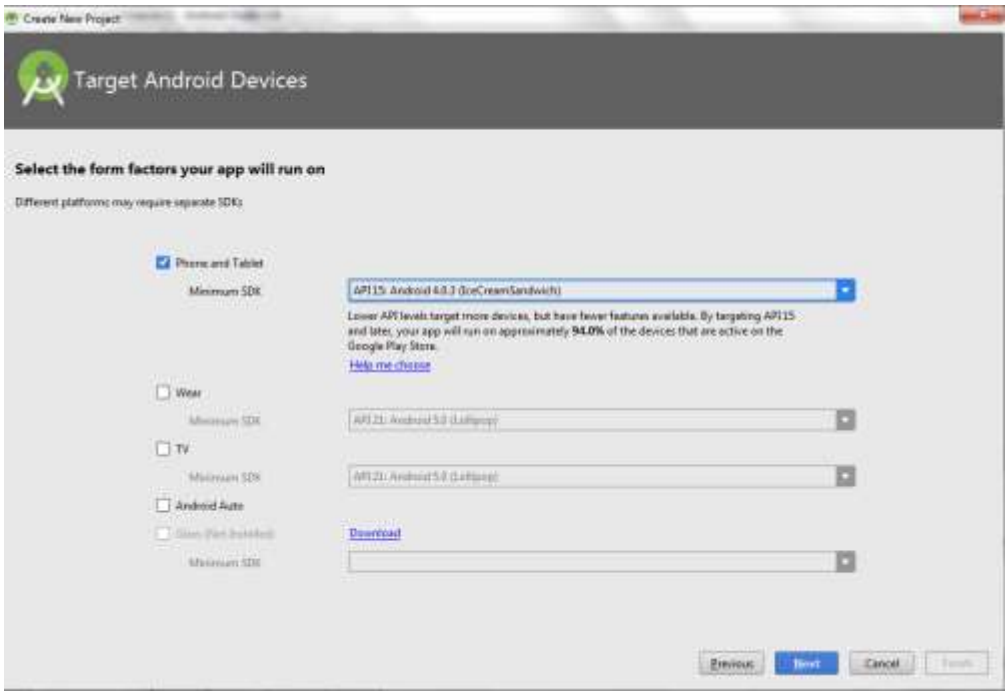
- Open Android Studio and then click on **File -> New -> New project.**



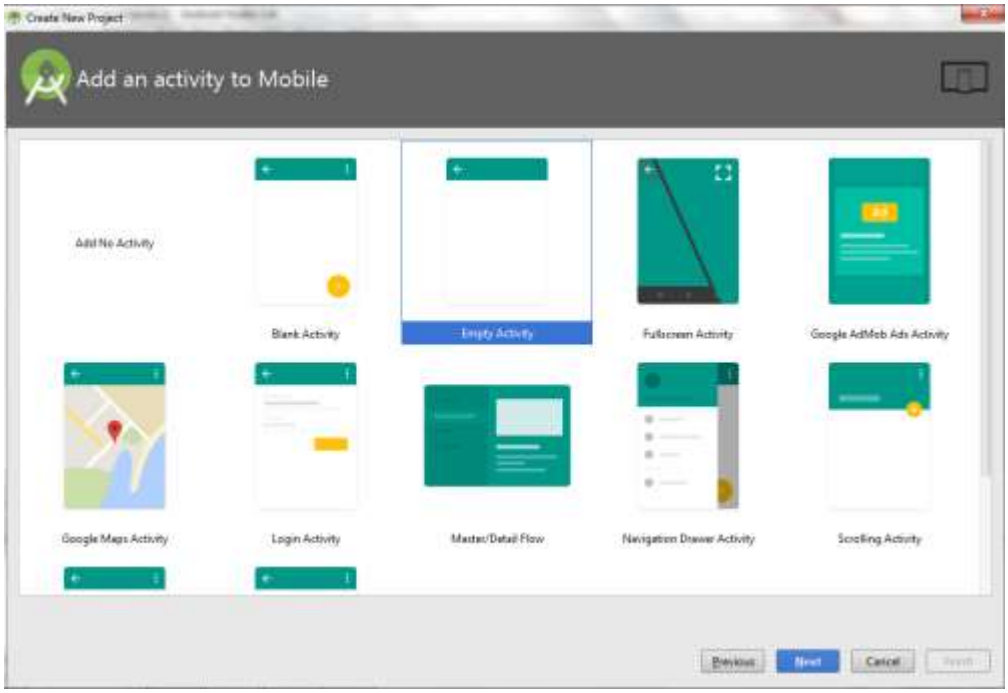
- Then type the Application name as "**ex.no.6"** and click **Next.**



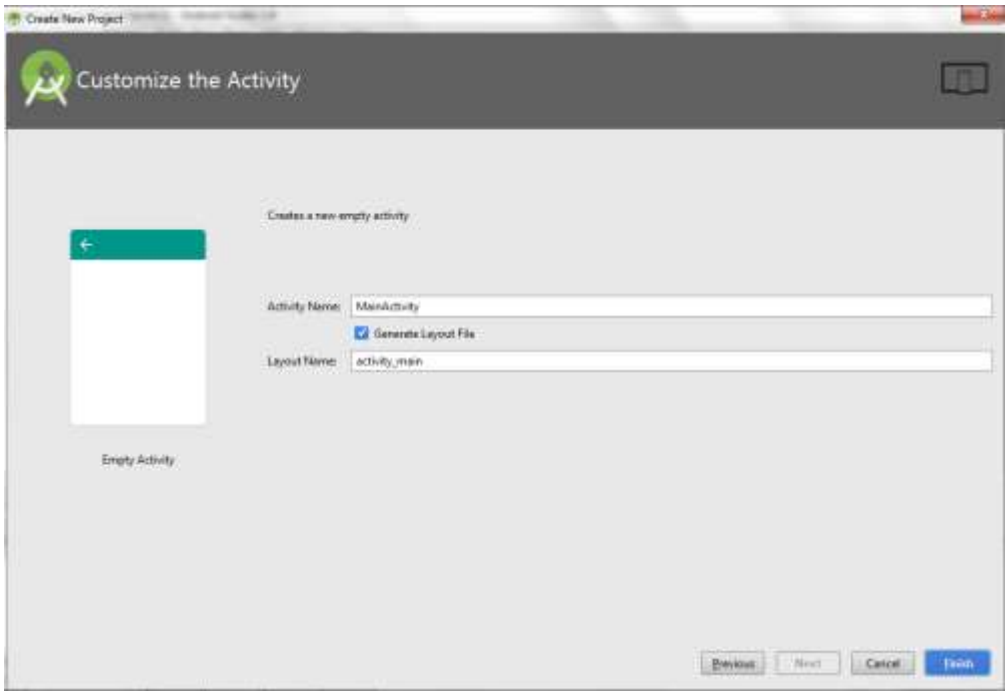
- Then select the **Minimum SDK** as shown below and click **Next**.



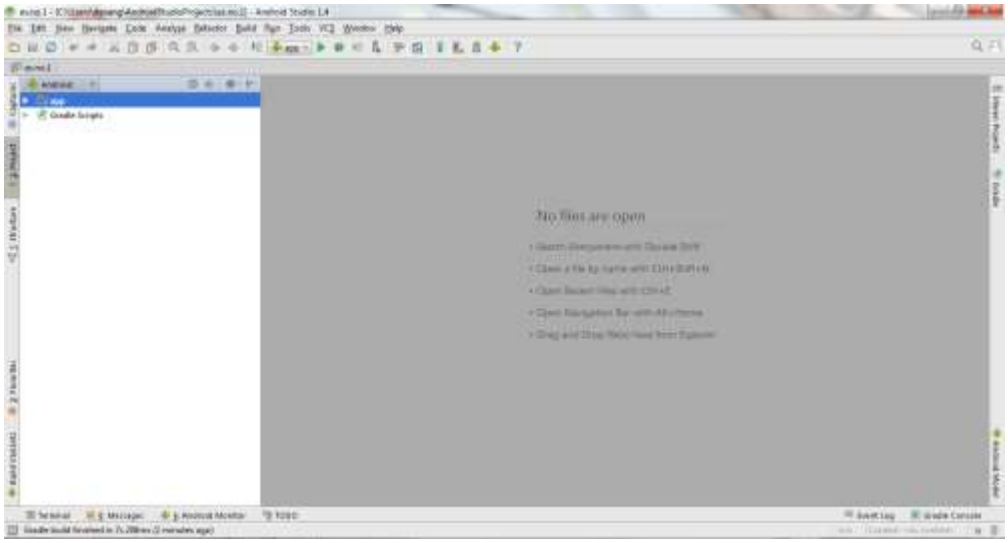
- Then select the **Empty Activity** and click **Next.**



- Finally click F**inish**.

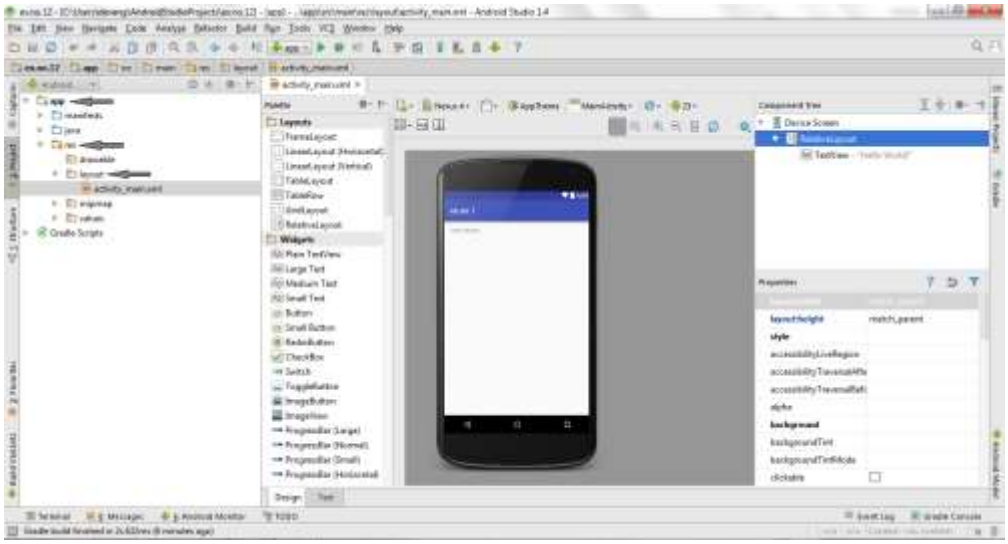


- It will take some time to build and load the project.
- After completion it will look as given below.

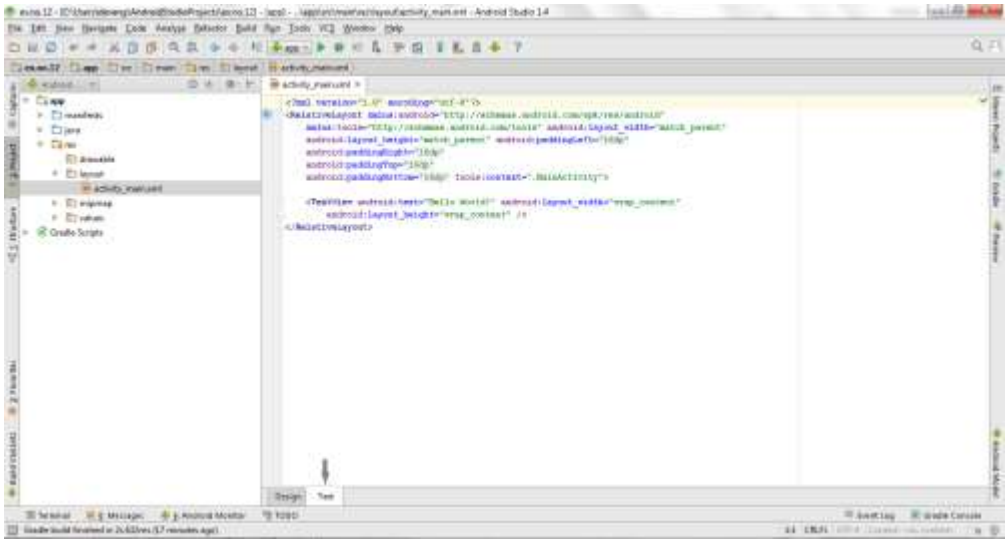


Designing layout for the Android Application:

- Click on **app -> res -> layout -> activity_main.xml**



- Now click on **Text** as shown below.

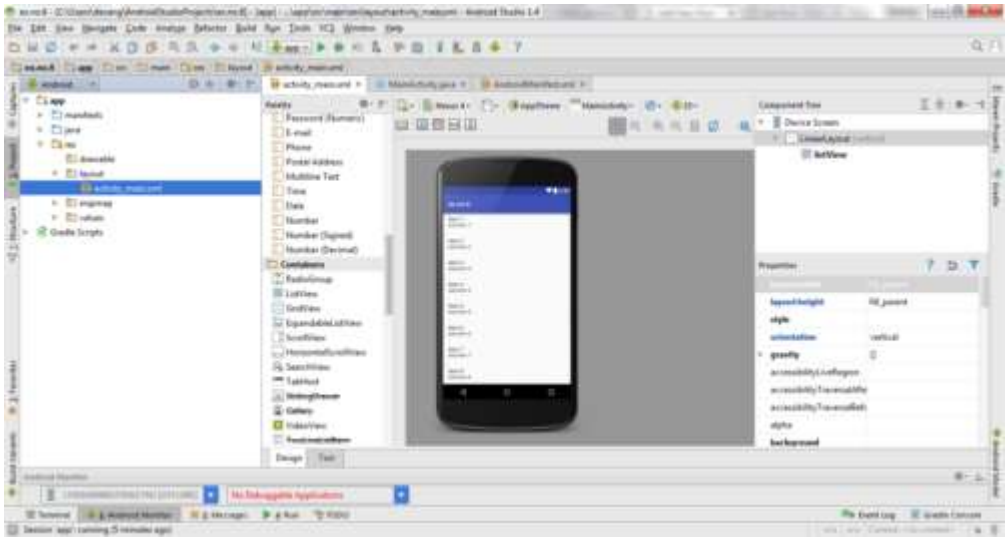


- Then delete the code which is there and type the code as given below.

Code for Activity_main.xml:

```
?
1
2 <?xml version="1.0" encoding="utf-8"?>
3 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
4     android:layout_width="fill_parent"
5     android:layout_height="fill_parent"
6     android:orientation="vertical" >
7
8     <ListView
9         android:id="@+id/listView"
10        android:layout_width="match_parent"
11        android:layout_height="wrap_content" />
12
13</LinearLayout>
```

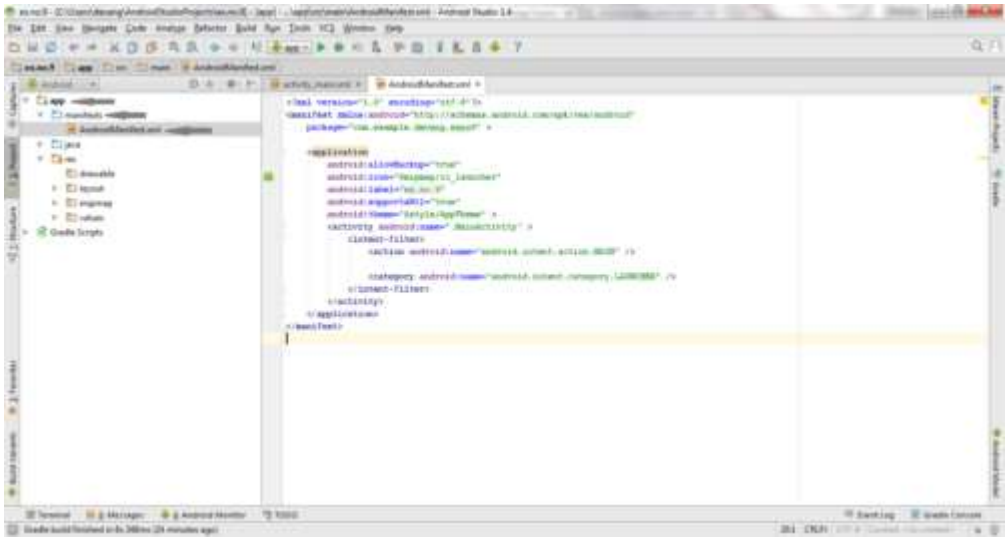
- Now click on **Design** and your application will look as given below.



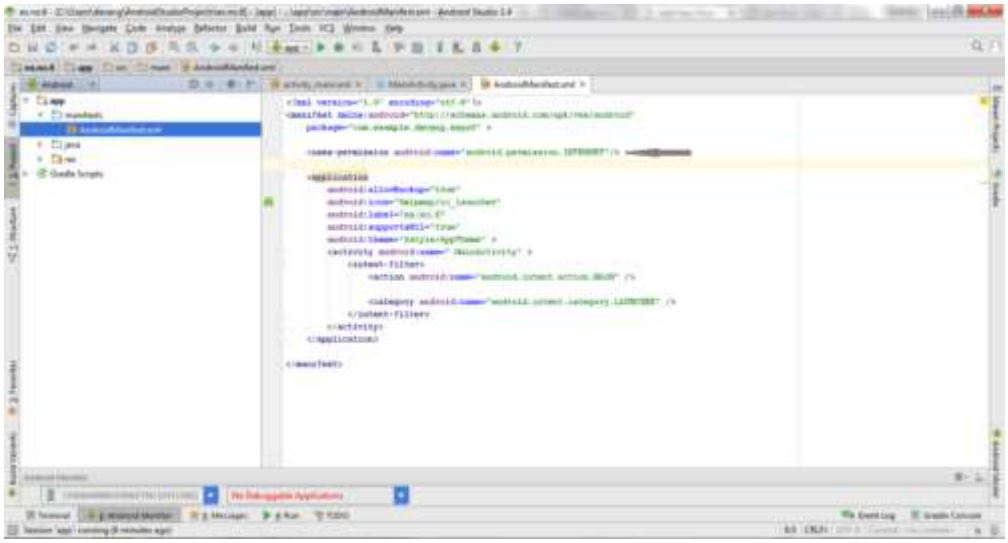
- So now the designing part is completed.

Adding permissions in Manifest for the Android Application:

- Click on **app -> manifests -> AndroidManifest.xml**



- Now include the **INTERNET** permissions in the AndroidManifest.xml file as shown below



Code for AndroidManifest.xml:

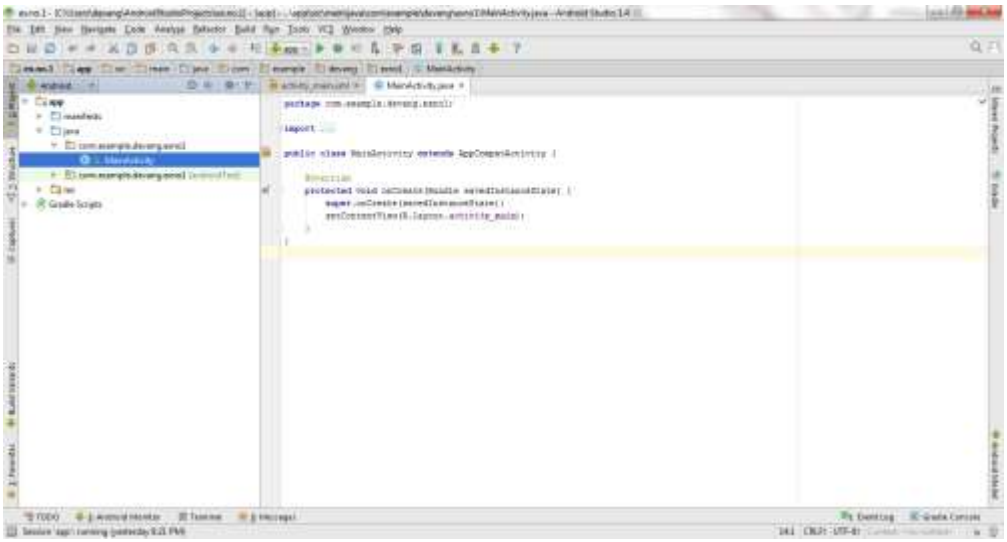
```
?
1 <?xml version="1.0" encoding="utf-8"?>
2 <manifest xmlns:android="http://schemas.android.com/apk/res/android"
3     package="com.example.exno6" >
4
5     <uses-permission android:name="android.permission.INTERNET"/>
6
7     <application
      android:allowBackup="true"
```

```
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:supportsRtl="true"
        android:theme="@style/AppTheme" >
        <activity android:name=".MainActivity" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER"
/>
            </intent-filter>
        </activity>
    </application>

</manifest>
```

- So now the Permissions are added in the Manifest.

Java Coding for the Android Application:

- Click on **app -> java -> com.example.exno6 -> MainActivity.**



- Then delete the code which is there and type the code as given below.

Code for MainActivity.java:

```
package com.example.exno6;

import android.app.ListActivity;
import android.content.Intent;
import android.net.Uri;
import android.os.AsyncTask;
import android.os.Bundle;
import android.view.View;
import android.widget.ArrayAdapter;
```

```
import android.widget.ListView;
import org.xmlpull.v1.XmlPullParser;
import org.xmlpull.v1.XmlPullParserException;
import org.xmlpull.v1.XmlPullParserFactory;
import java.io.IOException;
import java.io.InputStream;
import java.net.MalformedURLException;
import java.net.URL;
import java.util.ArrayList;
import java.util.List;

public class MainActivity extends ListActivity
{
    List headlines;
    List links;

    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        new MyAsyncTask().execute();
    }

    class MyAsyncTask extends AsyncTask<Object,Void,ArrayAdapter>
    {
        @Override
        protected ArrayAdapter doInBackground(Object[] params)
        {
            headlines = new ArrayList();
            links = new ArrayList();
            try
            {
                URL url = new URL("https://codingconnect.net/feed");
                XmlPullParserFactory factory =
XmlPullParserFactory.newInstance();
                factory.setNamespaceAware(false);
                XmlPullParser xpp = factory.newPullParser();

                // We will get the XML from an input stream
                xpp.setInput(getInputStream(url), "UTF_8");
                boolean insideItem = false;

                // Returns the type of current event: START_TAG,
END_TAG, etc..
                int eventType = xpp.getEventType();
                while (eventType != XmlPullParser.END_DOCUMENT)
                {
                    if (eventType == XmlPullParser.START_TAG)
                    {
                        if (xpp.getName().equalsIgnoreCase("item"))
                        {
                            insideItem = true;
                        }
                        else if (xpp.getName().equalsIgnoreCase("title"))
                        {
                            if (insideItem)
                                headlines.add(xpp.nextText()); //extract
the headline
                        }
                        else if (xpp.getName().equalsIgnoreCase("link"))
```

```
                        {
                            if (insideItem)
                                links.add(xpp.nextText()); //extract the
link of article
                        }
                    }
                    else if(eventType==XmlPullParser.END_TAG &&
xpp.getName().equalsIgnoreCase("item"))
                    {
                        insideItem=false;
                    }
                    eventType = xpp.next(); //move to next element
                }

            }
            catch (MalformedURLException e)
            {
                e.printStackTrace();
            }
            catch (XmlPullParserException e)
            {
                e.printStackTrace();
            }
            catch (IOException e)
            {
                e.printStackTrace();
            }
            return null;
        }
        protected void onPostExecute(ArrayAdapter adapter)
        {
            adapter = new ArrayAdapter(MainActivity.this,
android.R.layout.simple_list_item_1, headlines);
            setListAdapter(adapter);
        }
    }

    @Override
    protected void onListItemClick(ListView l, View v, int position, long
id)
    {
        Uri uri = Uri.parse((links.get(position)).toString());
        Intent intent = new Intent(Intent.ACTION_VIEW, uri);
        startActivity(intent);
    }

    public InputStream getInputStream(URL url)
    {
        try
        {
            return url.openConnection().getInputStream();
        }
        catch (IOException e)
        {
            return null;
        }
    }
}
```

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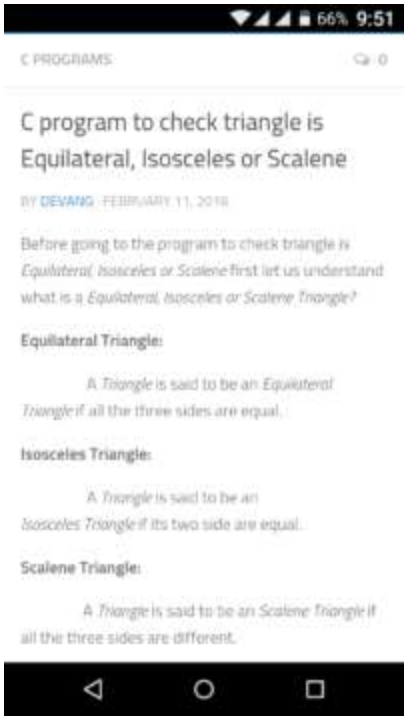
- So now the Coding part is also completed.
- Now run the application to see the output.

Output:



Result:

Thus Android Application that makes use of RSS Feed is developed and executed successfully.