Android Class

List View in Android

List View

- Android ListView is a view which groups several items and display them in vertical scrollable list.

- The list items are automatically inserted to the list using an Adapter that pulls content from a source such as an array or database.

Properties Of Listview

No	Attribute Name	Description
1	**android:id**	This is the ID which uniquely identifies the layout.
2	**android:divider**	This is drawable or color to draw between list items.
3	**android:dividerHeight**	This specifies height of the divider. This could be in px, dp, sp.

What is Adapter ?

- An adapter actually bridges between UI components and the data source that fill data into UI Component.

- Adapter holds the data and send the data to adapter view.

- The view can takes the data from adapter view and shows the data on different views like as spinner, list view, grid view etc.

- The ListView and GridView are subclasses of AdapterView.

Array Adapter ?

- Array adapter used when your data source is an array.

- By default, ArrayAdapter creates a view for each array item by calling toString() on each item and placing the contents in a TextView.

- Once you have array adapter created, then simply call **setAdapter()** method on your ListView object.

Syntax

- **Syntax:-**

```
ArrayAdapter adapter = new
ArrayAdapter<String>(this,R.layout.ListView,StringArray);
```
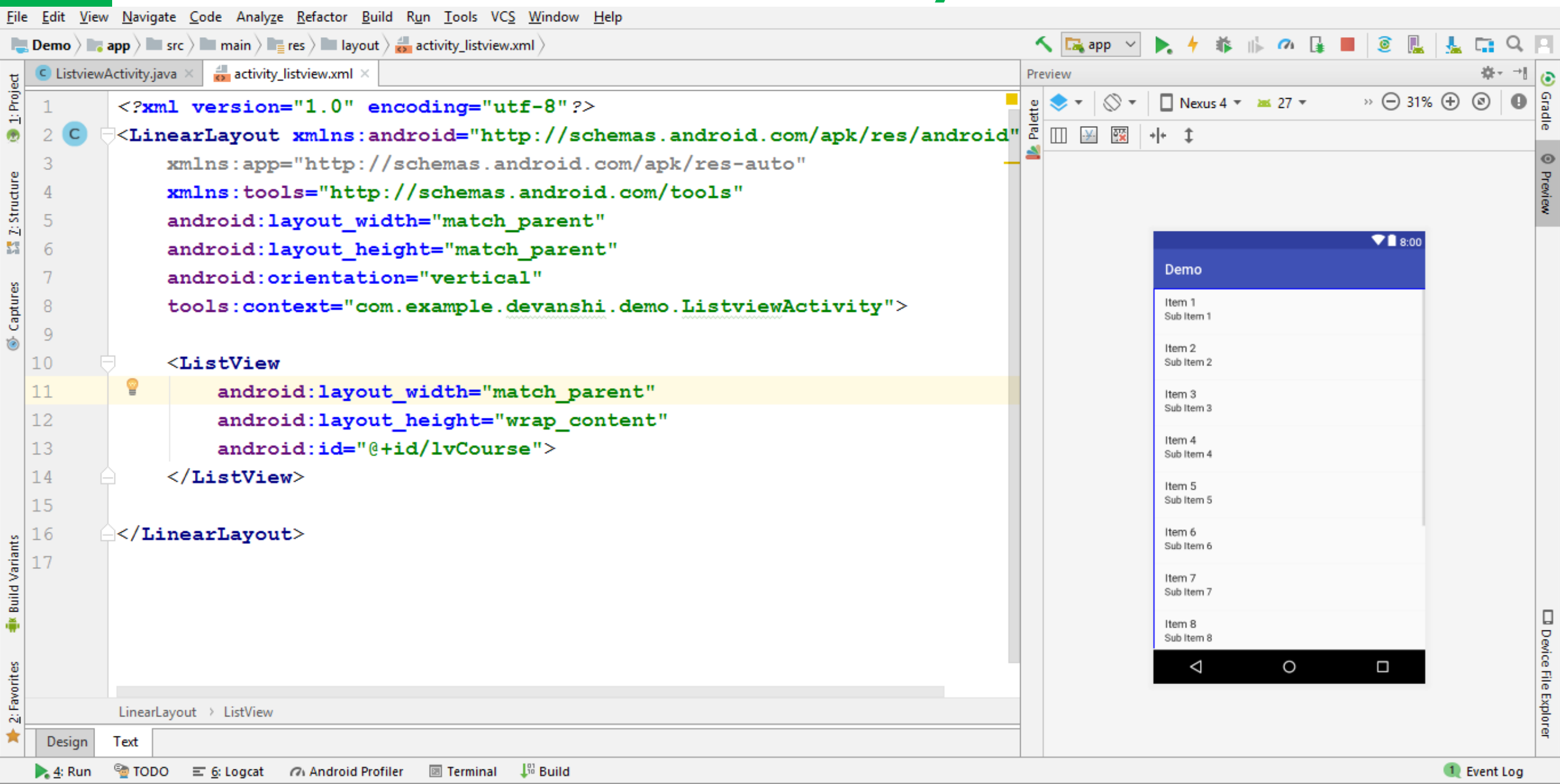
- Here,
  - First argument **this** is the **application context.**
  - Second argument will be **layout defined in XML file** and having **TextView** for each string in the array.
  - Third argument is **an array of strings** which will be populated in the text view.
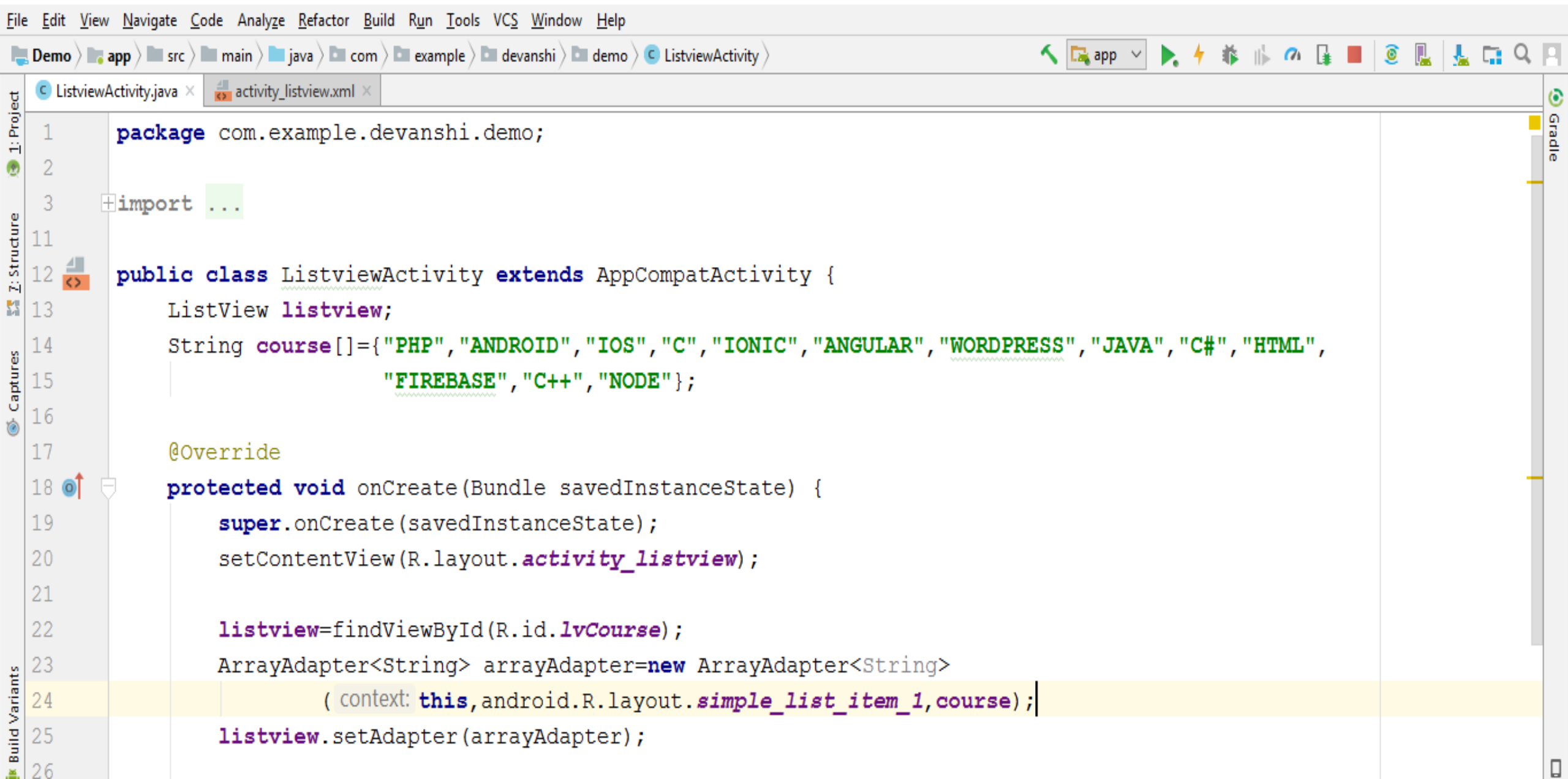
Screenshot Of activity_listview.xml

Demo › app › src › main › res › layout › activity_listview.xml

app

ListviewActivity.java   activity_listview.xml

Preview

```xml
1   <?xml version="1.0" encoding="utf-8"?>
2   <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3       xmlns:app="http://schemas.android.com/apk/res-auto"
4       xmlns:tools="http://schemas.android.com/tools"
5       android:layout_width="match_parent"
6       android:layout_height="match_parent"
7       android:orientation="vertical"
8       tools:context="com.example.devanshi.demo.ListviewActivity">
9
10      <ListView
11          android:layout_width="match_parent"
12          android:layout_height="wrap_content"
13          android:id="@+id/lvCourse">
14      </ListView>
15
16  </LinearLayout>
17
```

Nexus 4 27 31%

Demo

| Item 1 |
| Sub Item 1 |

| Item 2 |
| Sub Item 2 |

| Item 3 |
| Sub Item 3 |

| Item 4 |
| Sub Item 4 |

| Item 5 |
| Sub Item 5 |

| Item 6 |
| Sub Item 6 |

| Item 7 |
| Sub Item 7 |

| Item 8 |
| Sub Item 8 |

LinearLayout › ListView

Design   Text

4: Run   TODO   6: Logcat   Android Profiler   Terminal   Build   Event Log

Screenshot Of ListviewActivity.java

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

Demo › app › src › main › java › com › example › devanshi › demo › ListviewActivity

ListviewActivity.java ×   activity_listview.xml ×

```java
1    package com.example.devanshi.demo;

2

3    import ...

11

12   public class ListviewActivity extends AppCompatActivity {

13       ListView listview;

14       String course[]={"PHP","ANDROID","IOS","C","IONIC","ANGULAR","WORDPRESS","JAVA","C#","HTML",

15               "FIREBASE","C++","NODE"};

16

17       @Override

18       protected void onCreate(Bundle savedInstanceState) {

19           super.onCreate(savedInstanceState);

20           setContentView(R.layout.activity_listview);

21

22           listview=findViewById(R.id.lvCourse);

23           ArrayAdapter<String> arrayAdapter=new ArrayAdapter<String>

24                   ( context: this,android.R.layout.simple_list_item_1,course);

25           listview.setAdapter(arrayAdapter);

26
```

Click Event Of Listview

- To set click event on every item of Listview **setOnItemClickListener** is used.

- **Syntax:-**

listview.setOnItemClickListener(new AdapterView.OnItemClickListener() {

    @Override

    public void onItemClick(AdapterView<?> parent, View view, int position, long id)

    {

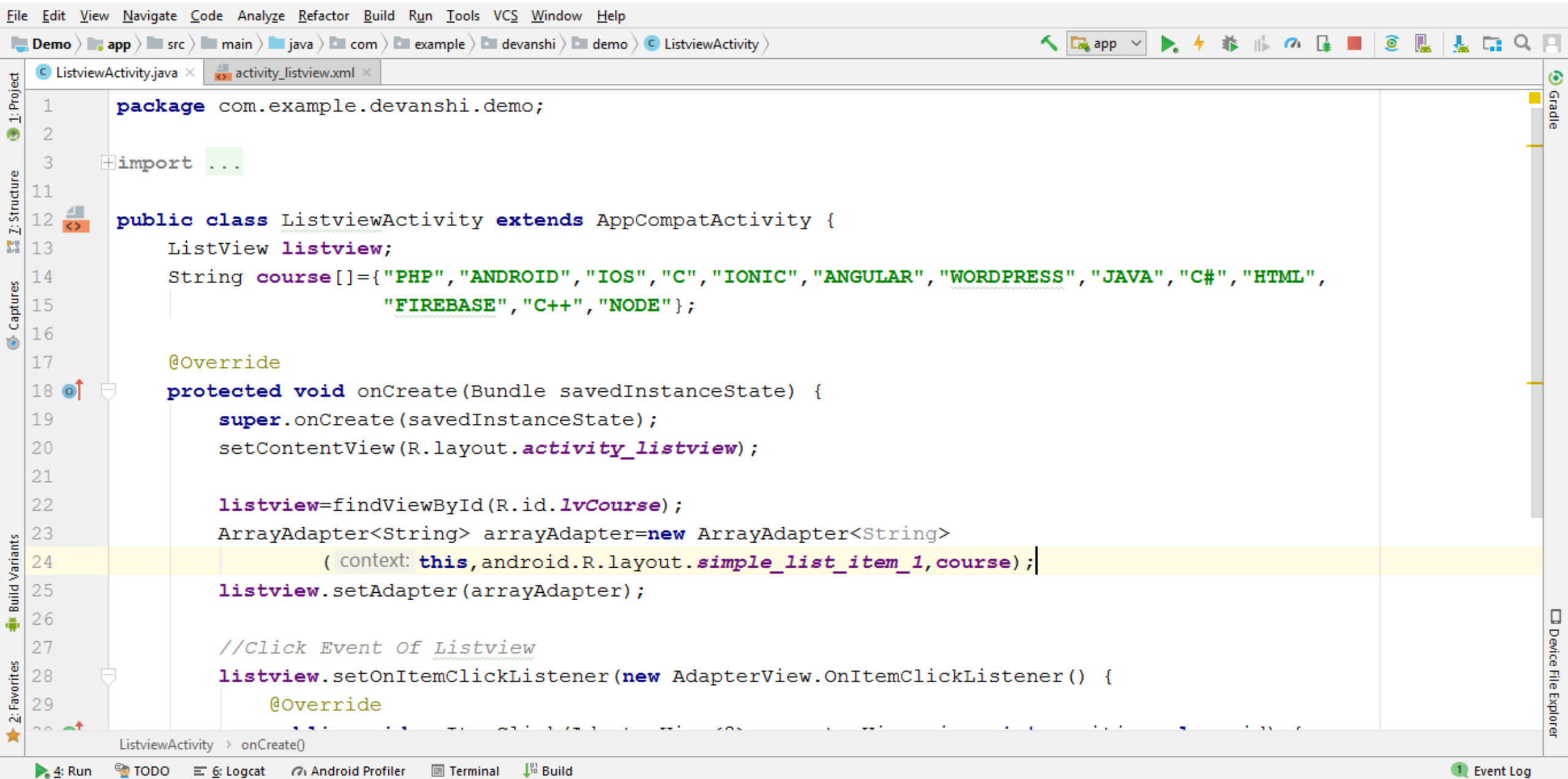   //Code To Be Executed

    }

  });

Screenshot Of activity_listview.xml

ListviewActivity.java   activity_listview.xml

```xml
1    <?xml version="1.0" encoding="utf-8"?>
2    <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3        xmlns:app="http://schemas.android.com/apk/res-auto"
4        xmlns:tools="http://schemas.android.com/tools"
5        android:layout_width="match_parent"
6        android:layout_height="match_parent"
7        android:orientation="vertical"
8        tools:context="com.example.devanshi.demo.ListviewActivity">
9
10       <ListView
11           android:layout_width="match_parent"
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13           android:id="@+id/lvCourse">
14       </ListView>
15
16   </LinearLayout>
17
```

Preview

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Demo

Item 1
Sub Item 1

Item 2
Sub Item 2

Item 3
Sub Item 3

Item 4
Sub Item 4

Item 5
Sub Item 5

Item 6
Sub Item 6

Item 7
Sub Item 7

Item 8
Sub Item 8

LinearLayout › ListView

Design   Text

4: Run   TODO   6: Logcat   Android Profiler   Terminal   Build   Event Log

Screenshot Of ListviewActivity.java

ListviewActivity.java ×   activity_listview.xml ×

```java
1   package com.example.devanshi.demo;
2
3   import ...
11
12  public class ListviewActivity extends AppCompatActivity {
13      ListView listview;
14      String course[]={"PHP","ANDROID","IOS","C","IONIC","ANGULAR","WORDPRESS","JAVA","C#","HTML",
15                      "FIREBASE","C++","NODE"};
16
17      @Override
18      protected void onCreate(Bundle savedInstanceState) {
19          super.onCreate(savedInstanceState);
20          setContentView(R.layout.activity_listview);
21
22          listview=findViewById(R.id.lvCourse);
23          ArrayAdapter<String> arrayAdapter=new ArrayAdapter<String>
24                  ( context: this,android.R.layout.simple_list_item_1,course);
25          listview.setAdapter(arrayAdapter);
26
27          //Click Event Of Listview
28          listview.setOnItemClickListener(new AdapterView.OnItemClickListener() {
29              @Override
```

ListviewActivity › onCreate()

Cont...

Demo › app › src › main › java › com › example › devanshi › demo › ⒸListviewActivity

ⒸListviewActivity.java ×   activity_listview.xml ×

```java
19          super.onCreate(savedInstanceState);
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22          listview=findViewById(R.id.lvCourse);
23          ArrayAdapter<String> arrayAdapter=new ArrayAdapter<String>
24                  ( context: this,android.R.layout.simple_list_item_1,course);
25          listview.setAdapter(arrayAdapter);
26
27          //Click Event Of Listview
28          listview.setOnItemClickListener(new AdapterView.OnItemClickListener() {
29              @Override
30              public void onItemClick(AdapterView<?> parent, View view, int position, long id) {
31                  Toast.makeText(getApplicationContext(), course[position], Toast.LENGTH_SHORT).show();
32                  }
33          });
34      }
35  }
36
```

ListviewActivity › onCreate()

4: Run   TODO   6: Logcat   Android Profiler   Terminal   Build   Event Log
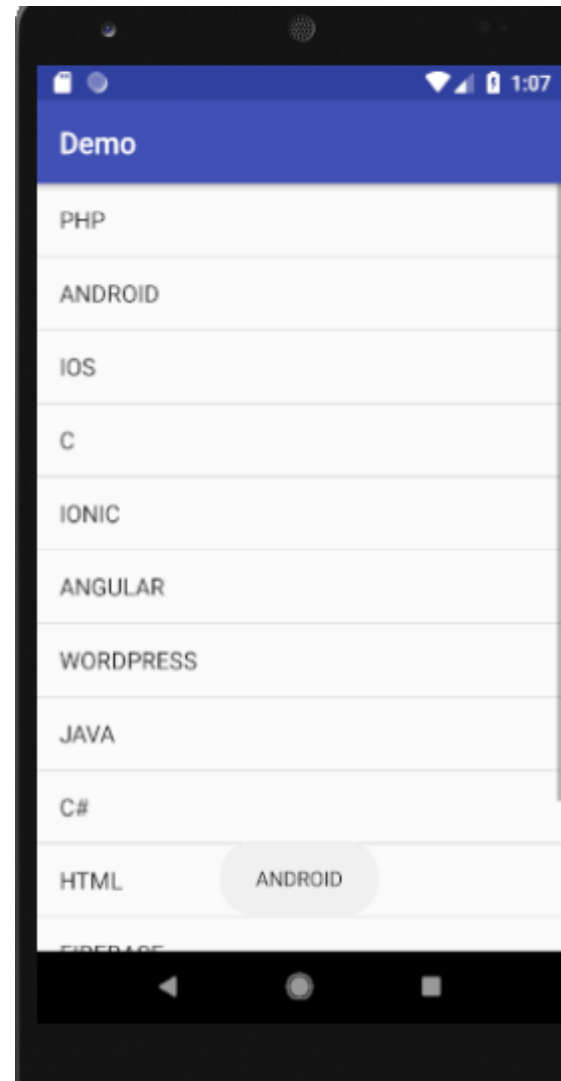
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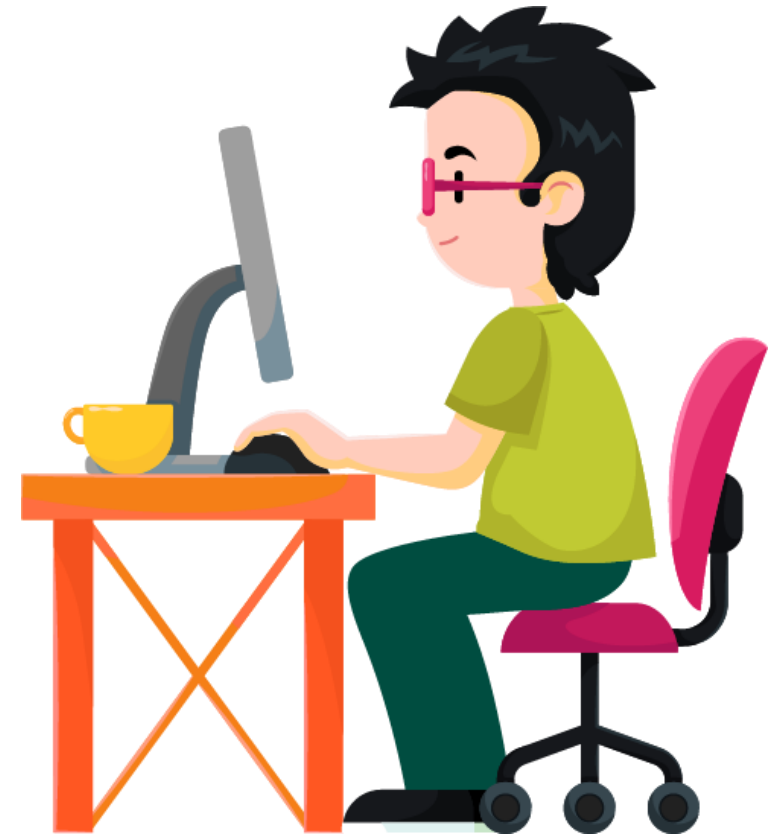
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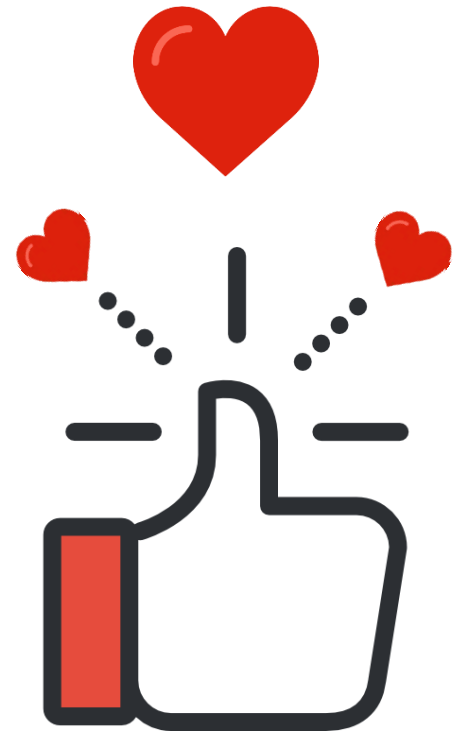
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