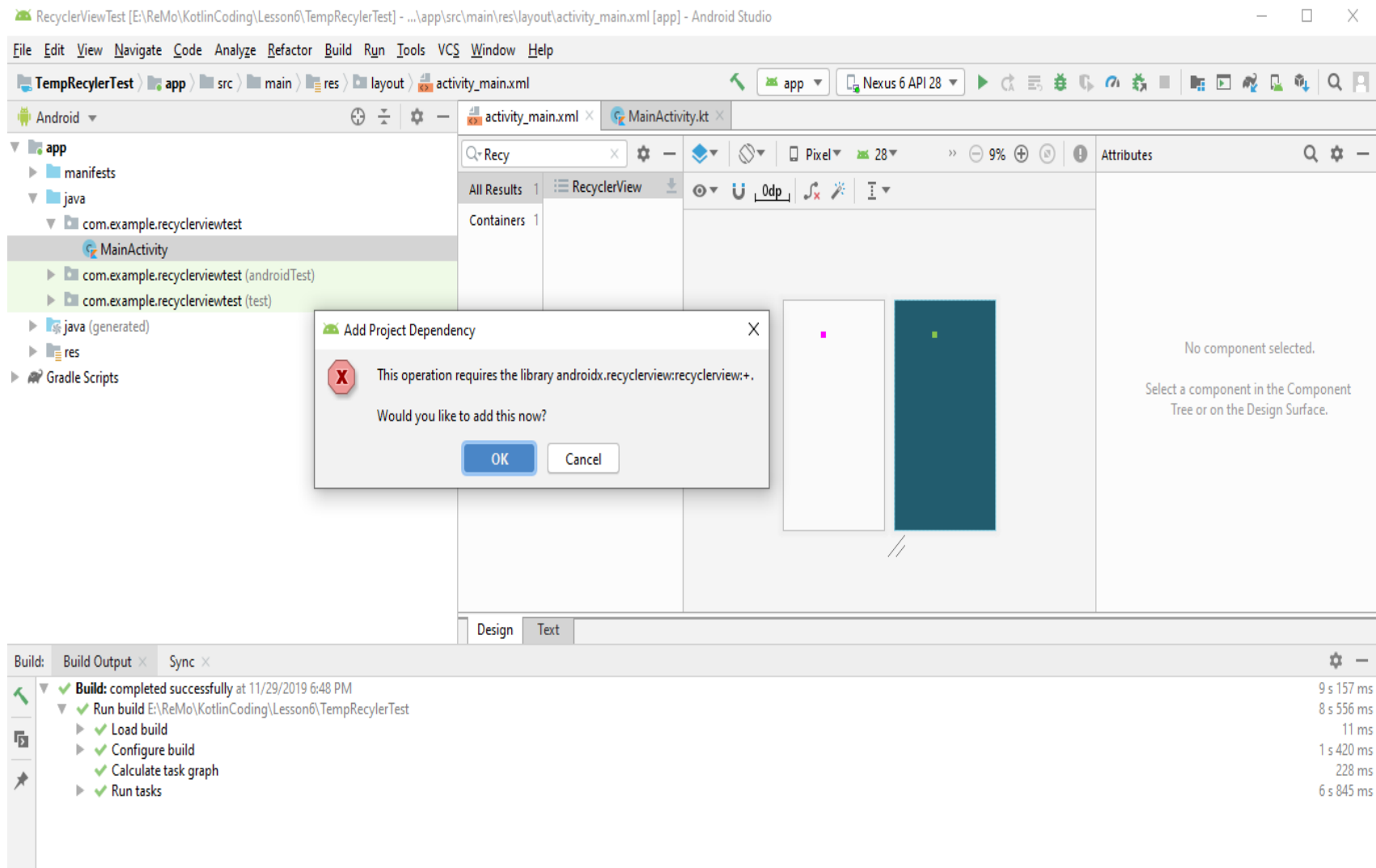
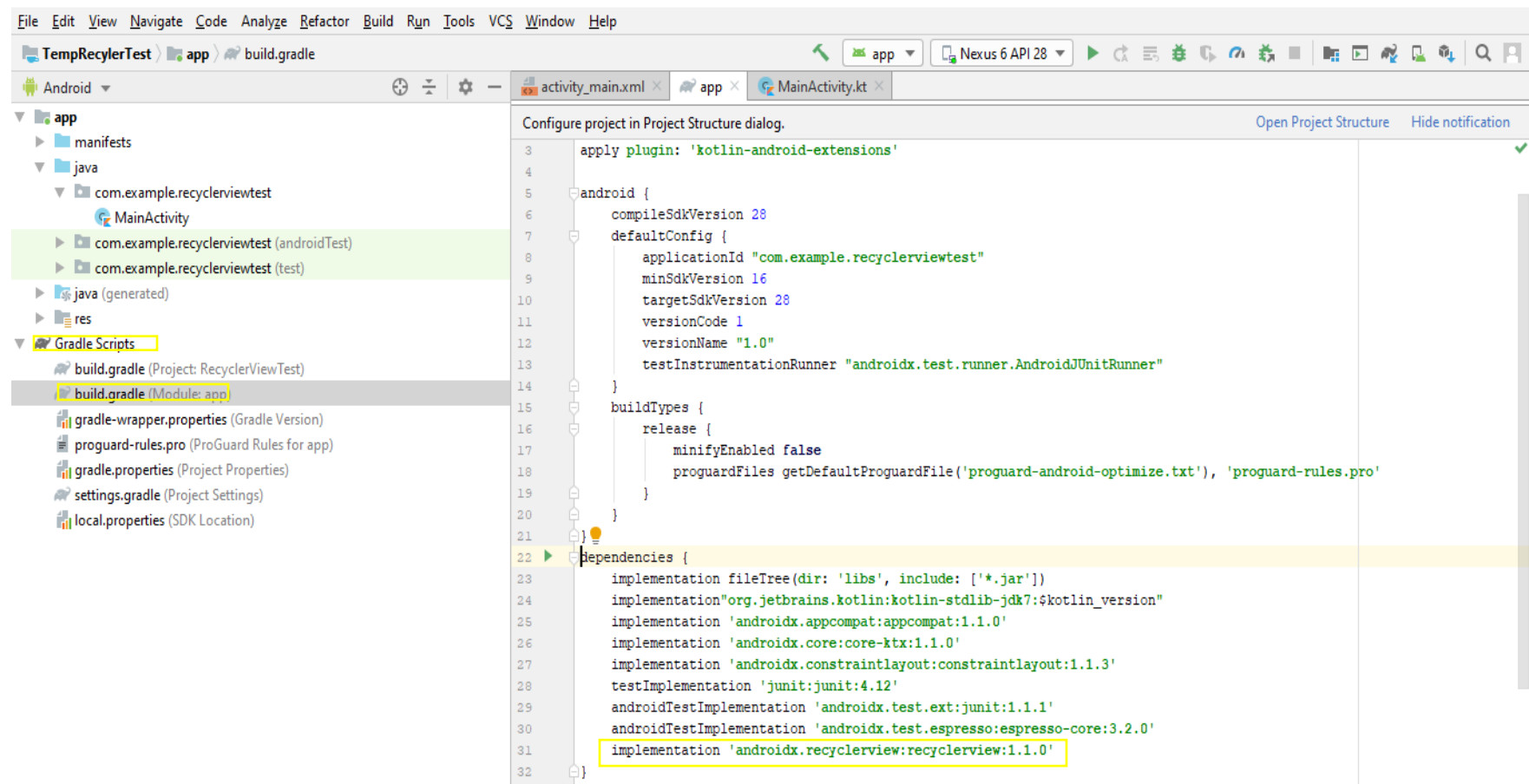


Step 1: Create a new Project and open activity_main.xml, remove the TextView. Go to your XML Design editor and drag RecyclerView, automatically you will get the warning to include RecyclerView Dependency on the gradle. Click OK.

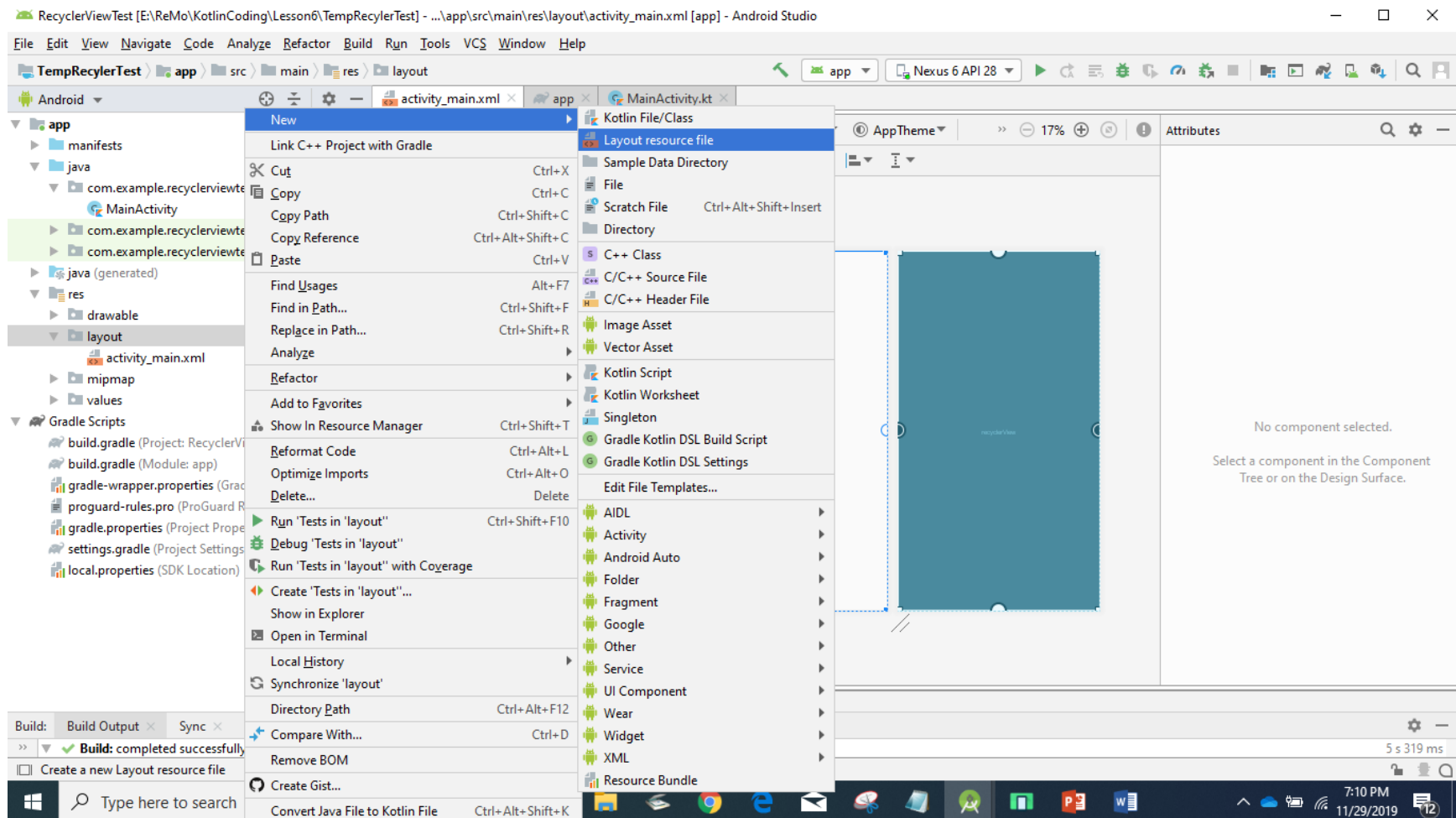


Step 2: To check the added dependency, selecting the highlighted part on your Project Explorer. You can able to see the below dependency on the build.gradle(Module:app)

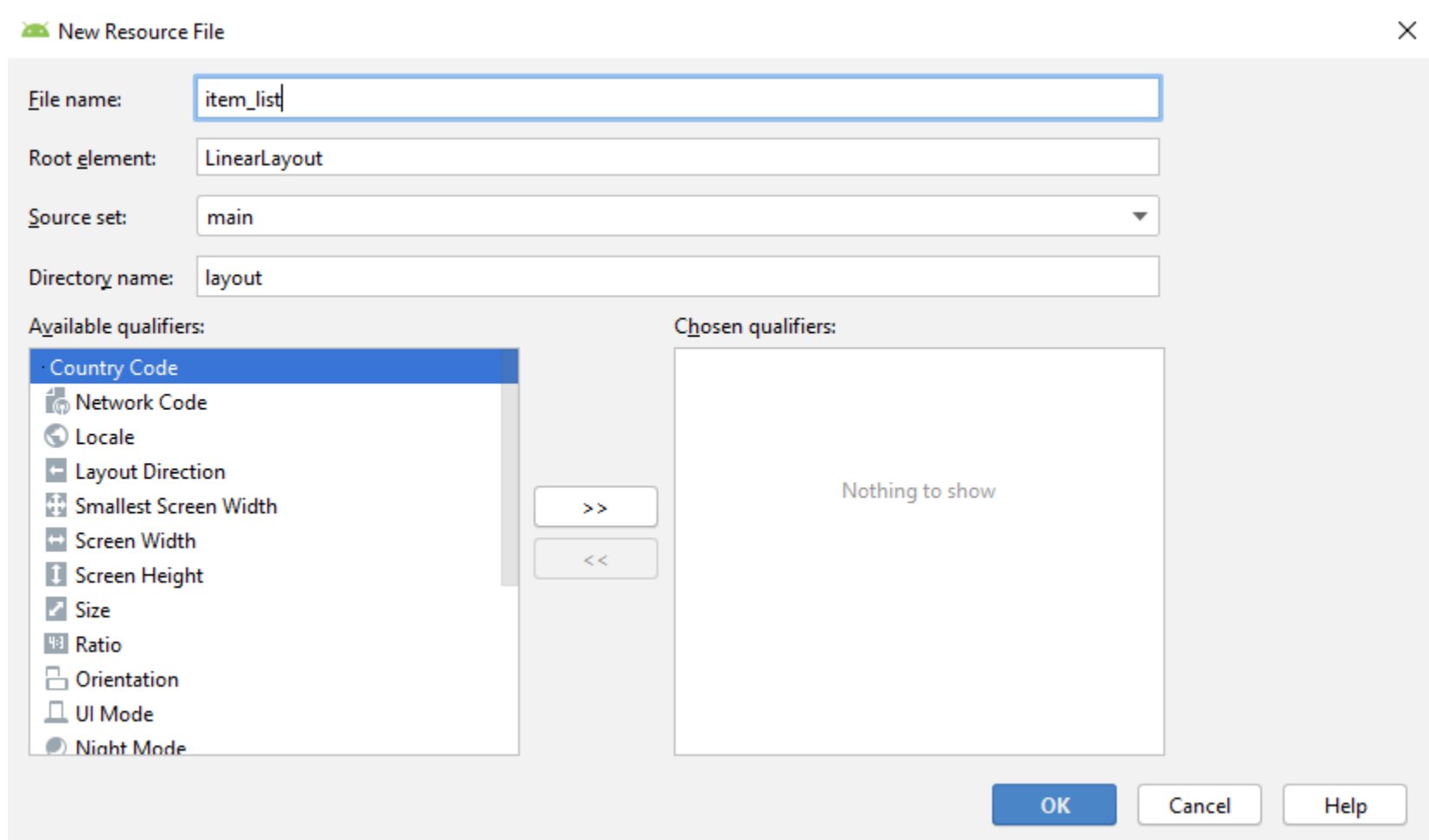
implementation '**androidx.recyclerview:recyclerview:1.1.0**'



Step 3: Create Layout according to your requirement to list on RecyclerView. So create a new Layout resource file as specified below



Step4 : Provide the name of your Layout



The image shows the 'New Resource File' dialog box in an Android Studio environment. The dialog has a title bar with an Android icon and a close button. It contains several input fields and a list of qualifiers.

File name:

Root element:

Source set:

Directory name:

Available qualifiers:

- Country Code
- Network Code
- Locale
- Layout Direction
- Smallest Screen Width
- Screen Width
- Screen Height
- Size
- Ratio
- Orientation
- UI Mode
- Night Mode

Chosen qualifiers:

Nothing to show

>>

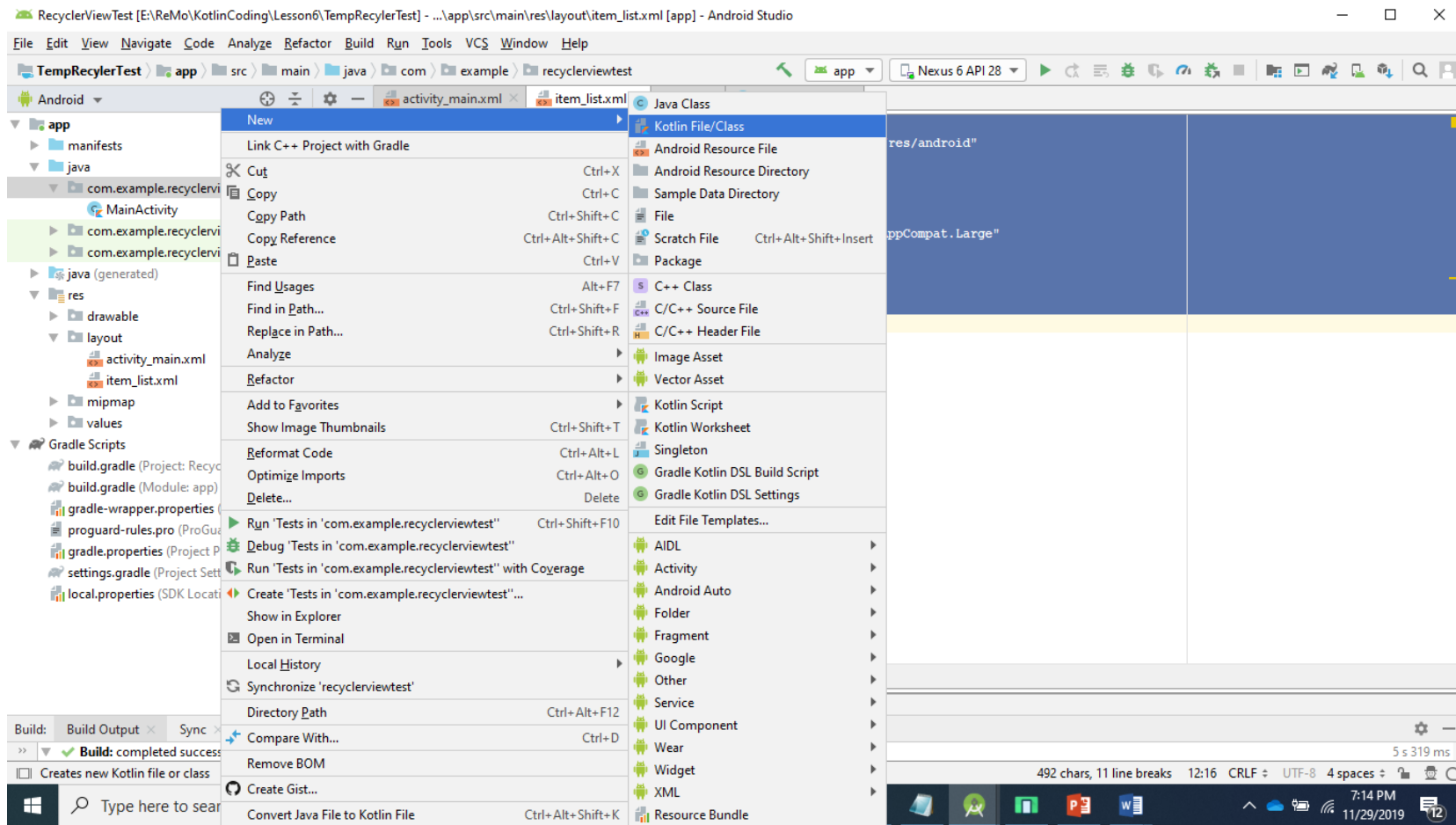
<<

OK Cancel Help

Step 5: Type the following code in your item_list.xml. Only one TextView is used for this example. You can customize according to your needs.

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="match_parent"
    android:layout_height="wrap_content">
    <TextView
        android:textAppearance="@style/Base.TextAppearance.AppCompat.Large"
        android:id="@+id/name"
        android:text="Course Name"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />
</LinearLayout>
```

Step 6: Create MyAdapter.kt as per the screen shot and name is as MyAdapter.kt.



Step 7: Create a Class as Mentioned below. Your class should have a constructor to accept the input list and should inherit from RecyclerView.Adapter<Type>. The type be an your own inner class Which is here MyViewHolder from MyAdapter class. MyViewHolder inherit from which accepts a view RecyclerView.ViewHolder(itemView)

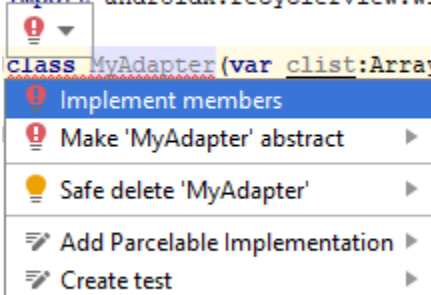
```
class MyAdapter(var clist:ArrayList<String>) : RecyclerView.Adapter<MyAdapter.MyViewHolder>(){  
}
```

Step 9: You will get errors as below

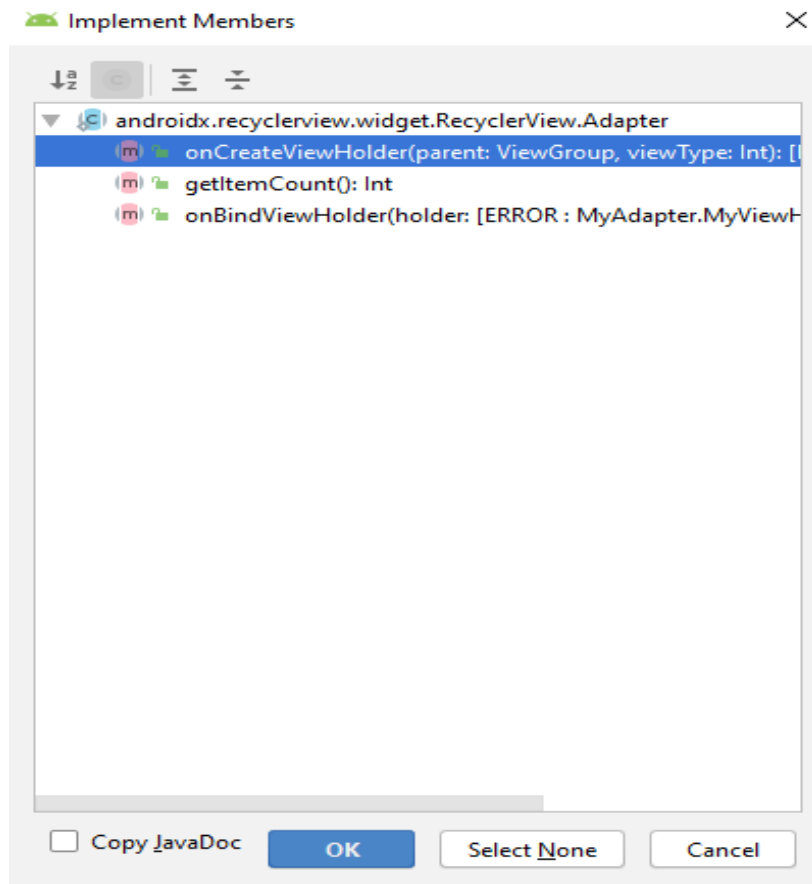
```
package com.example.recyclerviewtest
```

```
import androidx.recyclerview.widget.RecyclerView
```

```
class MyAdapter(var clist:ArrayList<String>) : RecyclerView.Adapter<MyAdapter.MyViewHolder>() {
```



Step 10: Click the Red Error, you will get the methods needs to override from RecyclerView.Adapter, select all the methods as per the screen shot and click OK.



Step 11: Your code will look like this

```
class MyAdapter(var clist:ArrayList<String>) : RecyclerView.Adapter<MyAdapter.MyViewHolder>(){  
    override fun onCreateViewHolder(parent: ViewGroup, viewType: Int): MyAdapter.MyViewHolder {  
        TODO("not implemented") //To change body of created functions use File | Settings | File Templates.  
    }  
  
    override fun getItemCount(): Int {  
        TODO("not implemented") //To change body of created functions use File | Settings | File Templates.  
    }  
  
    override fun onBindViewHolder(holder: MyAdapter.MyViewHolder, position: Int) {  
        TODO("not implemented") //To change body of created functions use File | Settings | File Templates.  
    }  
}
```

Step 12: class MyAdapter accepts the list of Strings to show it on the RecyclerViewList from the constructor and also inherit from RecyclerView.Adapter<MyAdapter.MyViewHolder>() class as a type of MyViewHolder need to implement as a Inner class to show the view. Here is the complete code to get rid of errors. Remove the TODO part from the above code and use given below code

```
import android.view.LayoutInflater  
import android.view.View  
import android.view.ViewGroup  
import androidx.recyclerview.widget.RecyclerView  
import kotlinx.android.synthetic.main.item_list.view.*  
  
class MyAdapter(var clist:ArrayList<String>) : RecyclerView.Adapter<MyAdapter.MyViewHolder>(){  
    // Inflate the Layout to set in the RecyclerView and return the ViewHolder object  
    override fun onCreateViewHolder(parent: ViewGroup, viewType: Int): MyAdapter.MyViewHolder {  
        val v = LayoutInflater.from(parent?.context).inflate(R.layout.item_list, parent, false)  
        return MyViewHolder(v);  
    }  
}
```

// @return Size of the list of data.

```
override fun getItemCount(): Int {  
    return clist.size  
}
```

// Binds the Array<String> values in to the ViewHolder name TextView designed in the item_list.xml

```
override fun onBindViewHolder(holder: MyAdapter.MyViewHolder, position: Int) {  
    holder.cname.text = clist[position]  
}
```

*/*RecyclerView.Adapter accepts the generic type of your Adapter inner class ViewHolder type.*

*In this example Adapter class name is MyAdapter and the MyViewHolder is the inner class */*

```
class MyViewHolder(itemView: View): RecyclerView.ViewHolder(itemView) {  
    var cname = itemView.name
```

```
}  
}
```

Step 13: Do the implementation in the MainActivity.kt

MainActivity.kt

```
import androidx.appcompat.app.AppCompatActivity  
import android.os.Bundle  
import androidx.recyclerview.widget.LinearLayoutManager  
import kotlinx.android.synthetic.main.activity_main.*
```

```
class MainActivity : AppCompatActivity() {  
  
    // Declare ArrayList to store the course list  
    lateinit var list:ArrayList<String>  
    override fun onCreate(savedInstanceState: Bundle?) {
```

```

super.onCreate(savedInstanceState)
setContentView(R.layout.activity_main)
recyclerView?.layoutManager = LinearLayoutManager(this)

// Initialize the values
list = ArrayList(arrayListOf("CS471 Parallel Programming", "CS473 Mobile Device Programming", "CS472
WAP", "CS390 FPP", "CS401 MPP", "CS435Algorithms"))

// Create an object for the MyAdapter and pass the values to its constructor
var adpt = MyAdapter(list)
// Set the MyAdapter object to your RecyclerView component
recyclerView.adapter = adpt
}
}

```

Step 14: If you do everything as per the screen the instructions, after running will get the output as below



