

1 Gradle Scripts

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 - build.gradle (Project: ListViewRecyleTest)
 - build.gradle (Module: ListViewRecyleTest.app)**
 - gradle-wrapper.properties (Gradle Version)
 - proguard-rules.pro (ProGuard Rules for ListViewRecyleTest.app)

```
dependencies {  
    implementation 'androidx.recyclerview:recyclerview:1.1.0'  
  
    implementation 'androidx.appcompat:appcompat:1.3.1'  
    implementation 'com.google.android.material:material:1.4.0'  
    implementation 'androidx.constraintlayout:constraintlayout:2.1.1'  
    testImplementation 'junit:junit:4.+'  
    androidTestImplementation 'androidx.test.ext:junit:1.1.3'  
    androidTestImplementation 'androidx.test.espresso:espresso-core:3.4.0'  
}
```

2 mainactivity_main.xml

Einfügen der RecyclerView:

```
<androidx.recyclerview.widget.RecyclerView  
    android:id="@+id/recyclerView"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:orientation="horizontal" />
```

3 MainActivity

```
public class MainActivity extends AppCompatActivity {

    public static final String TAG = "Studenten";

    private StudentenAdapter adapter=null;
    private RecyclerView recyclerView = null;

    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        Studentenliste.getInstance().insertDummyDatas();

        recyclerView = (RecyclerView) findViewById(R.id.recyclerView);

        // Setting the layout as linear
        // layout for vertical orientation
        LinearLayoutManager layoutManager = new
        LinearLayoutManager(getApplicationContext());
        recyclerView.setLayoutManager(layoutManager);

        adapter = new StudentenAdapter(this);
        recyclerView.setAdapter(adapter);

    }
```

4 StudentenAdapter

```
import androidx.annotation.NonNull;
import androidx.recyclerview.widget.RecyclerView;

public class ViewHolder extends RecyclerView.ViewHolder {
    ImageView icon;
    TextView tvstdname;
    TextView tvmatrnr;
    TextView tvnote;

    public ViewHolder(View view) {
        super(view);
        icon = (ImageView) view.findViewById(R.id.icon);
        tvstdname = view.findViewById(R.id.tvrowstdname);
        tvmatrnr = view.findViewById(R.id.tvrowmatrnr);
        tvnote = view.findViewById(R.id.tvrownote);
    }
}

ArrayList<Student> liste = null;

// Constructor for initialization
public StudentenAdapter(Context context) {
    Studentenliste stdlisteInstanz = Studentenliste.getInstance();
    liste = stdlisteInstanz.liste;
}

@Override
public int getItemCount() {
    return liste.size();
}

@NonNull
@Override
public ViewHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
    View view =
    LayoutInflater.from(parent.getContext()).inflate(R.layout.row_layout, parent, false);

    // Passing view to ViewHolder
    StudentenAdapter.ViewHolder viewHolder = new StudentenAdapter.ViewHolder(view);
    return viewHolder;
}

@Override
public void onBindViewHolder(@NonNull ViewHolder holder, int position) {
    // TypeCast Object to int type
    Student std = liste.get(position);

    Log.i(MainActivity.TAG, "***** Position: "+position);

    holder.icon.setImageResource(std.getIdForDrawable());
    holder.tvstdname.setText(std.name);
    holder.tvmatrnr.setText(Integer.toString(std.matrnr));
    holder.tvnote.setText(Double.toString(std.note));
}
}
```