# Day 3 Adapters and Styles

The first half of this session will focus on teaching attendees the basics of Lists and Adapters in Android through simple examples. The second half will focus on styles and themes.

# Session Objectives / Key Learning Points

# By the end of the session students should –

# Understand what are the various selection widgets.

# Understand what are adapters.

# Understand why adapters should be used.

# Understand the different types of adapters.

# Be able to implement assignments using different types of adapters.

# Understand Styles and Themes.

# Apply basic Styles.

# Be able to create custom Style attributes, and apply them.

# Repository

# Repo - https://github.com/androidbootcamp/ShoppingApplication

# Initial Commit - e82470a0bfe95bc9b19cf46d49b3b8f40ed3b601

# Final Commit - 0b3ac943bdd8045eae76490f581a1c6e364abb50

# Session Overview

|  |  |  |
| --- | --- | --- |
| Activity | Time | Elapsed Time (hh:mm) |
| Make sure the recent pull of Kranti app is taken. | 00:05 | 00:05 |
| Introduce the Agenda | 00:02 | 00:07 |
| Introduce Selection Widgets | 00:03 | 00:10 |
| Demonstrate how to get the list of issues using what was learnt in the previous sessions | 00:02 | 00:12 |
| Introduce Adapters | 00:15 | 00:27 |
| Introduce Array Adapters | 00:05 | 00:32 |
| Implement Assignment 1 | 00:15 | 00: 47 |
| Discuss Assignment 1 solution | 00:05 | 00:52 |
| Introduce Custom Adapters | 00:10 | 01:02 |
| Implement Assignment 2 | 00:25 | 01:27 |
| Discuss Assignment 2 Solution | 00:15 | 01:42 |
| Introduce the concept of Pending Intents through a small example | 00:10 | 01:52 |

Session Notes:

What are selection widgets :

* Selection Widgets provide the ability to the user to perform any action on the items available

from the data source.

* Explain how one can get the list of issues using what was learnt in other sessions.

Adapters :

* Adapters provide a common interface to the data model behind a selection-style widget, such as a listbox.
* Android’s adapters are responsible for providing the roster of data for a selection widget plus converting

individual elements of data into specific views to be displayed inside the selection widget.

Array adapters:

* Android provides default adapters.
* The easiest adapter to use is ArrayAdapter — all you need to do is wrap one of these around a

Java array or java.util.List instance, and you have a fully-functioning adapter

* Explain the signature:

*ArrayAdapter<String> adapter = new ArrayAdapter<String>(context,*

*resource ID of a view to use,*

*actual array/list of items);*

Custom Adapters:

* Use Custom Adapters to make the ListView Widgets fancy.
* Explain the signature :

*public abstract*[*View*](http://developer.android.com/reference/android/view/view.html)*getView (int position,*[*View*](http://developer.android.com/reference/android/view/view.html)*convertView,*[*ViewGroup*](http://developer.android.com/reference/android/view/viewgroup.html)*parent)*

Pending Intents:

* A Pending Intent specifies an action to take in the future.
* It is an Intent action that you want to perform, but at a later time.
* Explain the signature:

*public static PendingIntent getActivity(Context context, int requestCode, Intent intent, int flags)*

* Demonstrate a small notification application using pending intents.

Assignments:

1)

Problem:

Implement an Array Adapter to get the list of issues from the Database.

Make each item in the list clickable and show a notification on clicking any item.

Implement the following steps in the Kranti app to get the list of views:

* + Include ListView in your layout.
  + Invoke setAdapter().
  + Use onListItemClick() so that you can click on any item in list and get a toast.

Solution:

A List View which has the title of the issues.

2)

Problem:

Implement a Custom Adapter to get the list of issues from the Database.

Solution:

A similar looking list as solution 1.