Adapter Workflow

An Adapter object acts as a bridge between a [view](https://developer.android.com/reference/android/widget/AdapterView.html) and the underlying data for that view.

Below are the steps in details:

1. The [RecyclerView](https://developer.android.com/reference/androidx/recyclerview/widget/RecyclerView.html) widget is a more advanced and flexible version of simple list view. This widget is used to display the list of all items in MLA application.
2. In the [RecyclerView](https://developer.android.com/reference/androidx/recyclerview/widget/RecyclerView.html) model, several different components work together to display the data. The overall container for the user interface is a [RecyclerView](https://developer.android.com/reference/androidx/recyclerview/widget/RecyclerView.html) object that we add to the layout.

In ‘MLAAdminViewFragment.java’, *mLa\_admin\_display\_recyyclervie*w is a container for the user interface, used to display list of admins. This container is specified in ‘fragment\_mla\_adminlist.xml’ layout under the res/layout directory.

Once the container is added to the layout, *onCreateView* method obtains a handle to the object and connect it to the layout manager. The layout manager can be LinearLayout manager or GridLayout manager. The [RecyclerView](https://developer.android.com/reference/androidx/recyclerview/widget/RecyclerView.html) fills itself with views provided by alayout manager.

Below is the code snippet:

*recyclerViewusers = view.findviewById(R.id.mla\_admin\_display\_recyclerview)*

*recyclerviewUsers.setLayoutManager(new LinearLayoutmanager(getActivity()))*

1. To feed all the data to the recycler view, *onPostExecute* creates an object of *MLAdminAdapter* class, *mlauserDisplayAdapter* that holding the retrieved list of admins.
2. Next, we associate *mlauserDisplayAdapter* with the recycler view by

*recyclerview.setadapter(mlauserDisplayAdapter)* before the layout manager renders the output in the ‘mLa\_admin\_display\_recyyclerview’ view.

When creating *mlauserDisplayAdapter* in ‘MLAAdminViewFragment.java’, ‘MLAAdminAdapter.java’ performs the following:

1. The items in the list are represented by view holder objects. These objects are instances of a class SimpleViewHolder extending [RecyclerView. ViewHolder](https://developer.android.com/reference/androidx/recyclerview/widget/RecyclerView.ViewHolder.html). Each view holder is in charge of displaying a single item. For example, if your list contains multiple admins, each view holder will represent a single admin.
2. View holder objects are managed by *mlaUserDisplayAdapter*. *mlaUserDisplayAdapter* creates view holders as needed.
3. The layout manager calls the adapter's *[onCreateViewHolder](https://developer.android.com/reference/androidx/recyclerview/widget/RecyclerView.Adapter.html" \l "onCreateViewHolder(android.view.ViewGroup,%20int))* method. This method constructs a new SimpleViewHolder object.
4. Then in [*onBindViewHolder*](https://developer.android.com/reference/androidx/recyclerview/widget/RecyclerView.Adapter.html#onBindViewHolder(VH,%20int)) method, *mlaUserDisplayAdapter* binds an data item from the dataset of *MLAAdminAdapter* to the SimpleViewHolder object created above.