## Exercise 2.1: Save Recipe (Basic Layout)

Create a new empty *Activity* for your project (File 🡪 New... 🡪 Activity 🡪 Empty Activity):

* Set the name to “*SaveRecipeActivity”*
* Select the option *“Launcher Activity“*

This *Activity* will allow you to add new recipes to your recipe book.

When running the app the launcher might show two icons, depending on what you selected when creating the *Activity*. However, each icon will start the original *Activity*. To switch to the new *Activity*, try to edit *AndroidManifest.xml,* such that the *RecipeDetailsActivity* is deactivated, and you can instead see the recipe form. We will fix this problem in an upcoming exercise.

The layout consists of the following components:

*ConstraintLayout* as base layout of the *Activity* with the following rows (see example on the right). You can wrap the *ConstraintLayout* with a *ScrollView*, as most likely the entire Activity won’t fit on the screen:

* *EditText* (*inputType=“text“)* to input the recipe name
* *Spinner* with selection of country of origin
* *EditText* (*inputType=“ textMultiLine* *“*) to input the ingredients
* EditText (*inputType=“ textMultiLine* *“*) to input the instructions
* A save button that triggers data validation (check if the *EditText* fields are empty and set error text if so) and adds the new recipe to the instance of *RecipeCollection*

For this exercise the layout should only be shown. The selection box (*Spinner*) for country of origin can remain empty. The “Save” button is inoperable.

Feel free to experiment with the *Layout* design.

## Exercise 2.2: Save Recipe (List of Countries)

Use the class *CountryCollection* from the Materials folder to populate the country Spinner:

* Create an appropriate *ArrayAdapter*[[1]](#footnote-1)
* Set it for the Spinner-Views (see lecture) using the *getCountries()* method

For sake of simplicity, we are going to use only European countries. Don’t worry about the rest of the code inside the class. It will be explained in a later.

Your app should now be able to select a country of origin for your recipe.

## Exercise 2.3: Save Recipe (Functionality)

Add a getter method for the *List<Recipe>* inside the *RecipeCollection* class, which will allow you to access the object and add new recipes to it. Register an *onClick()* handler for the save button. Check if any of the *EditText*s are empty and if so, set an appropriate error text message to the corresponding field. If everything is valid, take the values from the text fields and the *Spinner*, and use them to create a new recipe object and add it to the *Recipe* list. For now, it won’t be possible to see the objects inside the list. Log a message to confirm that the *Recipe* was created successfully.

Remarks:

* Single layout views can be found using *findViewById(R.id.id\_of\_view)*.
* The selected item of a spinner can be obtained with *getSelectedItem()*.
* The error message can be set using the method *setError().*

## Exercise 2.4: Recipe List (New Activity)

Create an additional *Activity* with a *ListView* to show all the recipes. Define a fitting layout for the ListView and its entries. Set it as the *Launcher Activity,* like in Exercise 2.1

Create an ArrayAdapter that supplies the view with its entries. Extract the recipe names from the collection to a *List* set it to the adapter.

1. <https://developer.android.com/reference/android/widget/ArrayAdapter.html> [↑](#footnote-ref-1)