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Auto Complete

To create a text entry widget that provides auto-complete suggestions, use the `AutoCompleteTextView` widget. Suggestions are received from a collection of strings associated with the widget through an `ArrayAdapter`.

In this tutorial, you will create a `AutoCompleteTextView` widget that provides suggestions for a country name.

1. Start a new project named *HelloAutoComplete*.

2. Create an XML file named `list_item.xml` and save it inside the `res/layout/` folder. Edit the file to look like this:

```xml
<?xml version="1.0" encoding="utf-8"?>
<TextView xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:padding="10dp"
    android:textSize="16sp"
    android:textColor="#000">
</TextView>
```

This file defines a simple `TextView` that will be used for each item that appears in the list of suggestions.

3. Open the `res/layout/main.xml` file and insert the following:

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="horizontal"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:padding="5dp">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Country" />
    <AutoCompleteTextView android:id="@+id/autocomplete_country"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_marginLeft="5dp"/>
</LinearLayout>
```

The `TextView` is a label that introduces the `AutoCompleteTextView` widget.

4. Open `HelloAutoComplete.java` and insert the following code for the `onCreate()` method:

```java
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.main);

    AutoCompleteTextView textView = (AutoCompleteTextView) findViewById
(R.id.autocomplete_country);
```

```
    ArrayAdapter<String> adapter = new ArrayAdapter<String>(this,
R.layout.list_item, COUNTRIES);
    textView.setAdapter(adapter);
}
```

After the content view is set to the `main.xml` layout, the `AutoCompleteTextView` widget is captured from the layout with `findViewById(int)`. A new `ArrayAdapter` is then initialized to bind the `list_item.xml` layout to each list item in the `COUNTRIES` string array (defined in the next step). Finally, `setAdapter()` is called to associate the `ArrayAdapter` with the `AutoCompleteTextView` widget so that the string array will populate the list of suggestions.

5. Inside the `HelloAutoComplete` class, add the string array:

```
static final String[] COUNTRIES = new String[] {
  "Afghanistan", "Albania", "Algeria", "American Samoa", "Andorra",
  "Angola", "Anguilla", "Antarctica", "Antigua and Barbuda", "Argentina",
  "Armenia", "Aruba", "Australia", "Austria", "Azerbaijan",
  "Bahrain", "Bangladesh", "Barbados", "Belarus", "Belgium",
  "Belize", "Benin", "Bermuda", "Bhutan", "Bolivia",
  "Bosnia and Herzegovina", "Botswana", "Bouvet Island", "Brazil", "British
Indian Ocean Territory",
  "British Virgin Islands", "Brunei", "Bulgaria", "Burkina Faso", "Burundi",
  "Cote d'Ivoire", "Cambodia", "Cameroon", "Canada", "Cape Verde",
  "Cayman Islands", "Central African Republic", "Chad", "Chile", "China",
  "Christmas Island", "Cocos (Keeling) Islands", "Colombia", "Comoros", "Congo",
  "Cook Islands", "Costa Rica", "Croatia", "Cuba", "Cyprus", "Czech Republic",
  "Democratic Republic of the Congo", "Denmark", "Djibouti", "Dominica",
"Dominican Republic",
  "East Timor", "Ecuador", "Egypt", "El Salvador", "Equatorial Guinea",
"Eritrea",
  "Estonia", "Ethiopia", "Faeroe Islands", "Falkland Islands", "Fiji", "Finland",
  "Former Yugoslav Republic of Macedonia", "France", "French Guiana", "French
Polynesia",
  "French Southern Territories", "Gabon", "Georgia", "Germany", "Ghana",
"Gibraltar",
  "Greece", "Greenland", "Grenada", "Guadeloupe", "Guam", "Guatemala", "Guinea",
"Guinea-Bissau",
  "Guyana", "Haiti", "Heard Island and McDonald Islands", "Honduras", "Hong
Kong", "Hungary",
  "Iceland", "India", "Indonesia", "Iran", "Iraq", "Ireland", "Israel", "Italy",
"Jamaica",
  "Japan", "Jordan", "Kazakhstan", "Kenya", "Kiribati", "Kuwait", "Kyrgyzstan",
"Laos",
  "Latvia", "Lebanon", "Lesotho", "Liberia", "Libya", "Liechtenstein",
"Lithuania", "Luxembourg",
  "Macau", "Madagascar", "Malawi", "Malaysia", "Maldives", "Mali", "Malta",
"Marshall Islands",
  "Martinique", "Mauritania", "Mauritius", "Mayotte", "Mexico", "Micronesia",
"Moldova",
  "Monaco", "Mongolia", "Montserrat", "Morocco", "Mozambique", "Myanmar",
"Namibia",
  "Nauru", "Nepal", "Netherlands", "Netherlands Antilles", "New Caledonia", "New
Zealand",
  "Nicaragua", "Niger", "Nigeria", "Niue", "Norfolk Island", "North Korea",
"Northern Marianas",
  "Norway", "Oman", "Pakistan", "Palau", "Panama", "Papua New Guinea",
```
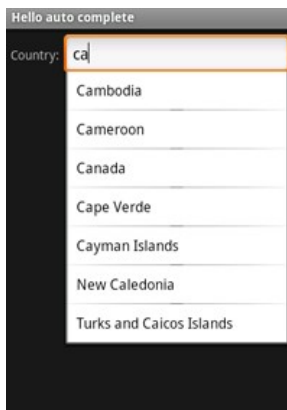
```
"Paraguay", "Peru",
  "Philippines", "Pitcairn Islands", "Poland", "Portugal", "Puerto Rico",
"Qatar",
  "Reunion", "Romania", "Russia", "Rwanda", "Sqo Tome and Principe", "Saint
Helena",
  "Saint Kitts and Nevis", "Saint Lucia", "Saint Pierre and Miquelon",
  "Saint Vincent and the Grenadines", "Samoa", "San Marino", "Saudi Arabia",
"Senegal",
  "Seychelles", "Sierra Leone", "Singapore", "Slovakia", "Slovenia", "Solomon
Islands",
  "Somalia", "South Africa", "South Georgia and the South Sandwich Islands",
"South Korea",
  "Spain", "Sri Lanka", "Sudan", "Suriname", "Svalbard and Jan Mayen",
"Swaziland", "Sweden",
  "Switzerland", "Syria", "Taiwan", "Tajikistan", "Tanzania", "Thailand", "The
Bahamas",
  "The Gambia", "Togo", "Tokelau", "Tonga", "Trinidad and Tobago", "Tunisia",
"Turkey",
  "Turkmenistan", "Turks and Caicos Islands", "Tuvalu", "Virgin Islands",
"Uganda",
  "Ukraine", "United Arab Emirates", "United Kingdom",
  "United States", "United States Minor Outlying Islands", "Uruguay",
"Uzbekistan",
  "Vanuatu", "Vatican City", "Venezuela", "Vietnam", "Wallis and Futuna",
"Western Sahara",
  "Yemen", "Yugoslavia", "Zambia", "Zimbabwe"
};
```

This is the list of suggestions that will be provided in a drop-down list when the user types into the
`AutoCompleteTextView` widget.

6. Run the application.

As you type, you should see something like this:

More Information

Note that using a hard-coded string array is not a recommended design practice because your application code should
focus on behavior, not content. Application content such as strings should be externalized from the code in order to make
modifications to the content easier and facilitate localization of the content. The hard-coded strings are used in this tutorial

only to make it simple and focus on the `AutoCompleteTextView` widget. Instead, your application should declare such string arrays in an XML file. This can be done with a `<string-array<` resource in your project `res/values/strings.xml` file. For example:

```xml
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string-array name="countries_array">
        <item>Bahrain</item>
        <item>Bangladesh</item>
        <item>Barbados</item>
        <item>Belarus</item>
        <item>Belgium</item>
        <item>Belize</item>
        <item>Benin</item>
    </string-array>
</resources>
```

To use these resource strings for the `ArrayAdapter`, replace the original `ArrayAdapter` constructor line with the following:

```java
String[] countries = getResources().getStringArray(R.array.countries_array);
ArrayAdapter<String> adapter = new ArrayAdapter<String>(this, R.layout.list_item,
countries);
```

References

- ArrayAdapter
- AutoCompleteTextView

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