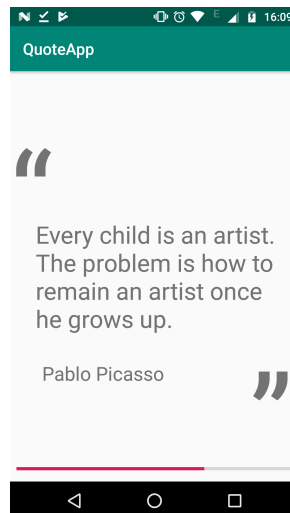


In this lab session we will introduce the ViewModel component that stores and manages all UI-related data. We will update an existing app to use a ViewModel and LiveData. The app shows a quote together with a progressbar. Each quote is visible for five seconds before the next quote is displayed.



## 1 Assignment

- Download the startcode from Minerva. Open the project in Android studio and explore the source code. We used data binding and observable fields to easily update our View.
- The app still has a bug however. Rotating the device destroys and recreates the current activity which means that we again see the first quote.
- Modify the app to use a ViewModel to keep track of all the UI related data:
  - Add a ViewModel class to your project. Keep in mind that the QuoteDAO class needs a *Context* to be able to read the json file that contains the quotes.
  - Change the type of the attributes from *ObservableField* to *LiveData*. LiveData is also observable but in addition it is also lifecycle aware which means that it will not trigger an update of the view if the view is not visible.

- The ViewModel should expose the LiveData through public getter methods. Make sure you don't return MutableLiveData but instead return the upcasted LiveData objects.
- Obtain a reference to the ViewModel in your activity and bind it to the variable you created in your layout file.
- Do not forget to set the *LifecycleOwner* of your DataBinding class. This will enable the View to listen to changes of your LiveData.