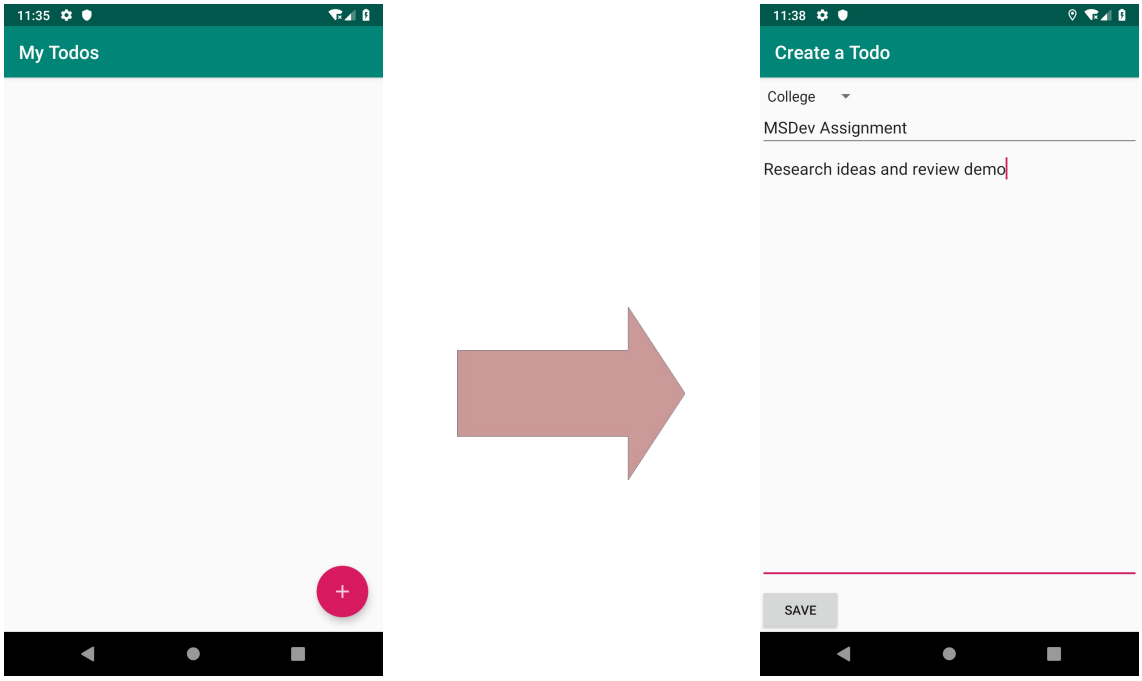
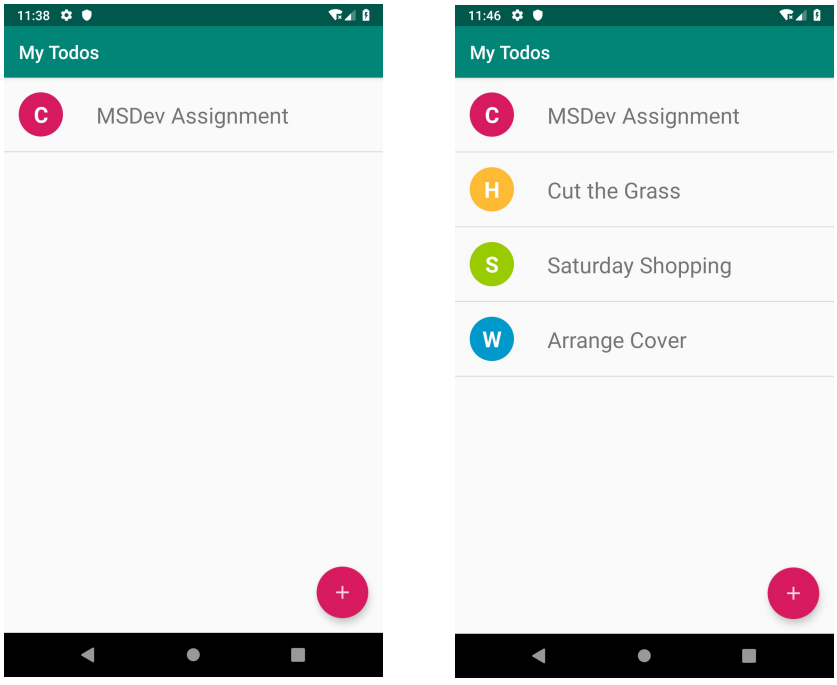
November 14th, once again can the students in the Aungier Street Lab please come over to Kevin Street (me in room 1-015 or Andrei in room 3-006) as your Lab Assistant will not be present today.

Last time we created an app for the Smurfs that explored using **explicit** intents and saving / restoring state as the lifecycle of our activity changes. This week we are going to be looking at the **Room** library for working with databases. How the app works is simple, when it launches, it displays summaries of our todo tasks loaded from the database.

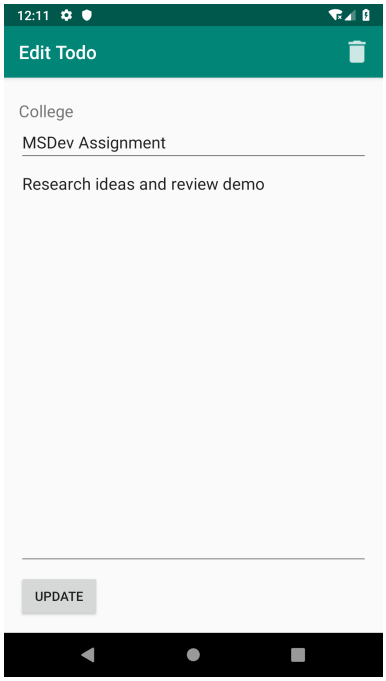


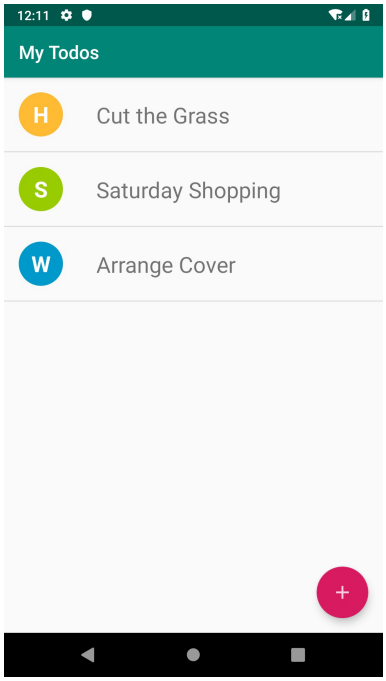
Clicking the **action button** allows us to create a new todo for a particular area of our life e.g. “College”, “Home”, “Social” or “Work”. A todo message also has a **summary** and **description** e.g. in the example above “MSDev Assignment” is the summary and the description is underneath.



Saving the todo stores it in the database and refreshes the home screen.

After some todo messages have been added to the database, it is also possible to update or delete them. This functionality is accessed by long-clicking on a todo e.g. below the user has finished their college todo and deletes it.





Project Set Up

Based on the same procedure used the last couple of weeks create a new project, you can call the application “My Sixth App”. **Note** that to use the starter code the root package name should be **com.example.mysixthapp**

The starter code is available in src.zip along with the two **necessary gradle files**. Ask your lab assistant if you are unsure about how to set these up.

Part 1

Add the annotatiions to the DAO and Entity classes (**note**, the id field is the **Primary Key** and should be autogenerated by Room on an initial insertion).

Part 2

In the onCreate method of each Activity initialise the DAO object.

Part 3

There is a save button in CreateToDoActivity and an update button in UpdateToDoActivity. Finish off the onClick methods that handle clicks on these buttons i.e. Complete the code to insert a ToDo in the database.

Part 4

Test your app to see that it works correctly i.e. add some todos and try to update and delete them. Save your final database to the Desktop.