Multimedia and Mobile Applications Project

Photoz

An Android Application for Photo Storage

Niall Quinn
BSCHE4
X13108727

Introduction

I set about creating an Android application to store photos on the device. The aim was to create an application which was backed by a database, and photos could be added to albums from either the camera or the gallery.

Database

The database i chose was the Realm Mobile Database (www.realm.io). The reason I chose this was that Realm is quite new and is becoming very popular in mobile development. I wanted to take this opportunity to explore this new technology while implementing a project. The database has two models:

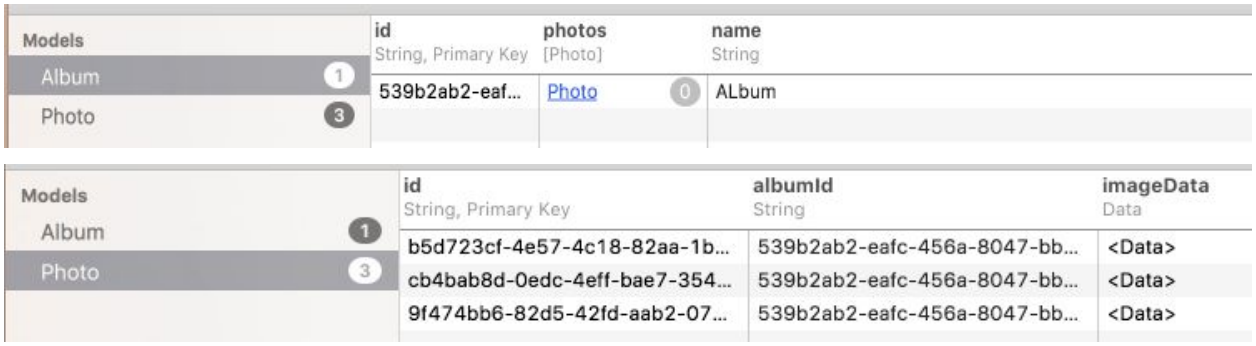
Album

Name	: String
Photos	: Photo[]
Id	: UUID

Photo

Id	: String
albumId	: UUID

A snapshot of the database layout is included below:



Activities

I used three activities to provide the functionality for my application

AlbumList

This activity contains a grid view, with each item in the grid representing an Album. This is backed by the AlbumAdapter. The AlbumAdapter chooses the first photo from the album to be the thumbnail.

This activity also supports selecting and deleting albums. To enter select mode, choose select from the settings menu on the top right. A Toast will let you know that you are in select mode, and checkboxes will appear by each album. To select an album, tap on the album. The check

box will inform you which items are selected. To delete the selected item, select delete in the toolbar. The item will be deleted from the database (including all photos) and removed from the view.
When not in select mode, if you tap on an album, you will be taken to the AlbumPhotoList by intent.

To add a new Album, select the + floating action button. You will be prompted to add an album name before selecting OK.

AlbumPhotoList

This activity again contains a grid view, this time each item is depicting one photo from the Album. This is backed by the PhotoAdapter. The PhotoAdapter takes care of retrieving the photos for the correct album. The ID of the album is passed to the Activity via the intent extras. The title of this Activity is set to the name of the album.

To add a photo to the album, choose either the Camera or Gallery floating action bar buttons.

Tapping on a photo in this view will take you to the SinglePhoto activity.

SinglePhoto

This activity contains a single Image View, which displays the image selected in the AlbumPhotosList. The image data is passed to this activity via intent extras.
It is possible to send this photo via SMS by tapping the send floating action button;

Challenges

One item which I did not complete, but have included functionality for, is the Photo delete functionality. You will see the functionality for selection and deletion in the AlbumPhotoList activity and adapter. I ran into some trouble showing the toolbar settings in my second activity, so I was unable to show the select and delete buttons.

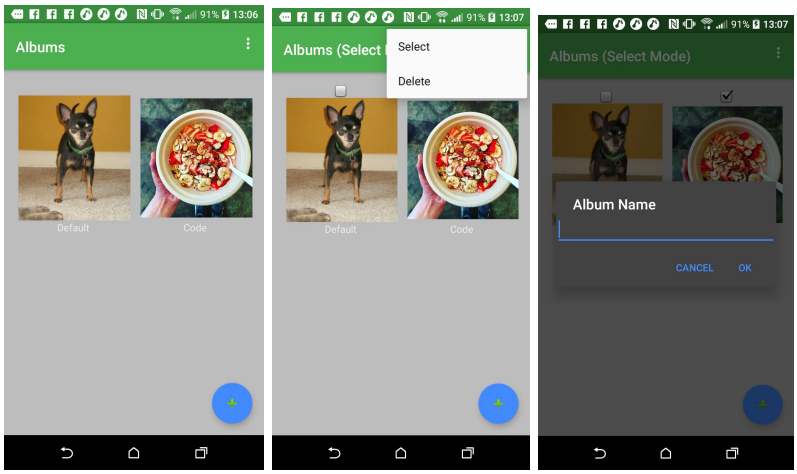
Requirements

Activity	I used three activities in my application, with data passed between them via intent extras.
UI	All UI is done via XML, with some manipulations happening due to state in the view adapters.
Interactive	The app is interactive. The app responds to user input via tapping on an item, selecting

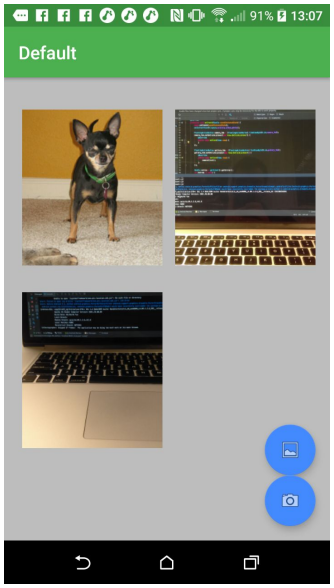
	items, floating action bars and text input.
Camera	I utilise the camera to add new photos to the album. I also allow the user to select an image from the gallery.
Send SMS	You can send your photo via SMS by tapping the send action button in the Single Image View.
Database	I used the Realm Mobile Database in my application to store Albums and Photos

Screenshots

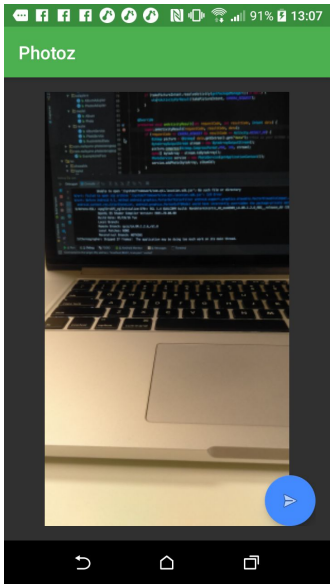
Album List



Album Photos View



Single Photo View



SMS Send