

Challenge 1

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1 Introduction

In this challenge problem, you will learn how to use the camera and SQLite.

2 Problem statement

Part I: Accessing the Camera

In this part, you will learn how to access the camera. This app will have a single activity. The layout consists of a single button and an image view. When the button is pressed, the camera is accessed, the image is captured, and the current image is displayed in the ImageView.

Bonus points for showing the user the image in realtime onscreen in the manner of a view finder so that he/she knows what image is being captured.

Part II: Interfacing with SQLite Database

The objective of this part is to learn how to use SQLite databases. You must create a basic database with a single table. The column entries will be: ID and image. The SQLite database must interface with your camera-based image capture app that you created in Part I as follows. Each time an image is captured, it must be inserted into the database with an appropriate ID. The ID begins at 1, and is updated for each successive image inserted in the database. Finally, you must have an EditText in which you can enter an ID and press a button. The appropriate image must be retrieved from the database and displayed in an ImageView.

XML: The layout of the MainActivity will consist of a title (TextView), a button to capture images (Button1), a location to enter the ID of the image requested (EditText) along with a button to click when the text has been entered (Button2), and a location to display images (ImageView).

JAVA: When Button1 is pressed, the camera image is captured and written to database as a BLOB along with an ID. When the ID is entered in EditText, the correct image should be displayed in ImageView.

3 Evaluation Guidelines

1. Check operation using the interface.
2. Creativity carries bonus points. Eg. showing image prior to capture (as in a camera view finder).
3. Your application must run on either a physical or a virtual device.