Correction:
You can use either TF Lite or Cloud Vision API for this assignment.
I have extended the deadlien by a week.
See Sakai for the new deadline.

Lab 7 – Photo Database with TF Lite

Topic: Camera, SQL, and TF Lite
Deadline and Submission Instructions are in Sakai.

1. Photo Tagger

The goal of this assignment is to create an app that can capture, tag (using TF Lite), save, and retrieve photos on your smartphone. A possible layout of the app is shown in Fig. 1.

- **Capture:** When clicked, it takes a picture and shows a thumbnail image and the photo size in bytes.
- **Tag:** **Use TF Lite to classify the image and show up to 5 tags for the photo (separated by a ";"). The user can edit these tags if they want.**
- **Save:** When clicked, it saves the photo in a database along with the tags and the size of the photo.
- **Load:** A user can specify one or more tags and a size. If only tags are specified, your app will find and show the first photo (and size) that contains **any** of those tags. If only the size is specified, your app will find and show the first photo (and size) whose size is within ±25% of the specified size. If both are specified, your app will find and show the first photo (and its size) that contains any of the mentioned tags and whose size is within ±25% of the specified size. If there are multiple matches, use a slider (or something similar) so that the user can browse the matched photos one by one.

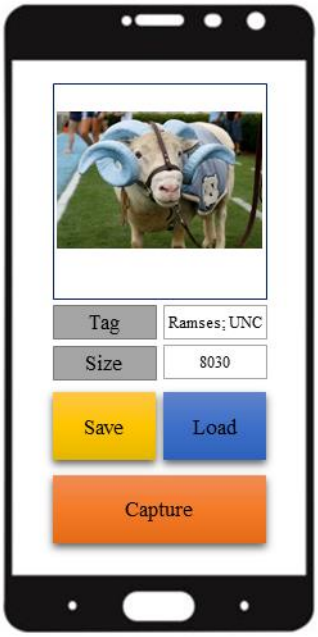

Fig 1. A possible GUI

2. Point Distribution

Tasks	Points	Grading
1. Capture – The app can capture photo and show the thumbnail image and the size (in the text box).	10	
2. Tag/Size – Tags are automatically generated by using TF Lite. A user can edit tags and size.	40	
3. Save – The save button inserts values correctly in a table (will be verified in Android Studio). You will be asked to print the content of your database table(s) using the Log.v("","");	10	
4. Load – works properly when only tags are provided.	10	
5. Load – works properly when only size is provided.	10	

6. Load – works properly when both are mentioned.	10	
7. Use a slider (or two buttons: back and forward) to show all images (and size) that matches the tag and size criteria in chronological order.	10	
Total:	100	