

## **ITIS/ITCS 5180 Mobile Application Development**

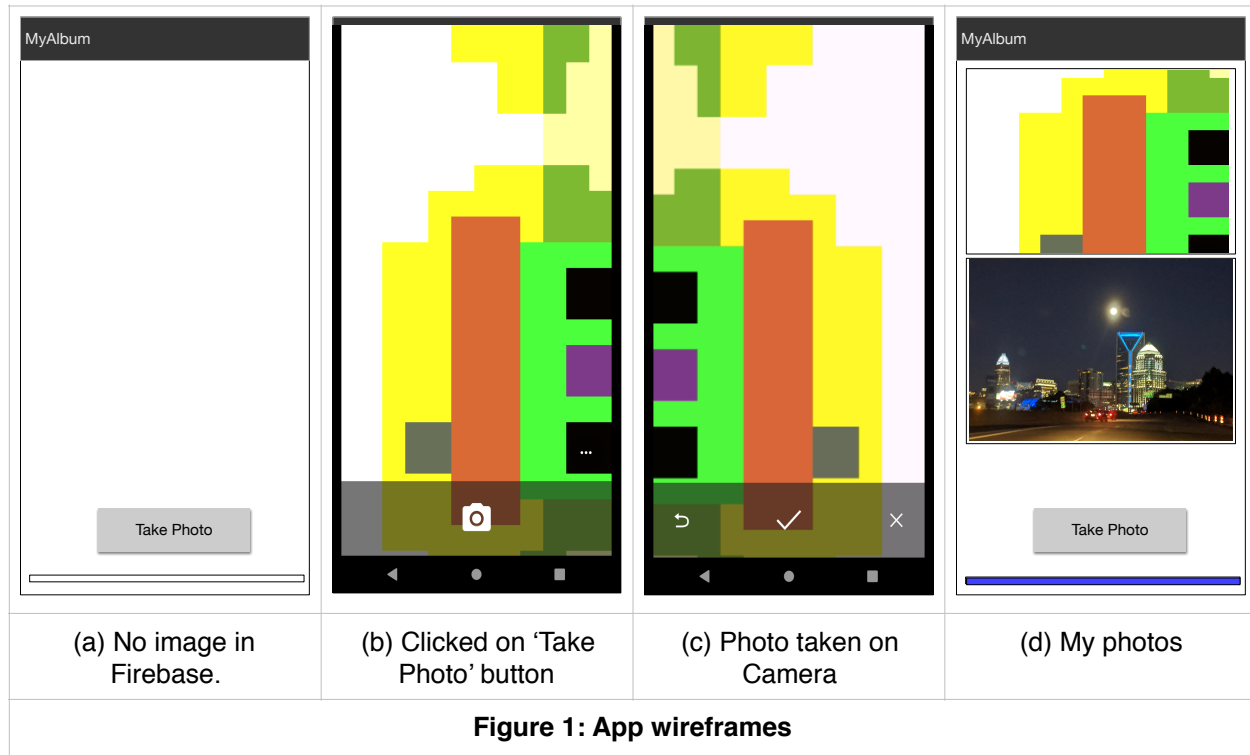
### **In Class Assignment 11**

#### **Basic Instructions:**

1. Each group should submit only one assignment on behalf of all the other group members.
2. Your assignment will be graded for functional requirements and efficiency of your submitted solution. You will lose points if your code is not efficient, does unnecessary processing or blocks the UI thread.
3. Export your Android project and create a zip file which includes all the project folder and any required libraries.
4. Submission details:
  - a. Compress the contents of your project folder. The file name is very important and should follow the following format: **IC11\_Group#.zip**
  - b. Only one group member is required to submit on behalf of the whole group.
  - c. You should submit the assignment through Canvas: Submit the zip file.
5. **Failure to follow the above instructions will result in point deductions**

## **In Class Assignment 11 (100 Points)**

In this assignment, we will learn how to upload images, download them, and remove them using Firebase Cloud Storage. We will develop a very simple photo album application. Please read the requirements carefully to develop the app.



There is only one activity. The activity should contain:

1. A RecyclerView/ListView to display images.
2. A Button named, "Take Photo" to take a photo using camera and upload it to cloud.
3. A ProgressBar to display upload progress.

### **Part 1, Taking photo using camera (15 points)**

1. Clicking on Take Photo button should start the camera to take the photo, see Figure 1(b).
2. After taking the photo, the app should get back to the activity with the taken Bitmap, and start uploading the image to cloud in the background.

### **Part 2, Uploading the photo to cloud (50 points)**

1. The app should upload the Bitmap to cloud and save it as a PNG image.
2. It should display the progress update in the progress bar.
3. It should retrieve the image download URL for the corresponding image.
4. After the image is uploaded it should display all the uploaded images in a List/RecyclerView.

### **Part 3, Displaying the photos (25 Points)**

1. The app should display all the photos in the cloud storage in a RecyclerView/ListView.
2. It should update the view after every time a new image is uploaded/deleted.

### **Part 4, Deleting a photo (10 points)**

1. On Long Click on any of the images in the List/RecyclerView should delete it from the cloud storage, and remove it from the list.

### **Rubrics:**

1. Using camera to get the bitmap: **15 points**
2. Setting up Firebase Cloud Storage: **10 points**
3. Compressing and creating the byte array for a PNG image from the Bitmap: **5 points**
4. Creating an upload task to upload the image and get the download URL: **20 points**
5. Monitoring and displaying the progress update using the progress bar: **10 points**
6. Displaying the photos in RecyclerView/ListView: **25 points**
7. Deleting the photos: **10 points**