Mobile App For Text Recognition

1. Introduction

This is a mobile app to capture photo from camera and recognize text (English characters only) in the captured photo. The captured text is then saved into public cloud storage.

2. Technology Stack

Frontend: Java in Android Studio

Backend: NodeJs and Google Cloud (functions, Pub/Sub, Storage, Vision API)

Text Recognition: Firebase ML Kit for Android

3. Source Codes Repository

Frontend is https://github.com/samhkwest/mycrapp

Backend is https://github.com/samhkwest/ocr

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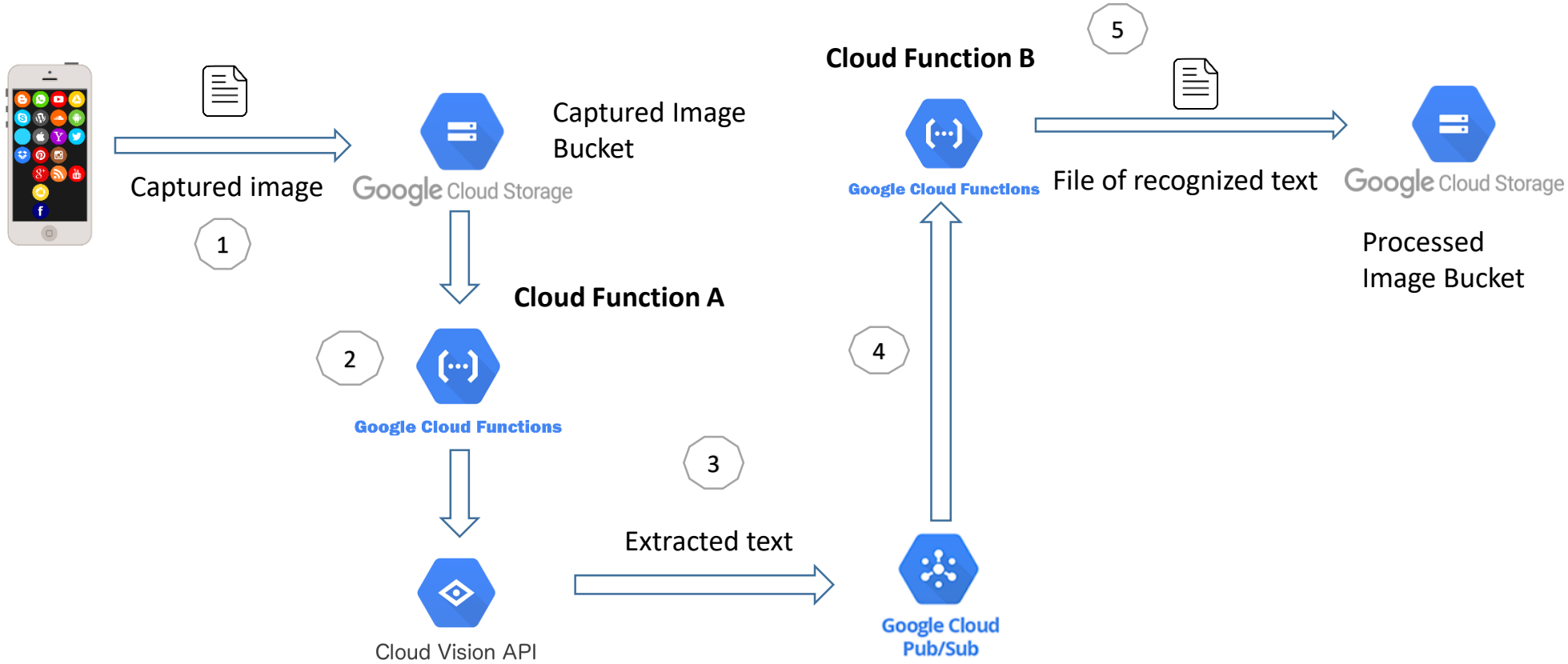
4. Data Flow

The data flow of this text recognition platform is illustrated as below:



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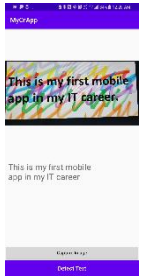
4. Data Flow (Cont'd)

The data flow consists of following steps:

1) The mobile app sends a image file captured from camera to Captured Image Bucket.
2) The Cloud Function A is triggered to call the Vision API to extract the text.
3) The extracted text is sent to a result.
4) The Cloud Function B saves the extracted text from the result queue to a text file.
5) The result file is sent to the Processed Image Bucket.

5. Frontend & Backend

The UI of the mobile app is as below:



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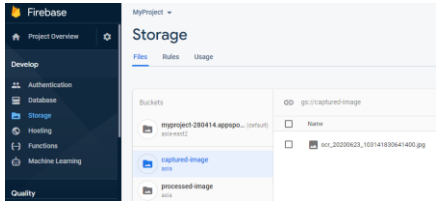
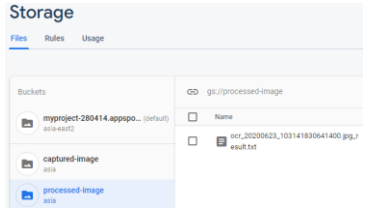
5. Frontend & Backend

The Backend in google cloud platform is as below:

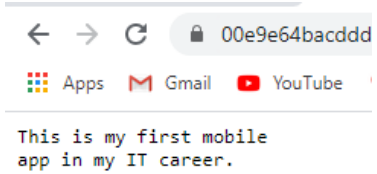
a) Bucket for captured image:



b) Bucket for result file (recognized text):



Open file in Google Cloud Console



c) Cloud Functions (to trigger text recognition and save result file)