

## CS5551 Lab Assignment-2

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**Class ID:** 33

**Team member Wiki link:** <https://github.com/mvivek3105/A.S.E/wiki/Assignment2>

**Part 1 Video link:** <https://www.youtube.com/watch?v=a4bQhhtISm0>

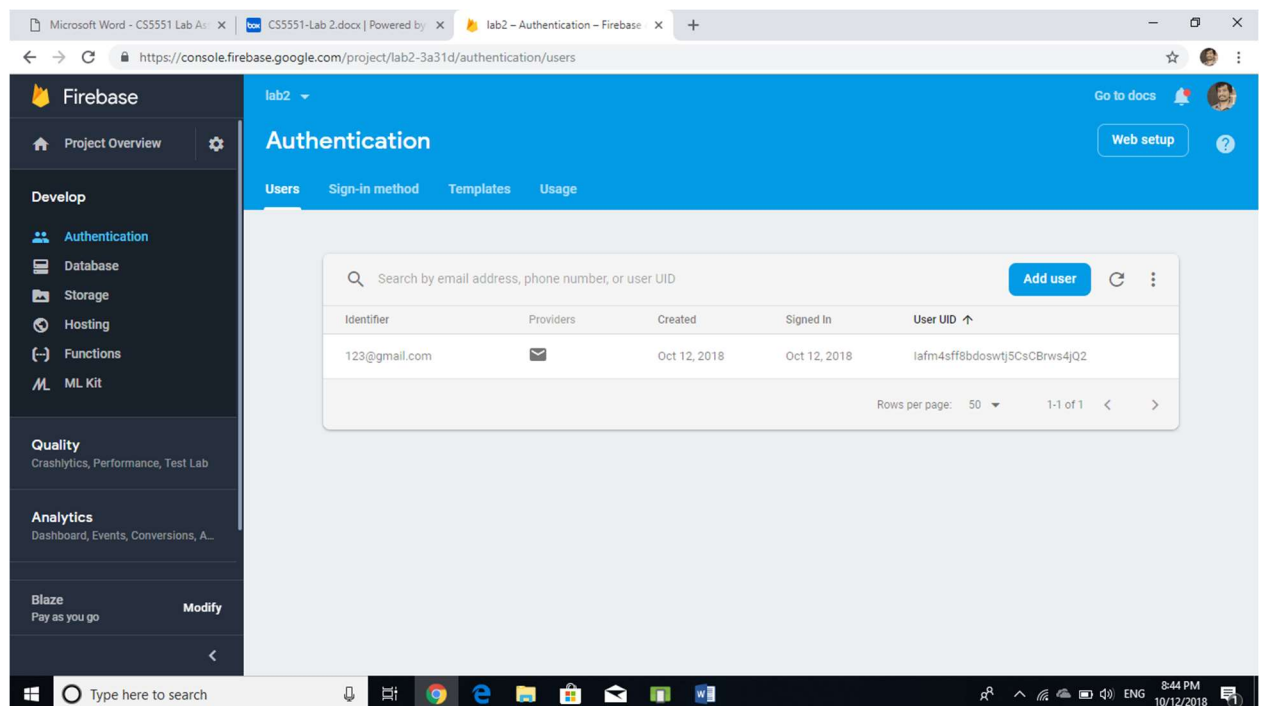
**Part 2 Video link:** <https://www.youtube.com/watch?v=DFuHH650YkQ>

### Part-1

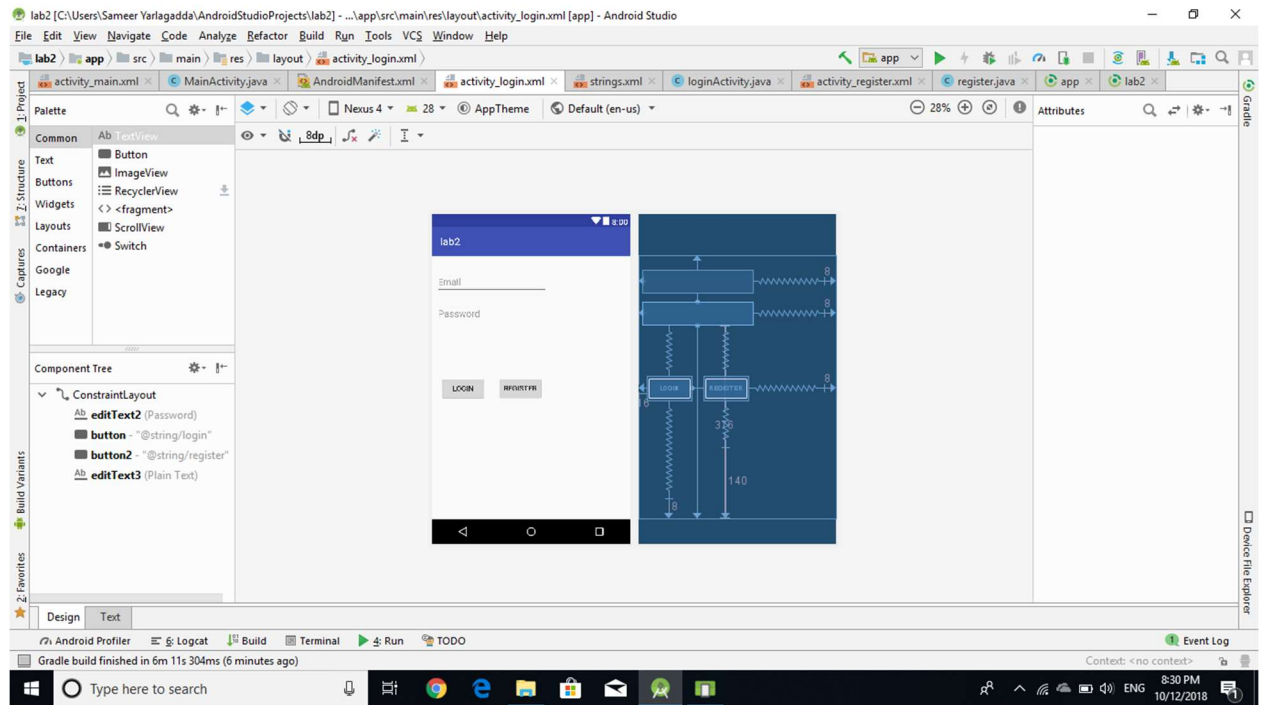
**Objective:** To develop an Android application with the following features

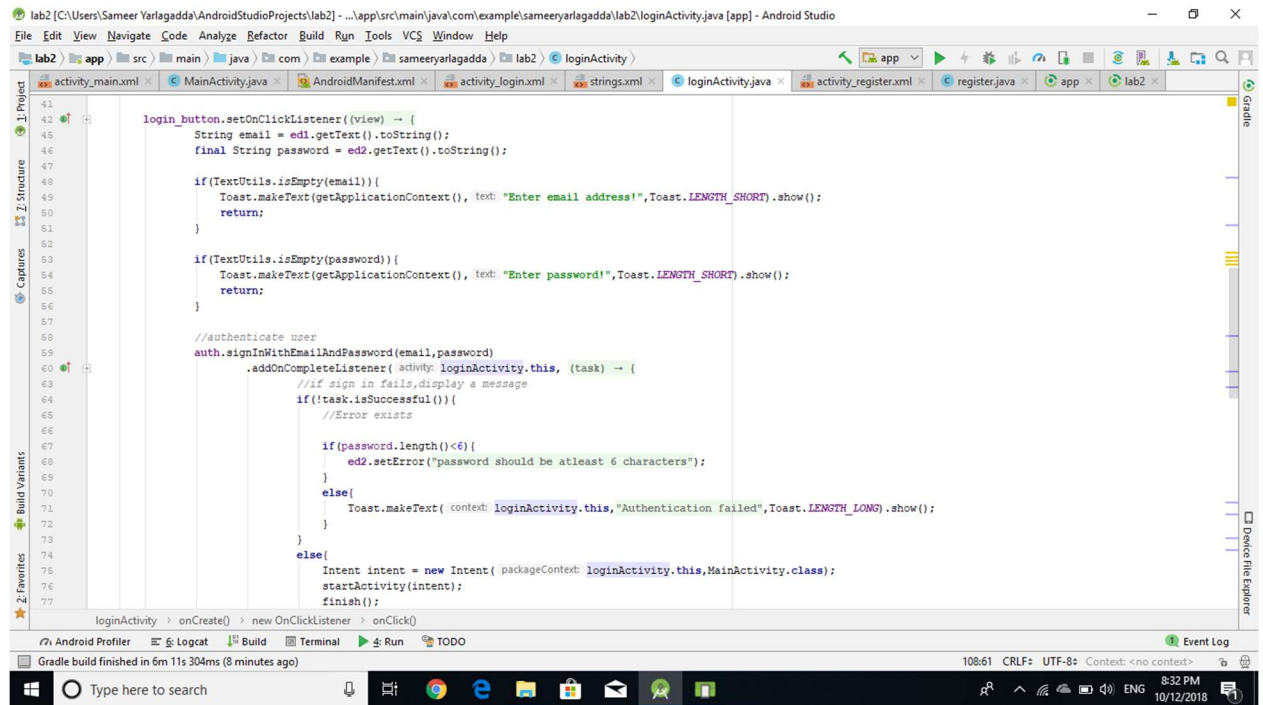
#### 1. FireBase Login and Registration:

FireBase authentication is used for logging into the application.

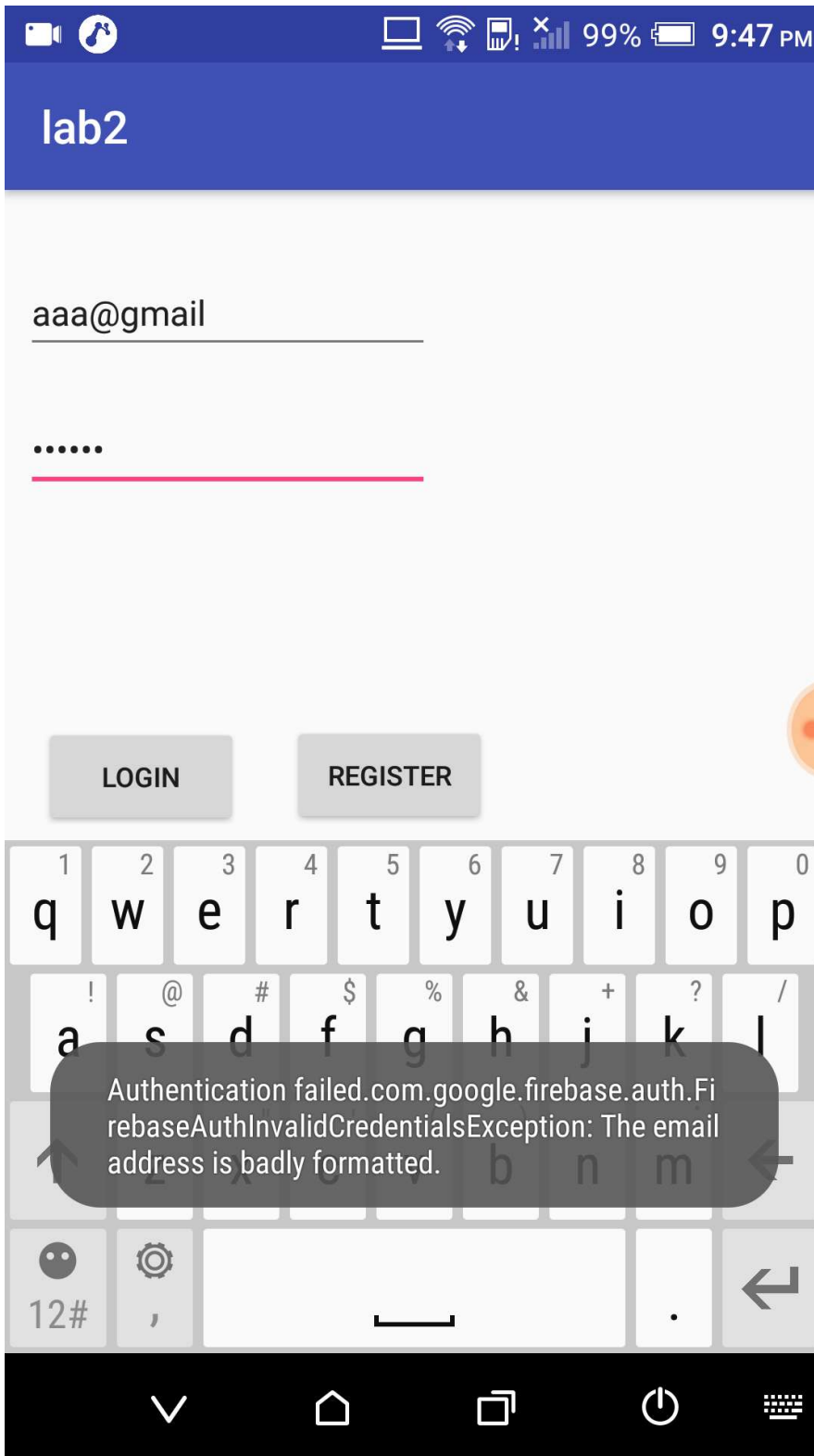


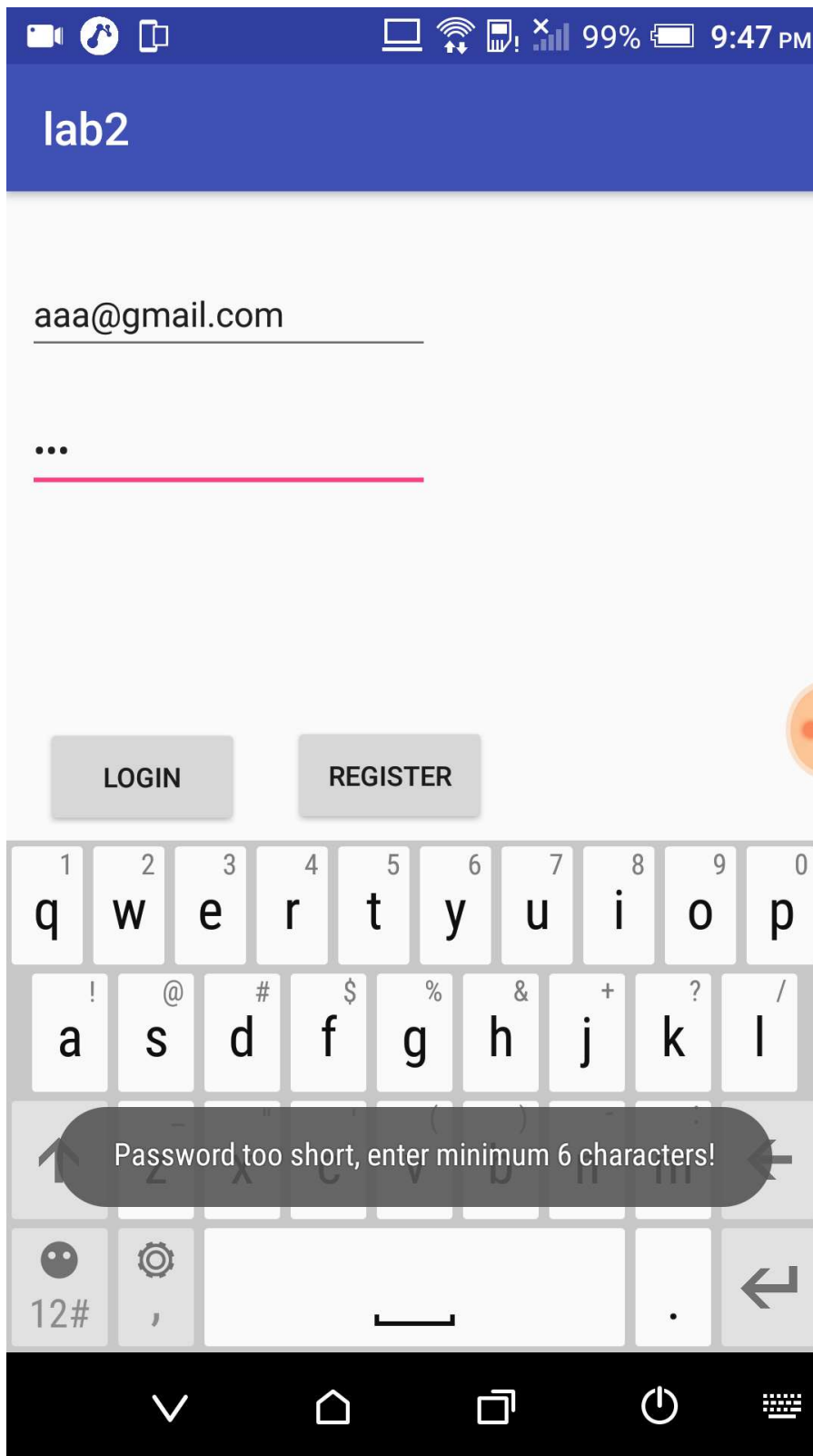
## Design view of Login page





During Registration and login, Validation is performed.

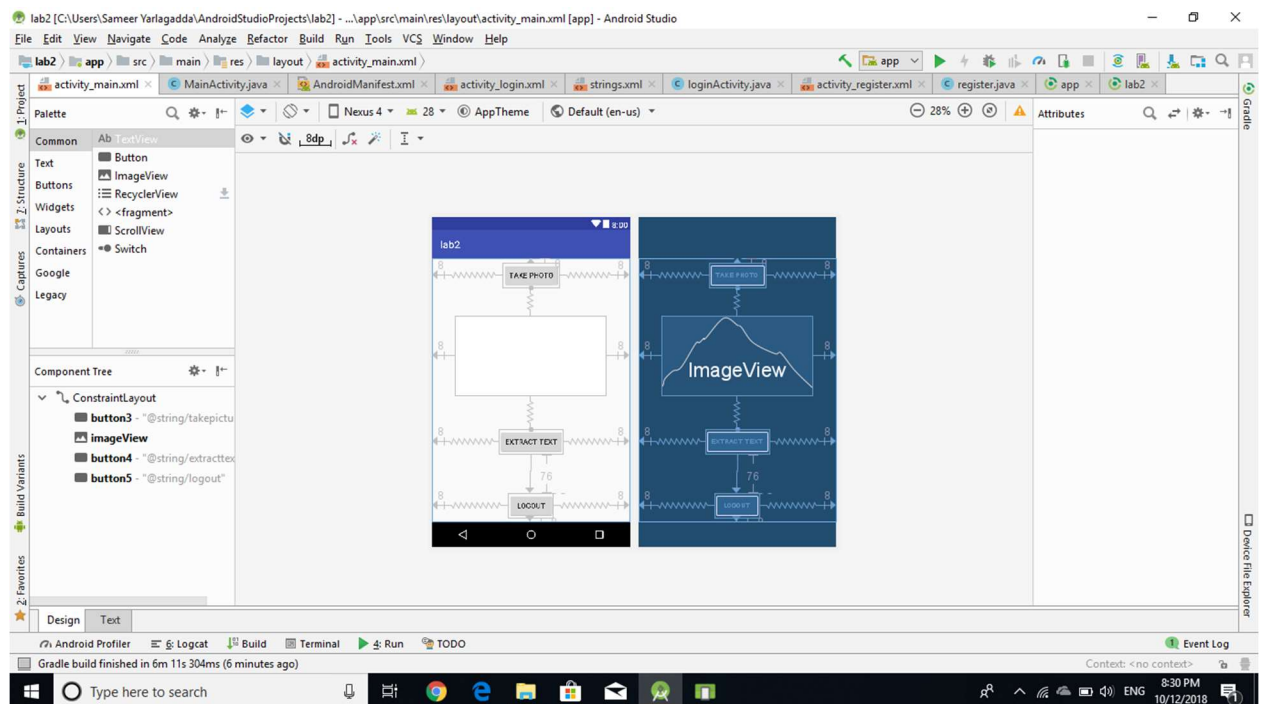
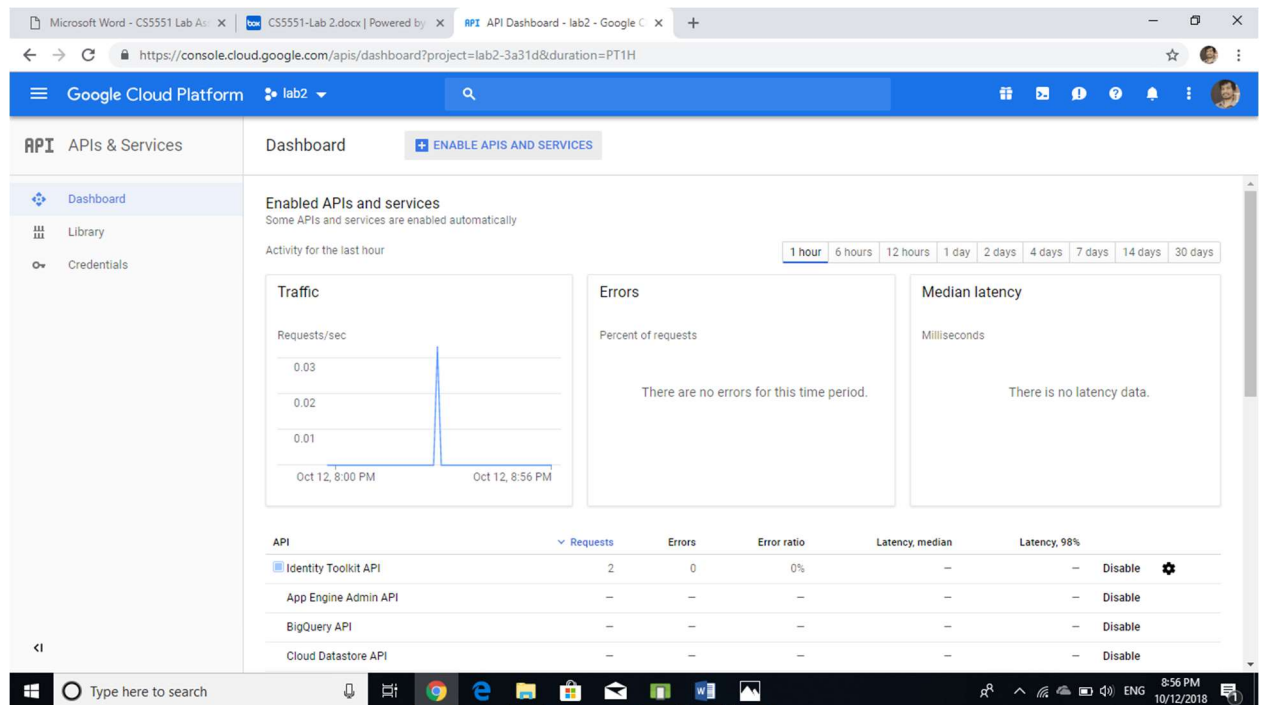




After successful registration and login app redirects the user to home page.

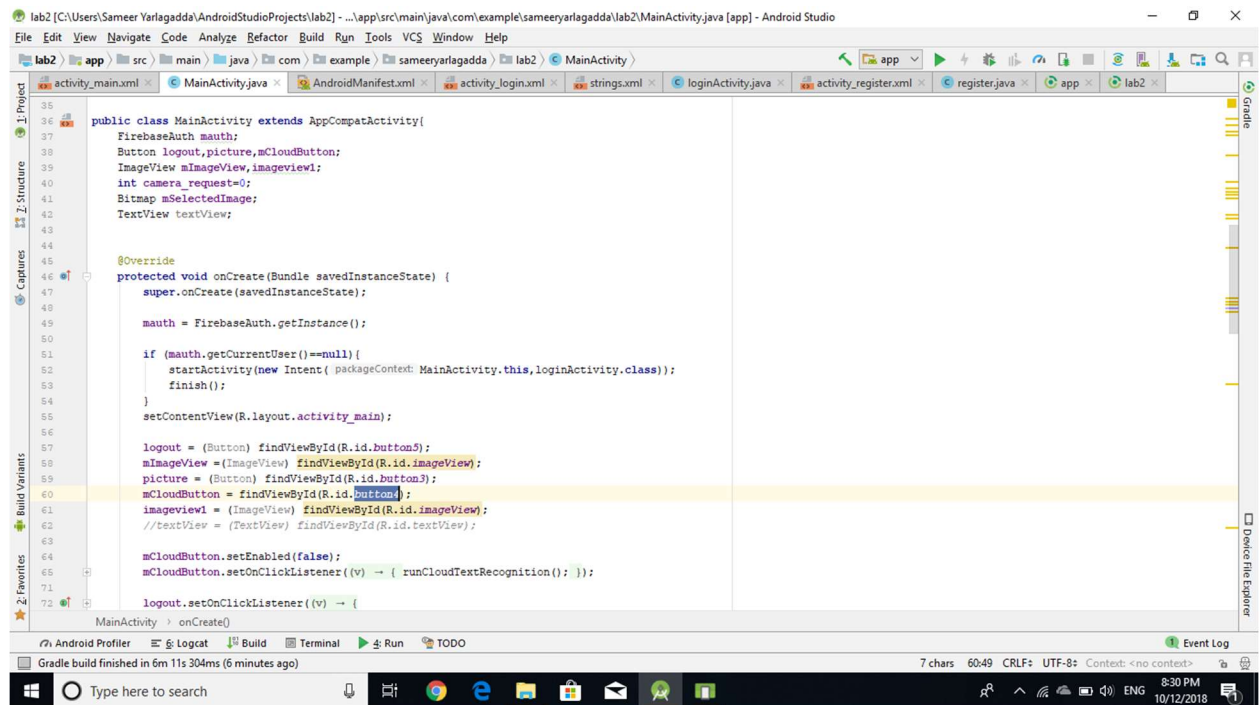
## 2. Home page with Google Cloud Vision API:

Here Google Cloud Vision API is used to extract the textual content from the image.



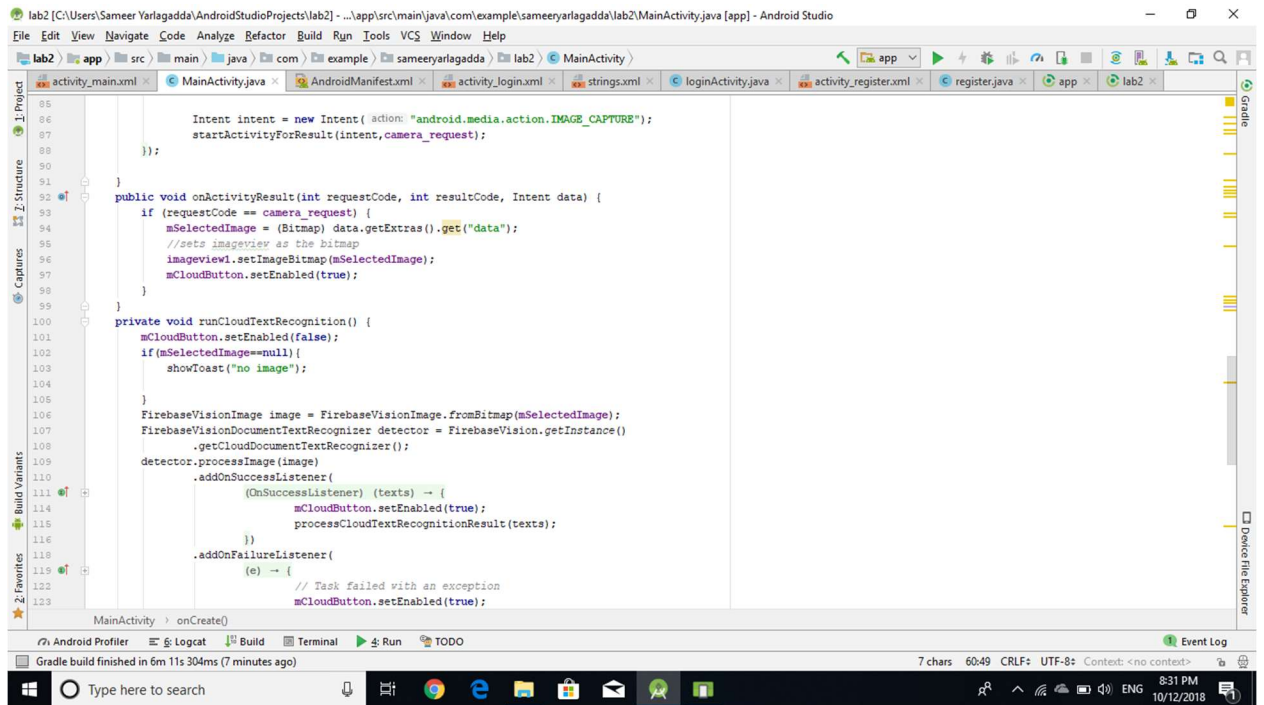
### 3. Camera (hardware feature):

When user clicks the button to “Take photo”, it initially requests the permission for camera to access the application.



It then take a snap and after clicking the “Extract text” button, API extracts the text in the picture.

“runCloudTextRecognition()” is used for extraction of text from the image.



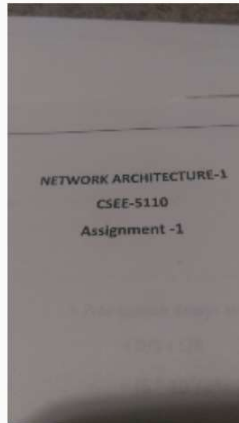




97% 9:54 PM

## lab2

TAKE PHOTO



EXTRACT TEXT

NETWORK ARCHITECTURE - 1 CSEE - 5110  
Assignment - 1

LOGOUT



## Part-2

**Objective:** To develop an Ionic Application with following features.

### 1. Mashup application with different web services:

After user logs in mashup page is loaded. Two API's Clarifai and Kairos are used for Face and Visual detection in this application.

The top screenshot displays the Clarifai developer account interface. The header includes the Clarifai logo and navigation links: PRODUCTS, SOLUTIONS, DEVELOPERS, COMPANY, DEMO, PRICING, and a user profile for SIVA SAMEER KRISHNA with a LOG OUT button. The main content area is titled 'Manage Your Applications' and includes a sidebar with links to ACCOUNT, Applications (selected), API Keys, Profile, Billing, and Usage. A 'CREATE NEW APPLICATION' button is visible. Below it, a list of applications is shown:

Application Name	Created	Actions
ASE-Lab2	Oct 12 2018, 10:47	View, Edit, Delete
my-first-application	Oct 12 2018, 10:44	View, Edit, Delete

The bottom screenshot shows the Kairos 'API Dashboard'. The header includes the Kairos logo and navigation links: DASHBOARD, APPLICATIONS, STATISTICS, MESSAGES (1), and SETTINGS. The main content area is titled 'API Dashboard' and features a 'Credentials' section with the following information:

Field	Value
App name	sy9bd@mail.umkc.edu's App
App ID	1a2e035b
Key	f8a08902f1888f67c412fb92f7d21479

Below the credentials section, there are three buttons: 'Read our Docs' (Learn about the API), 'Quick Start Guide' (Make your first API call), and 'Need On-Premise?' (Available on the Enterprise plan). At the bottom, there is a link to 'Email our support team'.

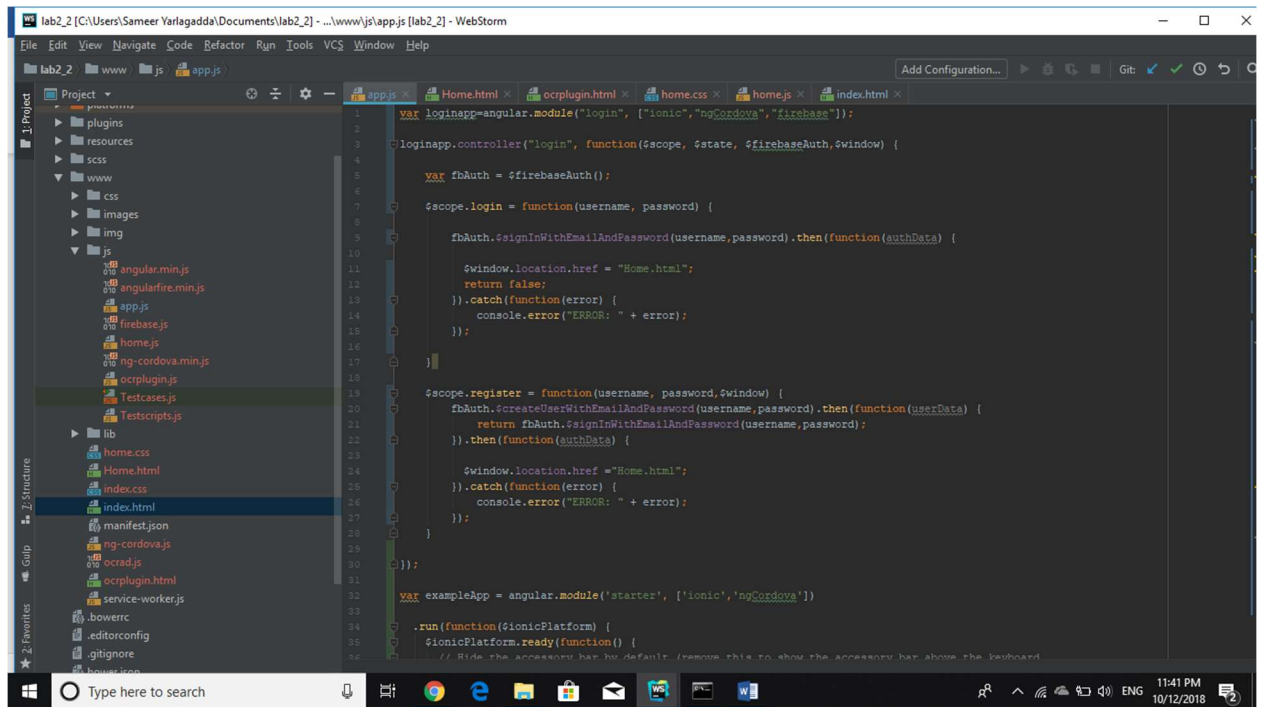
## Lab2

Enter email address

Enter password

Login

Register



lab2\_2 [C:\Users\Sameer Yarlaga\Documents\lab2\_2] - ...\\www\js\home.js [lab2\_2] - WebStorm

File Edit View Navigate Code Refactor Run Tools VCS Window Help

lab2\_2 www js home.js

Project

- plugins
- resources
- scss
- www
  - css
  - images
  - img
  - js
    - angular.min.js
    - angularfire.min.js
    - app.js
    - firebase.js
    - home.js
    - ng-cordova.min.js
    - ocplugin.js
    - Testcases.js
    - Testscripts.js
  - lib
    - home.css
    - Home.html
    - index.css
    - index.html
    - manifest.json
    - ng-cordova.js
    - ocrad.js
    - ocplugin.html
    - service-worker.js

2 Structure

2 Favorites

Type here to search

```
29 }
30
31
32
33 $scope.upload = function(file) {
34     var fname = file.base64;
35     var itemList = "";
36
37     const app = new Clarifai.App({apiKey: 'b09f0d3520d445ee8799fd370a631398'});
38     app.models.predict(Clarifai.GENERAL_MODEL, (base64: fname)).then(
39
40         function(response) {
41             console.log(response);
42             console.log(response.outputs[0].data.concepts[0].name);
43             console.log(response.outputs[0].data.concepts.length);
44
45             for (var i = 0; i < 10; i++) {
46                 var temp = response.outputs[0].data.concepts[i].name;
47                 itemList = itemList + temp + "<br/>";
48             }
49
50             document.getElementById("notes").innerHTML = itemList;
51         }
52     );
53
54 }
55
56
57 $scope.faceDetails = function(file1) {
58
59     var face64 = file1.base64;
60     var appurl = "https://api.kairos.com/detect?";
61     var appid = "1a2e035b";
62     var appkey = "f8a08902f1888f67c412fb92f7d21479";
63     $http({
64         url: appurl,
```

lab2\_2 [C:\Users\Sameer Yarlaga\Documents\lab2\_2] - ...\\www\js\home.js [lab2\_2] - WebStorm

File Edit View Navigate Code Refactor Run Tools VCS Window Help

lab2\_2 www js home.js

Project

- plugins
- resources
- scss
- www
  - css
  - images
  - img
  - js
    - angular.min.js
    - angularfire.min.js
    - app.js
    - firebase.js
    - home.js
    - ng-cordova.min.js
    - ocplugin.js
    - Testcases.js
    - Testscripts.js
  - lib
    - home.css
    - Home.html
    - index.css
    - index.html
    - manifest.json
    - ng-cordova.js
    - ocrad.js
    - ocplugin.html
    - service-worker.js

2 Structure

2 Favorites

Type here to search

```
52
53
54
55
56
57 $scope.faceDetails = function(file1) {
58
59     var face64 = file1.base64;
60     var appurl = "https://api.kairos.com/detect?";
61     var appid = "1a2e035b";
62     var appkey = "f8a08902f1888f67c412fb92f7d21479";
63     $http({
64         url: appurl,
65         method: 'POST',
66         headers: { app_id: appid, app_key: appkey },
67         data: { image: face64 }
68     }).success(function(data) {
69         var age = data.images[0].faces[0].attributes.age;
70         var gender = data.images[0].faces[0].attributes.gender.type;
71         document.getElementById("faceNotes").innerHTML = "Age : " + age + "<br/>" + "Gender : " + gender;
72         console.log(data);
73     }).error(function() {
74         alert("error");
75     });
76
77 }
78
79
80
81
82
```

# Ionic Mashup

## Facial Recognition

No file chosen

## Visual Recognition

No file chosen

# Ionic Mashup

## Facial Recognition

Choose file IMG\_20181011\_021501.jpg



Predict Face

Age : 26

Gender : M

## Visual Recognition

Choose file No file chosen

Predict Image

Scan QR

Logout

## Visual Recognition

Choose file

IMG-20181012-WA0003.jpg



Predict Image

sculpture

art

statue

religion

ancient

old

travel

architecture

no person

Buddha

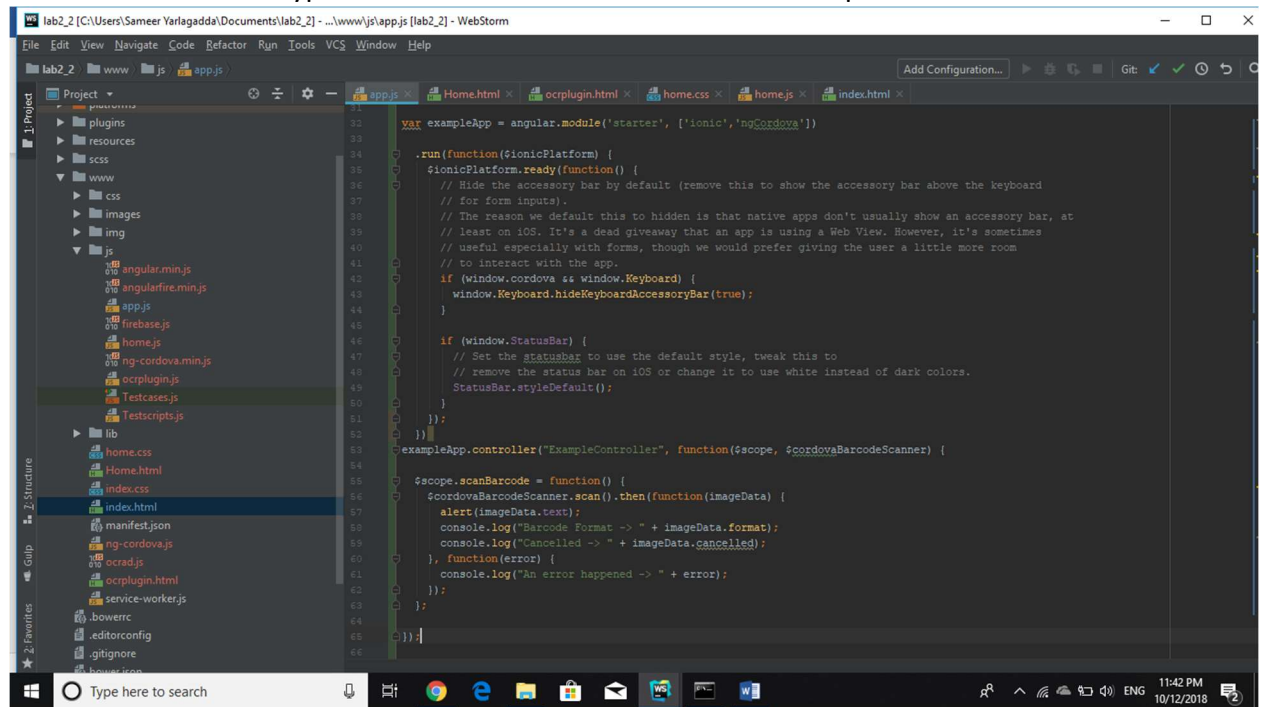


## 2. Test cases related to application:

S.no	Name of the test case	Input	Output	Status
1	In Login page email address should be of specific format(*@*) .	Enter an email id which is of invalid format.	Error message is displayed to enter the Correct mail id.	Pass
2	In Login page password should be of minimum 6 characters.	Enter only 3 characters in password field.	Displays an error message to enter a minimum of 6 characters.	Pass
3	On clicking the Login button with valid email id and password, application Home page (Ionic Mashup) should be opened.	Enter in- valid user credentials and click Login.	Blocks user from entering Home page (Ionic Mashup page).	Pass
4	On clicking the Scan QR button in Ionic Mashup page, QR Detection page should be opened to scan the QR Code.	Click Scan QR button present in Ionic Mashup page.	QR Detection page is opened.	Pass
5	On clicking the Logout button in Ionic Mashup page, application should be closed by redirecting to the Login Page.	Click Logout button present in Ionic Mashup page.	Login page is displayed.	Pass


### 3. Cordova plugin: Bar code scanner is implemented.

It scans for different types of codes and returns the information present in it.



The screenshot shows a web-based IDE with a project named 'lab2\_2'. The file explorer on the left shows a directory structure with 'plugins', 'resources', 'scss', 'www', 'css', 'images', 'img', and 'js' folders. The 'js' folder contains files like 'angular.min.js', 'angularfire.min.js', 'app.js', 'firebase.js', 'home.js', 'ng-cordova.min.js', 'ocrplugins.js', 'Testcases.js', and 'Testscripts.js'. The main editor displays the 'app.js' file, which contains the following code:

```
31
32 var exampleApp = angular.module('starter', ['ionic', 'ngCordova'])
33
34 .run(function($ionicPlatform) {
35   $ionicPlatform.ready(function() {
36     // Hide the accessory bar by default (remove this to show the accessory bar above the keyboard
37     // for form inputs).
38     // The reason we default this to hidden is that native apps don't usually show an accessory bar, at
39     // least on iOS. It's a dead giveaway that an app is using a Web View. However, it's sometimes
40     // useful especially with forms, though we would prefer giving the user a little more room
41     // to interact with the app.
42     if (window.cordova && window.Keyboard) {
43       window.Keyboard.hideKeyboardAccessoryBar(true);
44     }
45
46     if (window.StatusBar) {
47       // Set the statusbar to use the default style, tweak this to
48       // remove the status bar on iOS or change it to use white instead of dark colors.
49       StatusBar.styleDefault();
50     }
51   });
52 }
53
54 exampleApp.controller("ExampleController", function($scope, $cordovaBarcodeScanner) {
55   $scope.scanBarcode = function() {
56     $cordovaBarcodeScanner.scan().then(function(imageData) {
57       alert(imageData.text);
58       console.log("Barcode Format -> " + imageData.format);
59       console.log("Cancelled -> " + imageData.cancelled);
60     }, function(error) {
61       console.log("An error happened -> " + error);
62     });
63   };
64 }
65
66 }
```

11:33 PM 

   69%

## QR Detection

scan

Bar code Scanner output:

QR code details:

2594373860856

**References:**

1. <https://console.firebase.google.com>
2. <https://cloud.google.com/vision/>
3. <https://clarifai.com/developer/account/applications>
4. <https://www.kairos.com/docs/api/>
5. <https://developer.android.com/guide/>
6. <https://ionicframework.com/docs>
7. <https://www.thepolyglotdeveloper.com/2014/09/implement-barcode-scanner-using-ionic-framework/>