

# ADVANCED SOFTWARE ENGINEERING

## LAB ASSIGNMENT-5

**Team ID:** 5-2

**Team Members:** 1. Rahul Dhamerla

2. Teja Devarapalli

### **Assignment:**

1. Create your own firebase account enable authentication using email and password.
2. Plugin Use at least one Cordova plugin related to your project.
3. Save the results obtained from the step -2 into any of the cloud services like firebase Real Time Database/storage to the user's respective account such that when he login again it should display the previously stored data.
4. Deploy the application to Web/Android/Ionic.

### **Requirements:**

HTML5, CSS3, TypeScript, Webstorm, Ionic Lab, Google Firebase.

### **Implementation:**

1. Creating an ionic project by using below commands:

On placing command prompt on project directory.

Command to create an ionic project: **ionic start appname tabs**

blank sidemenu

Please use the below commands:

**ionic cordova build android**

2. We have setup a camera feature on the home page. So, initially we have to install app on the mobile.

3. For storing the data firebase storage is used. Firebase is installed by running the below command:

**npm install firebase angularfire2 --save**

4. We have created an account on Firebase and from Firebase console we get the configurations with registered API key.

### **Register:**

This is the open page after installing the application on android device. This helps the user to register with the required details. After registering with the details the credentials are stored in firebase real time database.

## Register

---

 Username

 Email

 Password

 Confirm Password

REGISTER

LOGIN

### Login:

Once the users registered the details, then will be able to sign in with the email and password used while setting up the account. After login the home page is displayed where we have an option to take pictures. These pictures are saved in Google Firebase real time database.

## Login

---

 Email

 Password

LOGIN

REGISTER

## Camera App

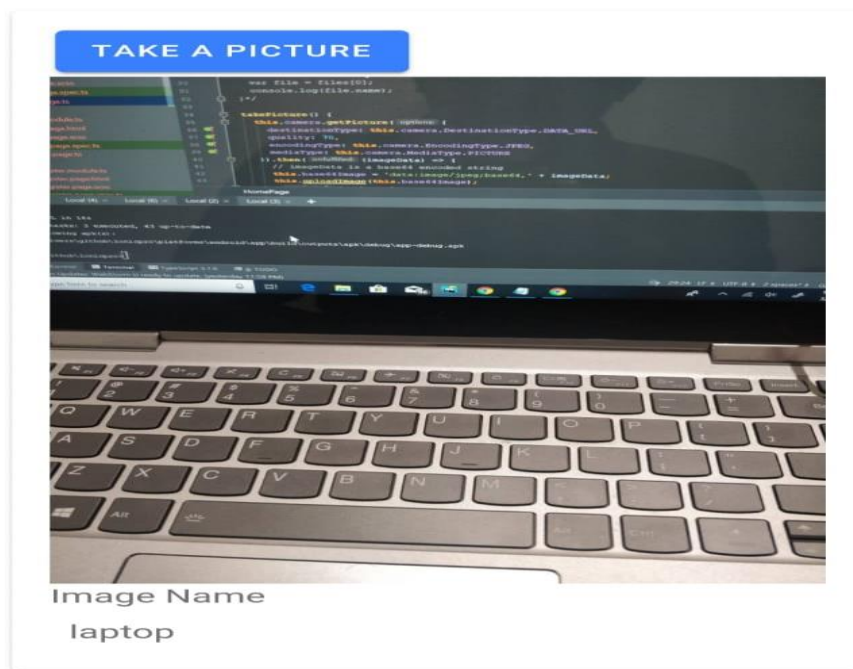
---

TAKE A PICTURE

Image Name

imagenam

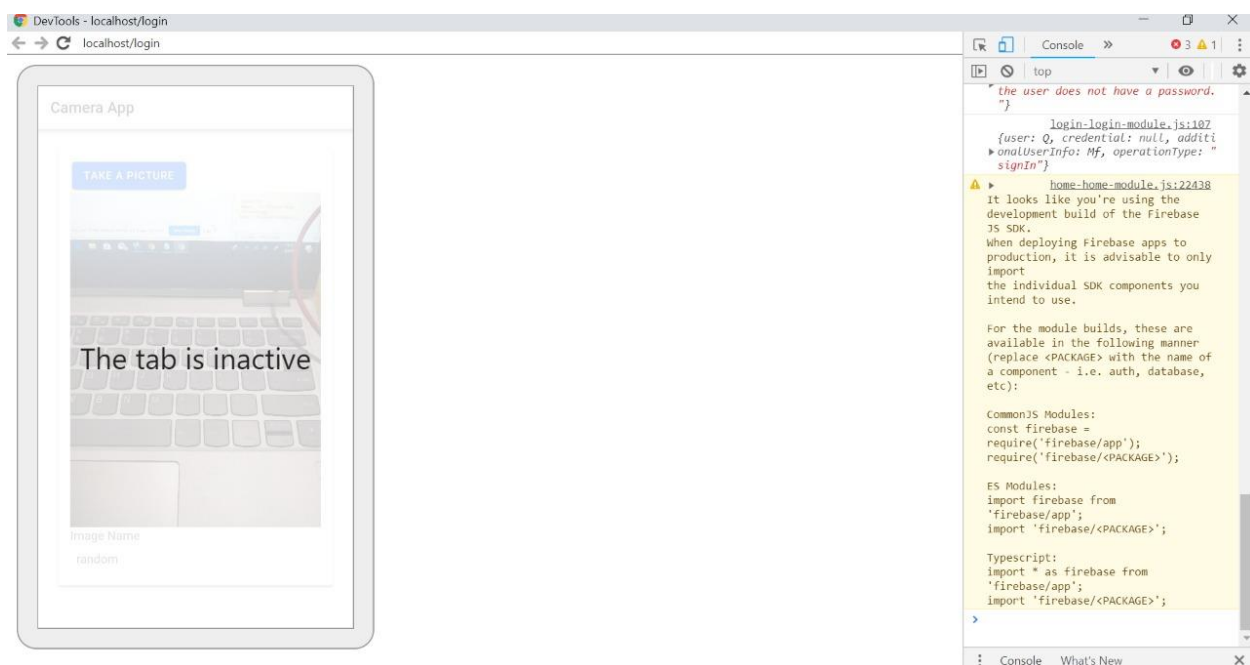
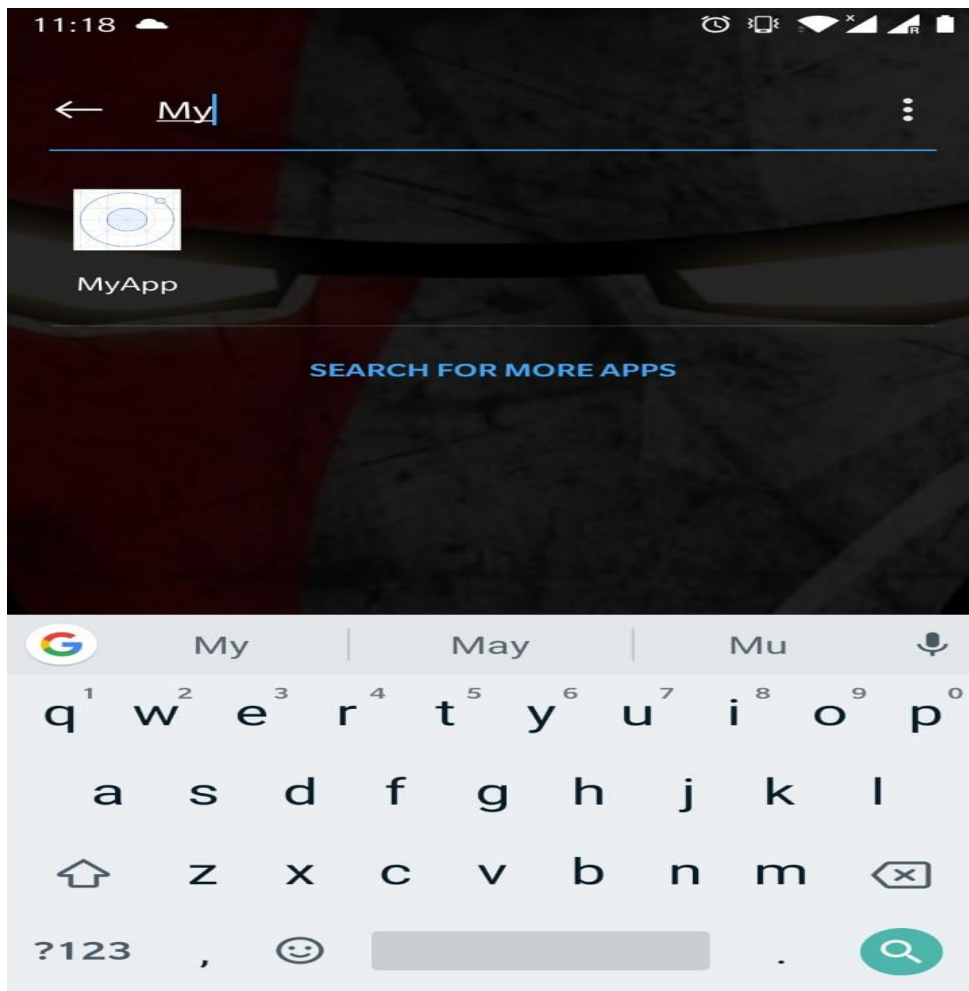
## Camera App



After finishing the project, we ran below commands:

**Ionic cordova build android**

Then Apk file is generated and it is installed in an android device.



## Source code:

### Firestore.service.ts:

```
1  firestore.service.ts x
2  import { AngularFire } from 'angularfire2';
3  import { AlertController, ToastController } from '@ionic/angular';
4
5  @Injectable({
6    providedIn: 'root'
7  })
8  export class FirestoreService {
9
10   public smessage;
11
12   constructor(public auth: AngularFireAuth, private afs: AngularFireStore,
13     private alert: AlertController) {
14   }
15
16   fireRegister(v1, v2) {
17     return new Promise<any>((executor: (resolve, reject) => {
18       firebase.auth().createUserWithEmailAndPassword(v1, v2).then((onfulfilled: res => {
19         resolve(res);
20       }, onrejected: err => reject(err));
21     }));
22   }
23
24   firelogin(v1, v2) {
25     return new Promise<any>((executor: (resolve, reject) => {
26       firebase.auth().signInWithEmailAndPassword(v1, v2).then((onfulfilled: res => {
27         resolve(res);
28       }, onrejected: err => reject(err));
29     }));
30   }
31
32   }
33
34   }
35
36   }
37
38   }
39
40   }
41
42   }
43
44   }
45
46   }
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88   }
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90   }
91
92   }
93
94   }
95
96   }
97
98   }
99
100  }
```

### Homepage.html:

```
1  <ion-header>
2    <ion-toolbar>
3      <ion-title>
4        Camera App
5      </ion-title>
6    </ion-toolbar>
7  </ion-header>
8
9  <ion-content padding>
10    <ion-card>
11      <ion-card-content>
12        <ion-button (click)="takePicture()">Take a Picture</ion-button>
13        <img [src]="base64Image" *ngIf="base64Image" />
14        <h2>Image Name</h2>
15        <h2><ion-input type="text" placeholder="imagename" [(ngModel)]="imagename" name="image"></ion-input></h2>
16        <!-- <ion-input type="text" placeholder="User full name" [(ngModel)]="fullname" name="name"></ion-input>
17        <ion-input type="text" placeholder="imagedetails" [(ngModel)]="imagename" name="image"></ion-input>
18        <ion-button (click)="submit()">submit</ion-button>-->
19      </ion-card-content>
20    </ion-card>
21  </ion-content>
22
23  </ion-content>
```

## Homepage.ts:

```
25      this.fbs.createTask(this.value);
26    }
27  }/*
28  fileupload(evt) {
29    var files = evt.target.files;
30    var file = files[0];
31    console.log(file.name);
32  }*/
33
34  takePicture() {
35    this.camera.getPicture( options: {
36      destinationType: this.camera.DestinationType.DATA_URL,
37      quality: 70,
38      encodingType: this.camera.EncodingType.JPEG,
39      mediaType: this.camera.MediaType.PICTURE
40    }).then( onFulfilled: (imageData) => {
41      // imageData is a base64 encoded string
42      this.base64Image = 'data:image/jpeg;base64,' + imageData;
43      this.uploadImage(this.base64Image);
44    }, onRejected: (err) => {
45      console.log(err);
46    });
47  }
48
49  uploadImage(imageURI) {
50    return new Promise<any> ( executor (resolve, reject) => {
51      const storageRef = firebase.storage().ref( path: 'pic' + this.imageName);
52      storageRef.putString(imageURI, format: 'data_url')
53        .then( onFulfilled: snapshot => {
54          resolve(snapshot.metadata);
55        });
56    });
57  }
58
59  HomePage
```

## Loginpage.html:

```
7    </ion-header>
8
9    <ion-content padding>
10      <ion-list shape="round">
11        <ion-item>
12          <ion-label position="floating"> <ion-icon ios="ios-contact" md="md-contact"></ion-icon>
13            Email</ion-label>
14          <ion-input type="text" [(ngModel)]="email" name="user"></ion-input>
15        </ion-item>
16        <ion-item>
17          <ion-label position="floating"><ion-icon ios="ios-lock" md="md-lock"></ion-icon>
18            Password
19          </ion-label>
20          <ion-input type="password" [(ngModel)]="password" name="password"></ion-input>
21        </ion-item>
22      </ion-list>
23      <!--signin() and register-->
24      <div style="padding: 5%;>
25        <div style="margin-left: 30%;>
26          <ion-button block ion-button (click)="login()" >Login</ion-button>
27        </div>
28        <div style="margin-left: 25%;>
29          <ion-button block ion-button (click)="register()" >Register</ion-button>
30        </div>
31      </div>
32    </ion-content>
33
```



## Loginpage.ts:

```
4 import { AlertController } from '@ionic/angular';
5
6 @Component({
7   selector: 'app-login',
8   templateUrl: './login.page.html',
9   styleUrls: ['./login.page.scss'],
10 })
11 export class LoginPage implements OnInit {
12   public email;
13   public password;
14   public eMessage;
15
16   constructor(private auth: FirebaseService, public Nav: Router, private alert: AlertController) { }
17
18   ngOnInit() {
19   }
20
21   login() {
22     this.auth.firelogin(this.email, this.password).then( onfulfilled: res => {
23       console.log(res);
24       this.alert1();
25       this.Nav.navigate( commands: ['/home']);
26     }, onrejected: err => {
27       console.log(err);
28       this.eMessage = err.message;
29       this.alert2(this.eMessage);
30     });
31   }
32   register() {
33     this.Nav.navigate( commands: ['/register']);
34   }
35 }
36
37 LoginPage
```

## Registerpage.html:

```
11 <ion-item...>
12 </ion-item>
13 <ion-item>
14   <!--mail icon and input-->
15   <ion-label position="floating"> <ion-icon ios="ios-mail" md="md-mail"></ion-icon>
16     Email</ion-label>
17     <ion-input type="text" [(ngModel)]="email" name="email"></ion-input>
18   </ion-item>
19   <ion-item>
20     <!--password lock icon and input-->
21     <ion-label position="floating"><ion-icon ios="ios-lock" md="md-lock"></ion-icon>
22       Password</ion-label>
23       <ion-input type="password" [(ngModel)]="password" name="password"></ion-input>
24     </ion-item>
25     <ion-item>
26       <!--confirm password icon-->
27       <ion-label position="floating"><ion-icon ios="ios-lock" md="md-lock"></ion-icon>
28         Confirm Password</ion-label>
29         <ion-input type="password" [(ngModel)]="cpassword" name="cpassword"></ion-input>
30       </ion-item>
31     </ion-list>
32     <!--register-->
33     <div padding>
34       <ion-button block ion-button (click)="register()" round>Register</ion-button>
35       <ion-button block ion-button (click)="login()" round>Login</ion-button>
36     </div>
37   </ion-content>
38 </ion-content>
```

## Registerpage.ts:

```
home.page.html x home.page.ts x login.page.html x login.page.ts x register.page.html x register.page.ts x
20 |
21 | }
22 |
23 | register()
24 | {
25 |   if(this.password === this.cpassword) {
26 |     if (this.email != null && this.password != null && this.fullname != null) {
27 |       this.auth.signInWithEmailAndPassword(this.email, this.password).then( onfulfilled: res => {
28 |         console.log(res)
29 |         this.alert1();
30 |         this.nav.navigate( commands: ['/Login']);
31 |       }, onrejected: err => {
32 |         console.log(err)
33 |         this.emessage = err.message;
34 |         this.alert2(this.emessage);
35 |       });
36 |     } else {
37 |       this.alert2( v1: 'Please Fill the details');
38 |     }
39 |   } else {
40 |     this.alert2( v1: 'confirm password not matched ');
41 |   }
42 | }
43 |
44 | async alert1() {
45 |   const alert = await this.alert.create({
46 |     header: 'Alert',
47 |     subHeader: 'Message',
48 |     message: 'Registration successful as' + this.fullname,
49 |     buttons: ['OK']
50 |   });
51 | }
```

## FireBase Real time database:

← → ↺ 🔒 https://console.firebase.google.com/u/0/project/ionicproc/authentication/users ☆ 🛡️ 📄 📁 📌 📧 📧 📧

Project Overview ⚙️

Develop

Authentication

Database

Storage

Hosting

Functions

ML Kit

Quality

Crashlytics, Performance, Test Lab

Analytics

Dashboard, Events, Conversion A

Spark

Free \$0/month

Upgrade

ionicproc Authentication

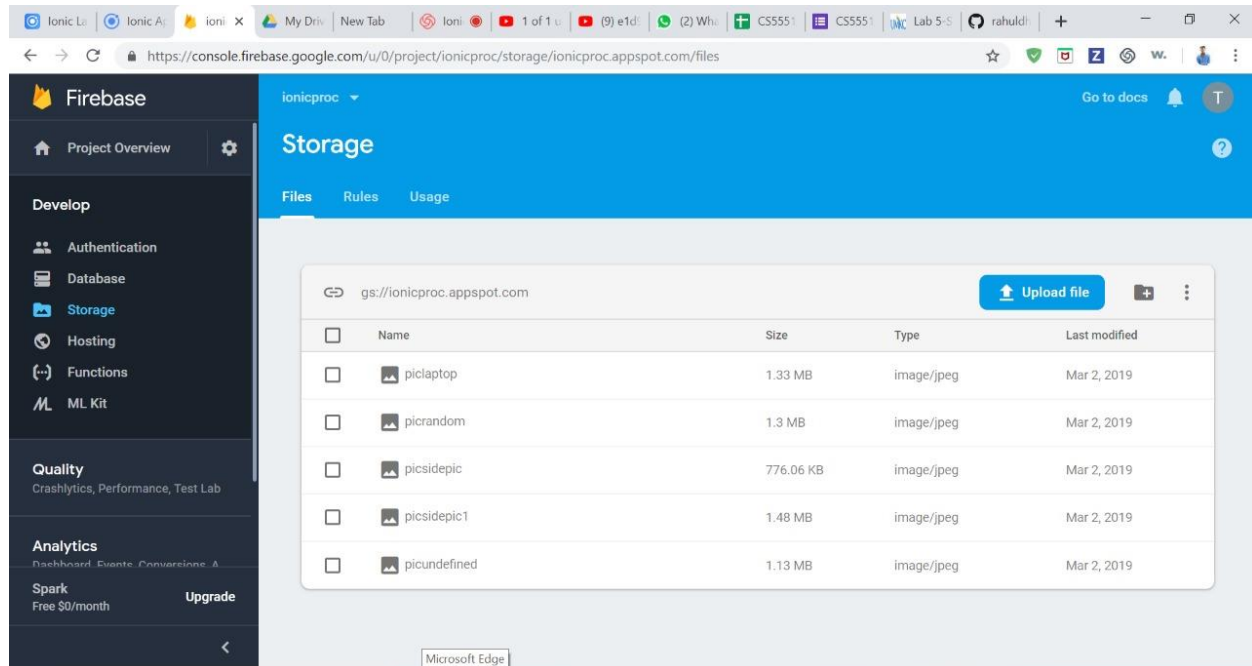
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🔍 Search by email address, phone number, or user UID

Add user ↺ ⋮

Identifier	Providers	Created	Signed In	User UID ↑
tejadevarapalli@gmail.com	📧	Feb 28, 2019	Feb 28, 2019	6GsdXdddQSQTsLVu9QxTaZmxAX...
tejadevarapalli47@gmail.com	📧	Feb 27, 2019	Feb 27, 2019	EFR2ocJwGFRnmEpszb5zKyQa22 ⋮
raihuldharto209@gmail.com	📧	Feb 28, 2019	Mar 2, 2019	FeHCJgRBUJM40Ido7mLUXgkLKS...
teja57@gmail.com	📧	Mar 2, 2019	Mar 2, 2019	HeOU2gbEQLgLPeBhbBUDeH5r86t2
teja56@gmail.com	📧	Mar 2, 2019	Mar 2, 2019	HtsmeOxNabWwIwtj3t15syJ3848...
teja@gmail.com	📧	Feb 27, 2019	Feb 27, 2019	lyqK21Sno4cwrSBJOI9FIwhZU2
teja55@gmail.com	📧	Feb 28, 2019	Mar 2, 2019	YTeyydiy2VZY45ys3McEYKIWTC3

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## Contributions:

### Rahul Dhamerla-7

- 1.Setup Ionic Project
- 2.Register page and logic
- 3.Added Firebase Configuration
- 4.Documentation

### Teja Devarapalli-5

- 1.Created and implemented login pages.
- 2.Saving registration details in Firebase.
- 3.Validating user login details.
- 4.Created home page and implemented ionic cordova camera plugin.
- 5.Saving the pictures in Firebase real time database.