**The Open University of Sri Lanka**

**Faculty of Engineering**

**Bachelor of Software Engineering**

**Department of Electrical and Computer Engineering**

**EEI3269 – Introduction to Mobile Application Development**

**Academic Year 2021/2022**

**Final Lab Test**


1.  **Functional and Nonfunctional requirements.**
    **Functional requirements**
    *   Users need to register/Signup with the application.
    *   If the users forgot their Passwords, they must be able to reset it.
    *   Once user clicks the LP Gas category on Dashboard it should Navigate to the Separate UI which contains the types of LP Gas.
    *   Once they distribute LP Gas to the retailers, admin teams can push notifications to all searched users in the area.
    *   Then users will get the notification with alert message.

    **Nonfunctional requirements.**
    *   Dashboard.
    *   In Dashboard LP Gas, Live Queue Map and Notifications displayed.
    *   Users can enter their preferred weight of LP Gas, District, City or Town and then can search the LP Gas availability of the nearest station.
    *   Based on the number of search requests details, the Ministry of Energy, Laugfs and Litro gas dealers can take the decisions to distribute the LP Gas trucks to relevant areas.
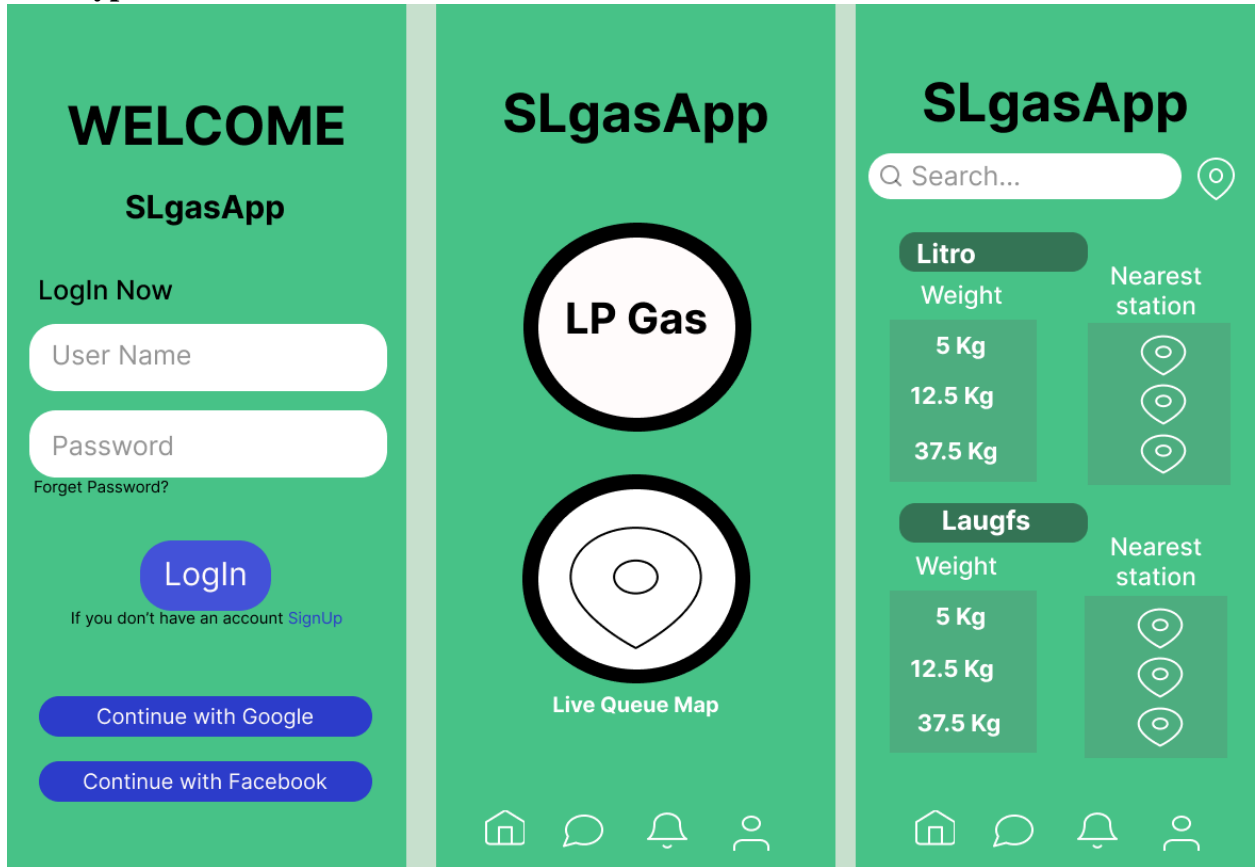
2.  **Difference between wireframe and prototyping.**
    Wireframe is a basic layout of the fundamental design elements in the design process and Prototyping focuses on the structure of a website and its content.
    Wireframes are low-fidelity, basic layout and structural guidelines of a web product's layout and prototypes are an advanced wireframe with more visual detail and interaction. A wireframe presents the contents of the main page, outlining the structure of the website/app and layout, and highlighting the basic UIs. But prototypes serve multiple use cases, such as visualizing an idea, serving as a blueprint for developers, assessing technical feasibility, or testing the effectiveness of the design.

Wireframes can be hand drawn or created using software programs. Prototypes can be made from paper or digital tools such as Axure or adobe XD

3. **Prototype UI**

## 4. React native project

```
Vihari@V2 MINGW64 ~
$ cd "D:\OUSL\2021and2022\EEI3269\DC\RNprojects"

Vihari@V2 MINGW64 /d/OUSL/2021and2022/EEI3269/DC/RNprojects
$ expo init SLgasApp
√ Choose a template: » blank              a minimal app as clean as an empty canvas
✓ Downloaded template.
🍴 Using npm to install packages.
| Installing JavaScript dependencies.
✓ Installed JavaScript dependencies.
✅ Your project is ready!

To run your project, navigate to the directory and run one of the following npm commands.

- cd SLgasApp
- npm start # you can open iOS, Android, or web from here, or run them directly with the commands below.
- npm run android
- npm run ios # requires an iOS device or macOS for access to an iOS simulator
- npm run web

Vihari@V2 MINGW64 /d/OUSL/2021and2022/EEI3269/DC/RNprojects
$ cd SLgasApp

Vihari@V2 MINGW64 /d/OUSL/2021and2022/EEI3269/DC/RNprojects/SLgasApp (main)
$ npm start

> slgasapp@1.0.0 start
> expo start
```

```
$ npm start

> slgasapp@1.0.0 start
> expo start

Starting project at D:\OUSL\2021and2022\EEI3269\DC\RNprojects\SLgasApp
Starting Metro Bundler
```



```
› Metro waiting on exp://192.168.249.65:19000
› Scan the QR code above with Expo Go (Android) or the Camera app (iOS)

› Press a │ open Android
› Press w │ open web

› Press r │ reload app
› Press m │ toggle menu
```

**5. Design and implement the given functions using react native.**

## LogIn

← LogIn

# WELCOME

## SLgasApp

LogIn Now

User Name

Password

**LOGIN**

If you forget your password

**GO TO RESET PASSWORD**

← Reset Password

# Reset Your Password

User Name

New Password

Confirtm Password

**SUBMIT**

# Your Password Is Updated

**LOGIN**

# SLgasApp

**LP GAS**

**LIVE QUEUE MAP**

## LP Gas

### LITRO

Weight

5Kg

12.5Kg

37.5Kg



NEAREST STATION

### LAUHFS

Weight

5Kg

12.5Kg

37.5Kg



NEAREST STATION

BACK TO DASHBOARD

## Live Queue Map



BACK TO DASHBOARD
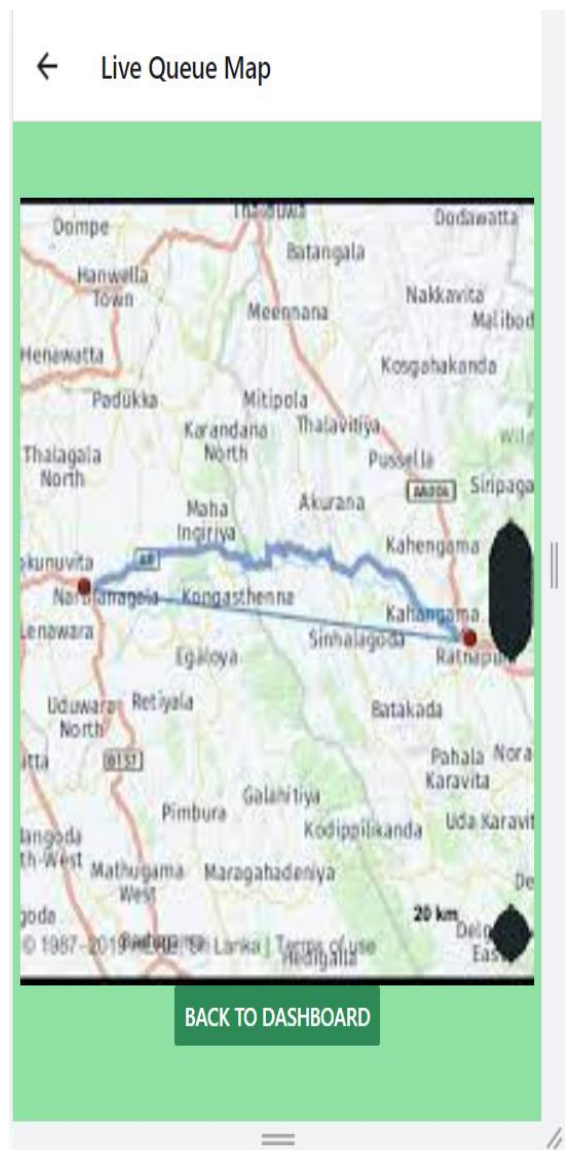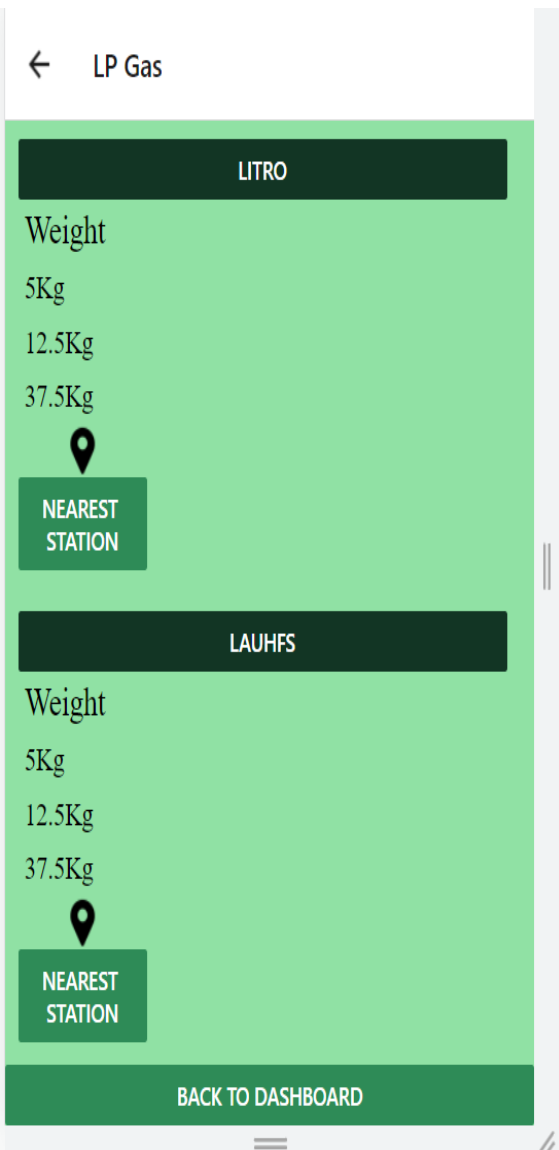
```jsx
import * as React from 'react';
import { Button, View, Text ,Image,TextInput,ScrollView} from 'react-native';
import { NavigationContainer } from '@react-navigation/native';
import { createNativeStackNavigator } from '@react-navigation/native-stack';

function HomeScreen({ navigation }) {
  return (
    <View style={{ flex: 1, alignItems: 'center',  backgroundColor:
'rgb(144,225,164)', justifyContent: 'center' }}>
      <Image source={{
        width: 300,
        height: 250,
        marginBottom: 50,
        padding: 50,
        alignItems: 'center',
        uri:"https://img.favpng.com/7/1/13/biofuel-renewable-energy-fuel-gas-
natural-gas-png-favpng-v63hn3h6jb40iKMHaZWWdiY9E.jpg",
        }}
        />
      <Text style={{fontSize:50,textAlign: 'center',margin:
10,color:'#ffffff',fontFamily: 'Georgia'}}>WELCOME</Text>
      <Text style={{fontSize:30,textAlign: 'center',margin: 10,color:
'#ffffff',fontFamily: 'Georgia'}}>SLgasApp</Text>
      <Text style={{fontSize:10,textAlign: 'center',margin: 5,color:
'#ffffff',fontFamily: 'Georgia'}}> Best way to find your choice</Text>

      <Button  title="Get Start"
       onPress={() => navigation.navigate('SignUp')}
      />
      <Text style={{fontSize:12,textAlign: 'center',margin: 5,color:
'#ffffff',fontFamily: 'Georgia'}}> If you already have an account?</Text>
      <Button
       title="LogIn"
       onPress={() => navigation.navigate('LogIn')}
      />
    </View>
  );
}


function SignUpScreen({ navigation }) {
  return (
    <View style={{ flex: 1, justifyContent: 'center',backgroundColor:
'rgb(144,225,164)' }}>
```

```
    <Text style={{fontSize:50,textAlign: 'center',margin: 10,color:
'#ffffff',fontFamily:'serif'}}>WELCOME</Text>
    <Text style={{fontSize:35,textAlign: 'center',margin: 10,color:
'#ffffff',fontFamily: 'serif'}}>SLgasApp</Text>
    <Text style={{fontSize:20,textAlign: 'left',margin: 10,color:
'#ffffff',fontFamily:'serif'}}>SignUp Now</Text>
    <Text style={{fontSize:15,textAlign: 'left', color:
'#ffffff',fontFamily:'serif'}}>Name</Text>
    <TextInput style={{height: 40,margin: 1,borderWidth: 1,padding:
10,borderRadius: 10,borderColor:'black'}}
    />
    <Text style={{fontSize:15,textAlign: 'left',margin: 1, color:
'#ffffff',fontFamily:'serif'}}>Email Address </Text>
    <TextInput style={{height: 40,alignItems: 'center',margin: 1,borderWidth:
1,padding: 10,borderRadius: 10,borderColor:'black'}}
    />
    <Text style={{fontSize:15,textAlign: 'left',margin: 1, color:
'#ffffff',fontFamily:'serif'}}>Password</Text>
    <TextInput style={{height: 40,margin: 2,borderWidth: 1,marginBottom:
15,padding: 10,borderRadius: 10,borderColor:'black'}}
    />
    <Button title="SignUp" onPress={() => navigation.navigate('Dashboard')} />
    <Text style={{fontSize:15,textAlign: 'center',margin: 5,color:
'#ffffff',fontFamily:'serif'}}>If you already have an account</Text>
    <Button title="Go to Login" onPress={() => navigation.navigate('LogIn')} />
    </View>

  );
}

function LoginScreen({ navigation }) {
  return (
    <View style={{ flex: 1, justifyContent: 'center',backgroundColor:
'rgb(144,225,164)' }}>
    <Text style={{fontSize:50,textAlign: 'center',margin: 10,color:
'#ffffff',fontFamily:'serif'}}>WELCOME</Text>
    <Text style={{fontSize:35,textAlign: 'center',margin: 10,color:
'#ffffff',fontFamily: 'serif'}}>SLgasApp</Text>
    <Text style={{fontSize:20,textAlign: 'left',margin: 5,color:
'#ffffff',fontFamily:'serif'}}>LogIn Now</Text>
    <Text style={{fontSize:15,textAlign: 'left', color:
'#ffffff',fontFamily:'serif'}}>User Name</Text>
    <TextInput style={{height: 40,margin: 1,borderWidth: 1,padding:
10,borderRadius: 10,borderColor:'black'}}
    />
```

```jsx
      <Text style={{fontSize:15,textAlign: 'left',margin: 1, color:
'#ffffff',fontFamily:'serif'}}>Password</Text>
        <TextInput style={{height: 40,margin: 2,borderWidth: 1,marginBottom:
15,padding: 10,borderRadius: 10,borderColor:'black'}}
        />

        <Button title="LogIn" onPress={() => navigation.navigate('Dashboard')} />
        <Text style={{fontSize:15,textAlign: 'center',margin: 5,color:
'#ffffff',fontFamily:'serif'}}>If you forget your password</Text>
        <Button title="Go to reset password" onPress={() =>
navigation.navigate('Reset Password')} />
      </View>
  );
}
function PasswordResetScreen({ navigation }) {
  return (
    <View style={{ flex: 1, justifyContent: 'center',backgroundColor:
'rgb(144,225,164)' }}>
      <Text style={{fontSize:40,textAlign: 'center',margin: 30,color:
'#ffffff',fontFamily:'serif'}}>Reset Your Password</Text>
      <Text style={{fontSize:15,textAlign: 'left', color:
'#ffffff',fontFamily:'serif'}}>User Name</Text>
      <TextInput style={{height: 40,margin: 1,borderWidth: 1,padding:
10,borderRadius: 10,borderColor:'black'}}
      />
      <Text style={{fontSize:15,textAlign: 'left',margin: 1, color:
'#ffffff',fontFamily:'serif'}}>New Password </Text>
      <TextInput style={{height: 40,alignItems: 'center',margin: 1,borderWidth:
1,padding: 10,borderRadius: 10,borderColor:'black'}}
      />
      <Text style={{fontSize:15,textAlign: 'left',margin: 1, color:
'#ffffff',fontFamily:'serif'}}>Confirtm Password</Text>
      <TextInput style={{height: 40,margin: 2,borderWidth: 1,marginBottom:
15,padding: 10,borderRadius: 10,borderColor:'black'}}
      />
        <Button title="Submit" onPress={() => navigation.navigate('Password
Updated')} />
      </View>
  );
}
function UpdatedPassword({ navigation }) {
  return (
    <View style={{ flex: 1, alignItems: 'center',justifyContent:
'center',backgroundColor: '#ffffff' }}>
```

```
        <Text style={{fontSize:40,textAlign: 'center',margin: 30,color:
'black',fontFamily:'serif'}}>Your Password Is Updated</Text>
    <Image source={{
        width: 300,
        height: 300,
        marginBottom: 50,
        padding: 50,
        alignItems: 'center',
        uri:"https://encrypted-
tbn0.gstatic.com/images?q=tbn:ANd9GcSvmFqwrHR4g0HvJ-
81OPpPzSeSFPtb4LUUpVN2MJjL2vb1JuzwD2yi4jUoLOjz3GZepqQ&usqp=CAU",
        }}
        />
    <Button color="#73ef71" title="LogIn" onPress={() =>
navigation.navigate('LogIn')} />
    </View>
  );
}


function Dashboard({ navigation }) {
  return (
    <View style={{ flex: 1,alignItems: 'center', justifyContent:
'center',backgroundColor: 'rgb(144,225,164)' }}>
      <Text style={{ fontSize:50,textAlign: 'center',margin: 10,color:
'#ffffff',fontFamily: 'serif'}}>SLgasApp</Text>

    <View style={{ flex: 1,padding:10,borderRadius:20, paddingBottom:30,
justifyContent: 'flex-end' }}>
    <Image source={{
        width: 150,
        height: 150,
        marginBottom: 50,
        padding: 50,
        alignItems: 'center',
        uri:"https://www.shareicon.net/data/256x256/2016/06/10/586220_gas_512x5
12.png",
        }}
        />
    <Button color="#2e8b57" title="LP Gas" onPress={() =>navigation.navigate('LP
Gas')}/>
    </View>
    <View style={{ flex: 1,padding:10,borderRadius:50, paddingBottom:30,
justifyContent: 'flex-end' }}>
    <Image source={{
```

```
            width: 150,
            height: 150,
            marginBottom: 50,
            padding: 50,
            alignItems: 'center',
            uri:"https://www.iconpacks.net/icons/2/free-location-pointer-icon-2961-
thumb.png",
          }}
        />
      <Button color="#2e8b57" title="Live Queue Map" onPress={()
=>navigation.navigate('Live Queue Map')}/>
    </View>
    </View>
  );
}
function LPGas({ navigation }) {
  return (
    <View style={{ flex: 1, justifyContent: 'center',backgroundColor:
'rgb(144,225,164)' }}>
    <View style={{ flex: 1,padding:10,width
:400,borderRadius:50,  justifyContent: 'flex-end' }}>
    <Button color="#123524" title="Litro" />
    <Text style={{fontSize:22,textAlign: 'left',margin: 5,color:
'black',fontFamily:'serif'}}>Weight</Text>
    <Text style={{fontSize:18,textAlign: 'left',margin: 5,color:
'black',fontFamily:'serif'}}>5Kg</Text>
    <Text style={{fontSize:18,textAlign: 'left',margin: 5,color:
'black',fontFamily:'serif'}}>12.5Kg</Text>
    <Text style={{fontSize:18,textAlign: 'left',margin: 5,color:
'black',fontFamily:'serif'}}>37.5Kg</Text>
    <View style={{ flex: 1,alignItems: 'center',padding:0,width :100 }}>
    <Image source={{
            width: 30,
            height: 30,

            padding: 50,
            alignItems: 'center',
            uri:"https://www.iconpacks.net/icons/2/free-location-pointer-icon-2961-
thumb.png",
          }}
        />

      <Button color="#2e8b57" title="nearest station" onPress={()
=>navigation.navigate('Live Queue Map')}/>
    </View>
```

```
        </View>
        <View style={{ flex: 1,padding:10,width
:400,borderRadius:150,  justifyContent: 'flex-end' }}>
        <Button color="#123524" title="Lauhfs" />
        <Text style={{fontSize:22,textAlign: 'left',margin: 5,color:
'black',fontFamily:'serif'}}>Weight</Text>
        <Text style={{fontSize:18,textAlign: 'left',margin: 5,color:
'black',fontFamily:'serif'}}>5Kg</Text>
        <Text style={{fontSize:18,textAlign: 'left',margin: 5,color:
'black',fontFamily:'serif'}}>12.5Kg</Text>
        <Text style={{fontSize:18,textAlign: 'left',margin: 5,color:
'black',fontFamily:'serif'}}>37.5Kg</Text>
        <View style={{ flex: 1,alignItems: 'center',padding:0,width :100 }}>
        <Image source={{
            width: 30,
            height: 30,

            padding: 50,
            alignItems: 'center',
            uri:"https://www.iconpacks.net/icons/2/free-location-pointer-icon-2961-
thumb.png",
        }}
        />

        <Button color="#2e8b57" title="nearest station" onPress={()
=>navigation.navigate('Live Queue Map')}/>
        </View>

        </View>
            <Button color="#2e8b57" title="Back to Dashboard" onPress={()
=>navigation.navigate('Dashboard')}/>
        </View>
    );
}
function LiveQueueMap({ navigation }) {
    return (
        <View style={{ flex: 1,alignItems: 'center', justifyContent:
'center',backgroundColor: 'rgb(144,225,164)' }}>
        <Image source={{
            width: 400,
            height:450,
            marginBottom: 70,
            padding: 50,
            alignItems: 'center',
```

```jsx
          uri:"https://encrypted-
tbn0.gstatic.com/images?q=tbn:ANd9GcTEq09hCbQXYwIr0T9agdahZzro57D1nZfHspP-
GGxE5hm0HlW9WWfKQm3U3X3bKlp7Lgw&usqp=CAU",
        }}
        />

      <Button color="#2e8b57" title="Back to Dashboard" onPress={()
=>navigation.navigate('Dashboard')}/>
    </View>
  );
}



const Stack = createNativeStackNavigator();

export default function App() {
  return (
    <NavigationContainer>

      <Stack.Navigator initialRouteName="Home">
        <Stack.Screen name="Home" component={HomeScreen} />
        <Stack.Screen name="SignUp" component={SignUpScreen} />
        <Stack.Screen name="LogIn" component={LoginScreen} />
        <Stack.Screen name="Reset Password" component={PasswordResetScreen} />
        <Stack.Screen name="Password Updated" component={UpdatedPassword} />
        <Stack.Screen name="Dashboard" component={Dashboard} />
        <Stack.Screen name="LP Gas" component={LPGas} />
        <Stack.Screen name="Live Queue Map" component={LiveQueueMap} />
      </Stack.Navigator>
    </NavigationContainer>
  );
}
```