

**ĐẠI HỌC QUỐC GIA THÀNH PHỐ HỒ CHÍ MINH**  
**TRƯỜNG ĐẠI HỌC CÔNG NGHỆ THÔNG TIN**  
**KHOA KHOA HỌC VÀ KỸ THUẬT THÔNG TIN**

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**BÁO CÁO THỰC HÀNH**  
**CÔNG NGHỆ LẬP TRÌNH ĐA NỀN TẢNG**  
**CHO ỨNG DỤNG DI ĐỘNG**  
**LAB 03: NESTED NAVIGATION, SQLite DATABASE**

GVHD: Phạm Nhật Duy

Lớp: IE307.P11

**Sinh viên thực hiện:**

Thạch Minh Luân

MSSV: 22520827

๑๐๑ Tp. Hồ Chí Minh, 11/2024 ๑๐๑

## NHẬN XÉT CỦA GIÁO VIÊN HƯỚNG DẪN

This image shows a full page of white paper with horizontal dotted lines, typical of primary school writing paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

....., ngày.....tháng.....năm 20...

**Người nhận xét**

(Ký tên và ghi rõ họ tên)

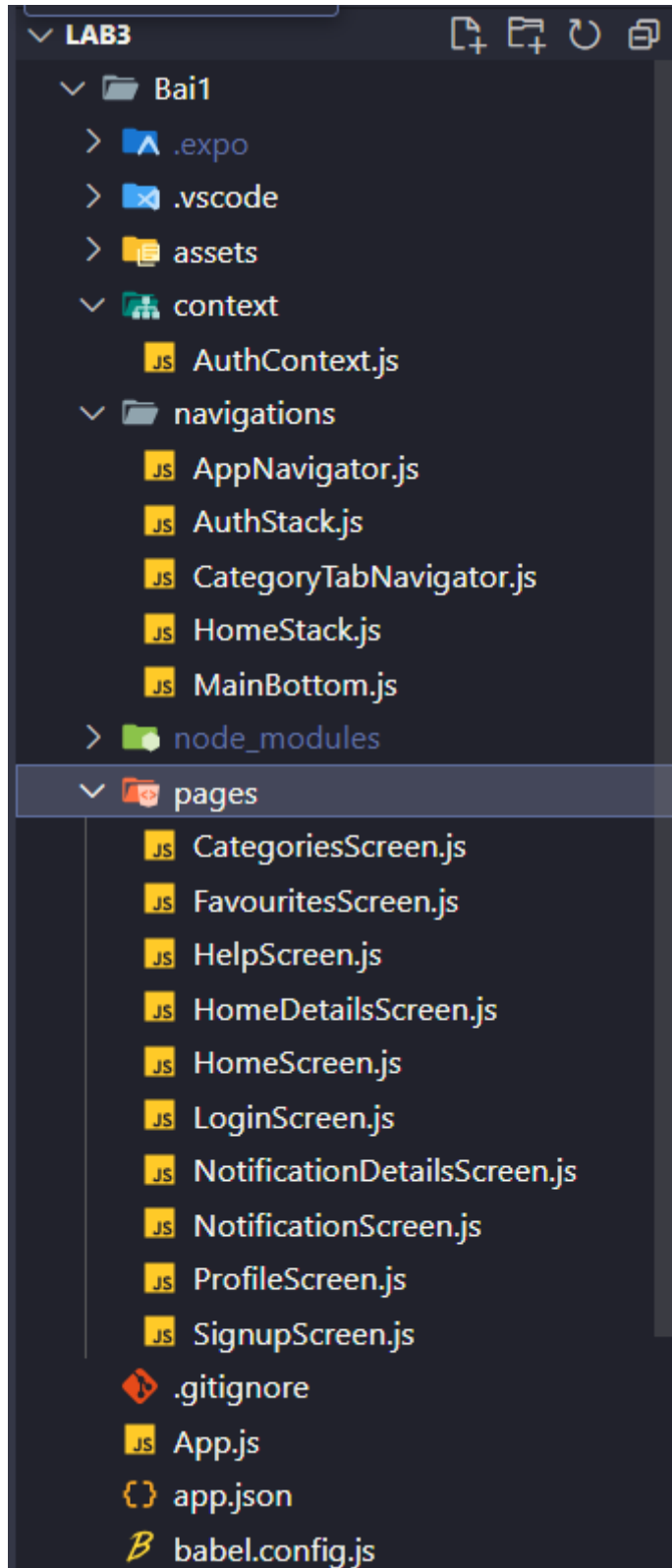
MỤC LỤC

<b>Bài 1: Nested Navigation .....</b>	<b>3</b>
<b>Bài 2: SQLite Database.....</b>	<b>21</b>

## BÀI LÀM

### Bài 1: Nested Navigation

- Cấu trúc các folder/file của dự án



- Nội dung code

- AuthContext.js

```
1 import React, { useState, createContext } from 'react';
2
3 export const AuthContext = createContext();
4
5 export const AuthProvider = ({ children }) => {
6   const [isAuthenticated, setIsAuthenticated] = useState(false);
7
8   const login = (email, password) => {
9     if (email === '22520827@gm.uit.edu.vn' && password === 'thachminhluan') {
10       setIsAuthenticated(true);
11     } else {
12       alert('Invalid email or password');
13     }
14   };
15   /*Thạch Minh Luân - 22520827*/
16   const logout = () => {
17     setIsAuthenticated(false);
18   };
19
20   return (
21     <AuthContext.Provider value={{isAuthenticated, login, logout }}>
22       {children}
23     </AuthContext.Provider>
24   );
25 };
26
27
```

- AuthStack.js

```
JS AuthStack.js M X
Bai1 > navigations > JS AuthStack.js > ...
1 import { createStackNavigator } from '@react-navigation/stack';
2 import LoginScreen from '../pages/LoginScreen';
3 import SignupScreen from '../pages/SignupScreen';
4
5 const Stack = createStackNavigator();
6 /*Thạch Minh Luân - 22520827*/
7 const AuthStack = () => {
8   return (
9     <Stack.Navigator initialRouteName="Login">
10       <Stack.Screen
11         name="Login"
12         component={LoginScreen}
13         options={{headerShown: false}}/>
14       <Stack.Screen
15         name="Signup"
16         component={SignupScreen}
17         options={{headerShown: false}}/>
18     </Stack.Navigator>
19   );
20 };
21
22 export default AuthStack;
23
```

- CategoriesScreen.js

```
JS CategoriesScreen.js M X
Bai1 > pages > JS CategoriesScreen.js > ...
1
2 import { View, Text, StyleSheet } from 'react-native';
3
4 const CategoriesScreen = ({title}) => {
5
6   return (
7     <View style={styles.container}>
8       <Text>{title}</Text>
9     </View>
10  );
11 };
12   /*Thạch Minh Luân - 22520827*/
13 const styles = StyleSheet.create({
14   container: {
15     alignItems: "center",
16     marginTop: 100
17   }
18 });
19
20 export default CategoriesScreen;
21
```

- FavouritesScreen.js

```

JS FavouritesScreen.js M X
Bai1 > pages > JS FavouritesScreen.js > ...
1
2 import { View, Text, StyleSheet } from 'react-native';
3
4 const FavoritesScreen = () => {
5
6   return (
7     <View style={styles.container}>
8       <Text>FavouritesScreen</Text>
9     </View>
10  );
11 };
12 /**Thạch Minh Luân - 22520827*/
13 const styles = StyleSheet.create({
14   container: {
15     alignItems: "center",
16     marginTop: 100
17   }
18 });
19
20 export default FavoritesScreen;
21

```

- HelpScreen.js

```

JS HelpScreen.js M X
Bai1 > pages > JS HelpScreen.js > ...
1
2 import { View, Text, StyleSheet } from 'react-native';
3
4
5 const HelpScreen = () => {
6   return (
7     <View style={styles.container}>
8       <Text>HelpScreen</Text>
9     </View>
10  );
11 };
12 /**Thạch Minh Luân - 22520827*/
13 const styles = StyleSheet.create({
14   container: {
15     alignItems: "center",
16     marginTop: 100
17   }
18 });
19
20 export default HelpScreen;
21

```

- HomeDetailsScreen.js

```
JS HomeDetailsScreen.js M X
Bai1 > pages > JS HomeDetailsScreen.js > ...
1
2 import { View, Text, StyleSheet } from 'react-native';
3
4
5 const HomeDetailsScreen = ({navigation}) => {
6   return (
7     <View style={styles.container}>
8       <Text>HomeDetailsScreen</Text>
9     </View>
10  );
11 };
12 { /*Thạch Minh Luân - 22520827*/ }
13 const styles = StyleSheet.create({
14   container: {
15     alignItems: "center",
16     marginTop: 100
17   }
18 })
19
20 export default HomeDetailsScreen;
21
```

- HomeScreen.js

```
JS HomeScreen.js M X
Bai1 > pages > JS HomeScreen.js > ...
1
2 import { View, Text, StyleSheet, Button } from 'react-native';
3
4
5 const HomeScreen = ({navigation}) => {
6   return (
7     <View style={styles.container}>
8       <Text>HomeScreen</Text>
9       <Button title="Go to detail"
10         onPress={() => navigation.navigate('HomeDetails')}
11       />
12     </View>
13   );
14 };
15 { /*Thạch Minh Luân - 22520827*/ }
16 const styles = StyleSheet.create({
17   container: {
18     alignItems: "center",
19     marginTop: 100
20   }
21 })
22
23 export default HomeScreen;
24
```

- LoginScreen.js



```

LoginScreen.js M X
Bail > pages > LoginScreen.js > ...
1 import React, { useContext, useState } from 'react';
2 import { View, Text, TextInput, StyleSheet, Image, TouchableOpacity } from 'react-native';
3 import { AuthContext } from '../context/AuthContext';
4
5 const LoginScreen = ({ navigation }) => {
6   const {login} = useContext(AuthContext);
7   const [email, setEmail] = useState('');
8   const [password, setPassword] = useState('');
9   /*Thạch Minh Luân - 22520827*/
10  return (
11    <View style={styles.viewCha}>
12      <View>
13        <Image
14          style={styles.logo}
15          source={{ uri: 'https://www.scorchsoft.com/public/capabilities/head/react-native-logo-square.webp' }}
16        />
17        <Text style={styles.title}>Welcome</Text>
18      </View>
19      <View style={styles.container}>
20        <View style={styles.viewInput}>
21          <Image
22            style={styles.icon}
23            source={{uri: "https://cdn-icons-png.flaticon.com/128/646/646094.png"}}/>
24          <TextInput
25            style={styles.input}
26            value={email}
27            onChangeText={setEmail}
28            placeholder="Email"
29            placeholderTextColor={"#666"}
30          />
31        </View>

```

```

32    /*Thạch Minh Luân - 22520827*/
33    <View style={styles.viewInput}>
34      <Image
35        style={styles.icon}
36        source={{uri: "https://cdn-icons-png.flaticon.com/128/9512/9512572.png"}}/>
37      <TextInput
38        style = {styles.input}
39        value={password}
40        onChangeText={setPassword}
41        placeholder="Password"
42        placeholderTextColor={"#666"}
43        secureTextEntry={true}
44      />
45    </View>
46    <Text style={styles.forgotpw}>Forgot password?</Text>
47
48    <TouchableOpacity
49      style={styles.btnLogin}
50      onPress={() => login(email, password)}
51    >
52      <Text style={styles.txtLogin}>LOG IN</Text>
53    </TouchableOpacity>
54
55    /* dang nhap bang phuc khac */
56    <Text style={styles.loginwith}>Or login with</Text>
57
58    <View style={styles.viewLoginWith}>
59      <Image
60        style={styles.iconLoginWith}
61        source={{uri: "https://cdn-icons-png.flaticon.com/128/5968/5968764.png"}}/>
62      <Image
63        style={styles.iconLoginWith}
64        source={{uri: "https://cdn-icons-png.flaticon.com/128/281/281764.png"}}/>
65    </View>
66    /*Thạch Minh Luân - 22520827*/

```

```
JS LoginScreen.js M X
Bai1 > pages > JS LoginScreen.js > ...
5  const LoginScreen = ({ navigation }) => {
66  /*Thạch Minh Luân - 22520827*/
67    <View style={styles.viewNoAcc}>
68      <Text style={styles.txtNoAcc}>Don't have account?</Text>
69      <Text
70        style={styles.signup}
71        onPress={() => navigation.navigate('Signup')}>Sign up here!</Text>
72    </View>
73  </View>
74 </View>
75 );
76 };
77 /*Thạch Minh Luân - 22520827*/
78 const styles = StyleSheet.create({
79   viewCha: {
80     paddingTop: 100
81   },
82   container:{
83     alignItems: "center"
84   },
85   logo: {
86     height: 100,
87     width: 100,
88     borderRadius: 50,
89     alignSelf: "center"
90   },
91   title: {
92     fontSize: 28,
93     fontWeight: "bold",
94     alignSelf: "center"
95   },
96   viewInput: {
97     borderWidth: 1,
98     height: 40,
99     width: '70%',
100    margin: 12,
101    padding: 10,
102    flexDirection: "row",
103    alignItems: "center",
104    borderRadius: 10
105  },
106  icon: {
107    height: 24,
```

```

LoginScreen.js M X
Bai1 > pages > LoginScreen.js > ...
78   const styles = StyleSheet.create({
120   },
121   btnLogin: {
122     backgroundColor: "orange",
123     width: '70%',
124     height: 40,
125     borderRadius: 5,
126     alignSelf: "center"
127   },
128   txtLogin: {
129     fontSize: 30,
130     fontWeight: "bold",
131     alignSelf: "center",
132     color: "white"
133   },
134   loginwith: {
135     alignSelf: "center",
136     marginTop: 15,
137     fontSize: 20,
138     fontWeight: "bold"
139   },
140   iconLoginWith: {
141     width: 50,
142     height: 50,
143     alignSelf: "center",
144     marginHorizontal: 15
145   },
146   viewLoginWith: {
147     width: 'auto',
148     height: 50,
149     flexDirection: "row",
150     alignItems: "center",
151     marginVertical: 15
152   },
153   viewNoAcc: {
154     flexDirection: "row",
155     alignItems: "center",
156   },
157   txtNoAcc: {
158     fontSize: 20
159   },
160   signup: {
161     width: 'auto',
162     marginStart: 5,
163     fontSize: 20,
164     fontWeight: "bold",
165     color: "blue",
166   }
167 })
168
169 export default LoginScreen;

```

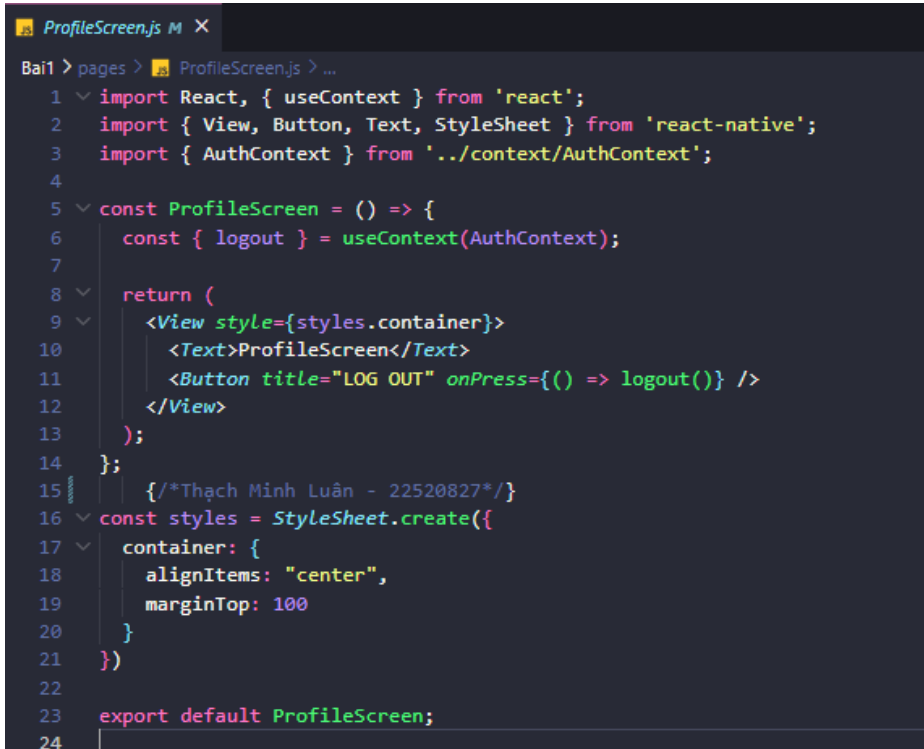
- NotificationDetailsScreen.js

```
NotificationDetailsScreen.js M X
Bai1 > pages > NotificationDetailsScreen.js > ...
1
2 import { View, Text, StyleSheet} from 'react-native';
3
4
5 const NotificationDetailsScreen = () => {
6   return (
7     <View style={styles.container}>
8       <Text>NotificationDetailsScreen</Text>
9     </View>
10  );
11 };
12 /*Thạch Minh Luân - 22520827*/
13 const styles = StyleSheet.create({
14   container: {
15     alignItems: "center",
16     marginTop: 100
17   }
18 })
19
20 export default NotificationDetailsScreen;
21
```

- NotificationScreen.js

```
NotificationScreen.js M X
Bai1 > pages > NotificationScreen.js > ...
1
2 import { View, Text, StyleSheet, Button } from 'react-native';
3
4
5 const NotificationScreen = ({navigation}) => {
6   return (
7     <View style={styles.container}>
8       <Text>NotificationScreen</Text>
9       <Button title="Go to detail"
10         onPress={() => navigation.navigate('NotificationDetails')}
11       />
12     </View>
13   );
14 };
15 /*Thạch Minh Luân - 22520827*/
16 const styles = StyleSheet.create({
17   container: {
18     alignItems: "center",
19     marginTop: 100
20   }
21 })
22
23 export default NotificationScreen;
24
```

- ProfileScreen.js

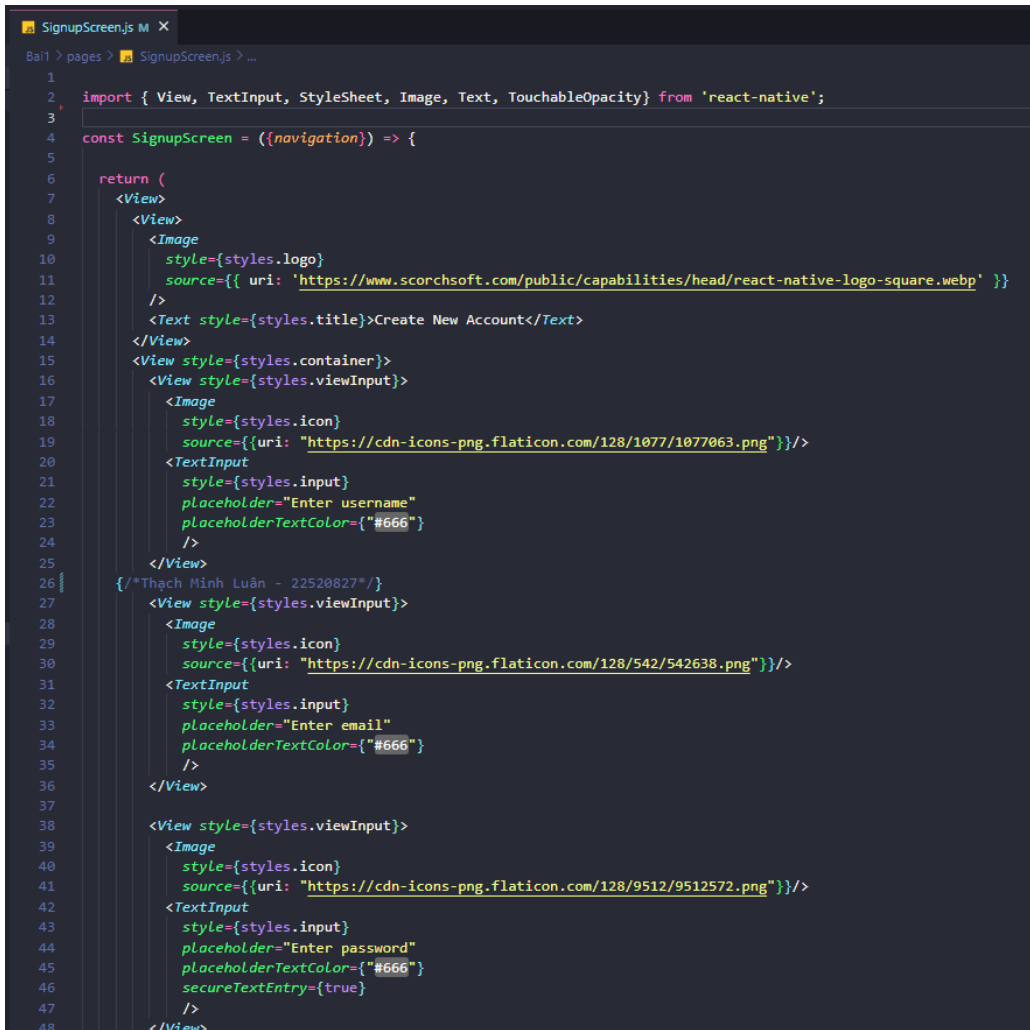


```

ProfileScreen.js M X
Bail > pages > ProfileScreen.js > ...
1  import React, { useContext } from 'react';
2  import { View, Button, Text, StyleSheet } from 'react-native';
3  import { AuthContext } from '../context/AuthContext';
4
5  const ProfileScreen = () => {
6    const { logout } = useContext(AuthContext);
7
8    return (
9      <View style={styles.container}>
10        <Text>ProfileScreen</Text>
11        <Button title="LOG OUT" onPress={() => logout()} />
12      </View>
13    );
14  };
15  /*Thạch Minh Luân - 22520827*/
16  const styles = StyleSheet.create({
17    container: {
18      alignItems: "center",
19      marginTop: 100
20    }
21  })
22
23  export default ProfileScreen;
24

```

- SignupScreen.js



```

SignupScreen.js M X
Bail > pages > SignupScreen.js > ...
1
2  import { View, TextInput, StyleSheet, Image, Text, TouchableOpacity } from 'react-native';
3
4  const SignupScreen = ({navigation}) => {
5
6    return (
7      <View>
8        <View>
9          <Image
10            style={styles.logo}
11            source={{ uri: 'https://www.scorchsoft.com/public/capabilities/head/react-native-logo-square.webp' }}
12          />
13          <Text style={styles.title}>Create New Account</Text>
14        </View>
15        <View style={styles.container}>
16          <View style={styles.viewInput}>
17            <Image
18              style={styles.icon}
19              source={{uri: "https://cdn-icons-png.flaticon.com/128/1077/1077063.png"}}/>
20            <TextInput
21              style={styles.input}
22              placeholder="Enter username"
23              placeholderTextColor={"#666"}
24            />
25          </View>
26          /*Thạch Minh Luân - 22520827*/
27          <View style={styles.viewInput}>
28            <Image
29              style={styles.icon}
30              source={{uri: "https://cdn-icons-png.flaticon.com/128/542/542638.png"}}/>
31            <TextInput
32              style={styles.input}
33              placeholder="Enter email"
34              placeholderTextColor={"#666"}
35            />
36          </View>
37          <View style={styles.viewInput}>
38            <Image
39              style={styles.icon}
40              source={{uri: "https://cdn-icons-png.flaticon.com/128/9512/9512572.png"}}/>
41            <TextInput
42              style={styles.input}
43              placeholder="Enter password"
44              placeholderTextColor={"#666"}
45              secureTextEntry={true}
46            />
47          </View>
48        </View>

```

```

50     <View style={styles.viewInput}>
51       <Image
52         style={styles.icon}
53         source={{uri: "https://cdn-icons-png.flaticon.com/128/9512/9512572.png"}}/>
54       <TextInput
55         style={styles.input}
56         placeholder="Confirm password"
57         placeholderTextColor={"#666"}
58         secureTextEntry={true}
59       />
60     </View>
61
62     <TouchableOpacity
63       style={styles.btnCreate}
64     >
65       <Text style={styles.txtCreate}>CREATE</Text>
66     </TouchableOpacity>
67
68     {/*Thạch Minh Luân - 22520827*/}
69
70     <View style={styles.viewHaveAcc}>
71       <Text style={styles.txtHaveAcc}>Already have an account</Text>
72       <Text
73         style={styles.login}
74         onPress={() => navigation.navigate('Login')}>Login now!</Text>
75     </View>
76   </View>
77 </View>
78 );
79 };
80
81
82 const styles = StyleSheet.create({
83   container:{
84     alignItems: "center"
85   },
86   logo: {
87     height: 100,
88     width: 100,
89     borderRadius: 50,
90     alignSelf: "center"
91   },

```

```
96     },
97     viewInput: {
98         borderWidth: 1,
99         height: 40,
100        width: '70%',
101        margin: 12,
102        padding: 10,
103        flexDirection: "row",
104        alignItems: "center",
105        borderRadius: 10
106    },
107    icon: {
108        height: 24,
109        width: 24,
110    },
111    input: {
112        marginStart: 15,
113        width: '85%'
114    },
115    btnCreate: {
116        backgroundColor: "orange",
117        width: '70%',
118        height: 40,
119        borderRadius: 5,
120        alignSelf: "center",
121        marginVertical: 15
122    },
123    txtCreate: {
124        fontSize: 30,
125        fontWeight: "bold",
126        alignSelf: "center",
127        color: "white"
128    },
129    viewHaveAcc: {
130        flexDirection: "row",
131        alignItems: "center",
132    },
133    txtHaveAcc: {
134        fontSize: 20
135    },
136    login: {
137        width: 'auto',
138        marginStart: 5,
139        fontSize: 20,
140        fontWeight: "bold",
141        color: "blue",
142    }
143 })
144
```

- HomeStack.js

```

12 const Drawer = createDrawerNavigator();
13 |   /*Thạch Minh Luân - 22520827*/
14 const DrawerApp = () => {
15   return (
16     <Drawer.Navigator initialRouteName="HomeScreen">
17       <Drawer.Screen name="HomeScreen" component={MainBottom}
18         options={{
19           drawerIcon: ({color}) => <Entypo name="home" size={24} color={color}/>
20         }}
21       />
22       <Drawer.Screen name="NotificationsScreen" component={NotificationScreen}
23         options={{
24           drawerIcon: ({color}) => <Ionicons name="notifications" size={24} color={color} />
25         }}
26       />
27       <Drawer.Screen name="Help" component={HelpScreen}
28         options={{
29           drawerIcon: ({color}) => <Entypo name="help-with-circle" size={24} color={color}/>
30         }}
31       />
32     </Drawer.Navigator>
33   );
34 }
35
36 const HomeStack = createStackNavigator();
37 const HomeStackScreen = () => (
38   <HomeStack.Navigator>
39     <HomeStack.Screen
40       name="DrawerApp"
41       component={DrawerApp}
42       options={{headerShown: false}}
43     />
44 |   /*Thạch Minh Luân - 22520827*/
45     <HomeStack.Screen
46       name="HomeDetails"
47       component={HomeDetailsScreen}
48       options={{ title: 'Home Details' }}
49     />
50     <HomeStack.Screen
51       name="NotificationDetails"
52       component={NotificationDetailsScreen}
53       options={{ title: 'Notification Details' }}
54     />
55   </HomeStack.Navigator>
56 );
57

```

- CategoryTabNavigator.js

```

Bail > navigations > CategoryTabNavigator.js > ...
1 import { createMaterialTopTabNavigator } from '@react-navigation/material-top-tabs';
2 import CategoriesScreen from '../pages/CategoriesScreen';
3
4 const TopTab = createMaterialTopTabNavigator();
5 |   /*Thạch Minh Luân - 22520827*/
6 const CategoryTabNavigator = () => (
7   <TopTab.Navigator>
8     <TopTab.Screen name="Category1">
9       {() => <CategoriesScreen title="Category 1" />}
10    </TopTab.Screen>
11    <TopTab.Screen name="Category2">
12       {() => <CategoriesScreen title="Category 2" />}
13    </TopTab.Screen>
14    <TopTab.Screen name="Category3">
15       {() => <CategoriesScreen title="Category 3" />}
16    </TopTab.Screen>
17  </TopTab.Navigator>
18 );
19
20 export default CategoryTabNavigator;
21

```

- AppNavigator.js



```

Bai1 > navigations > AppNavigator.js > AppNavigator
1  import React, { useState, useContext } from 'react';
2  import { NavigationContainer } from '@react-navigation/native';
3  import AuthStack from './AuthStack';
4  import { AuthContext } from '../context/AuthContext';
5  import HomeStack from './HomeStack'
6
7
8  const AppNavigator = () => {
9
10     const {isAuthenticated} = useContext(AuthContext);
11     /*Thạch Minh Luân - 22520827*/
12     return (
13         <NavigationContainer>
14             { isAuthenticated ? <HomeStack/> : <AuthStack/>}
15         </NavigationContainer>
16     );
17 };
18 export default AppNavigator;
19

```

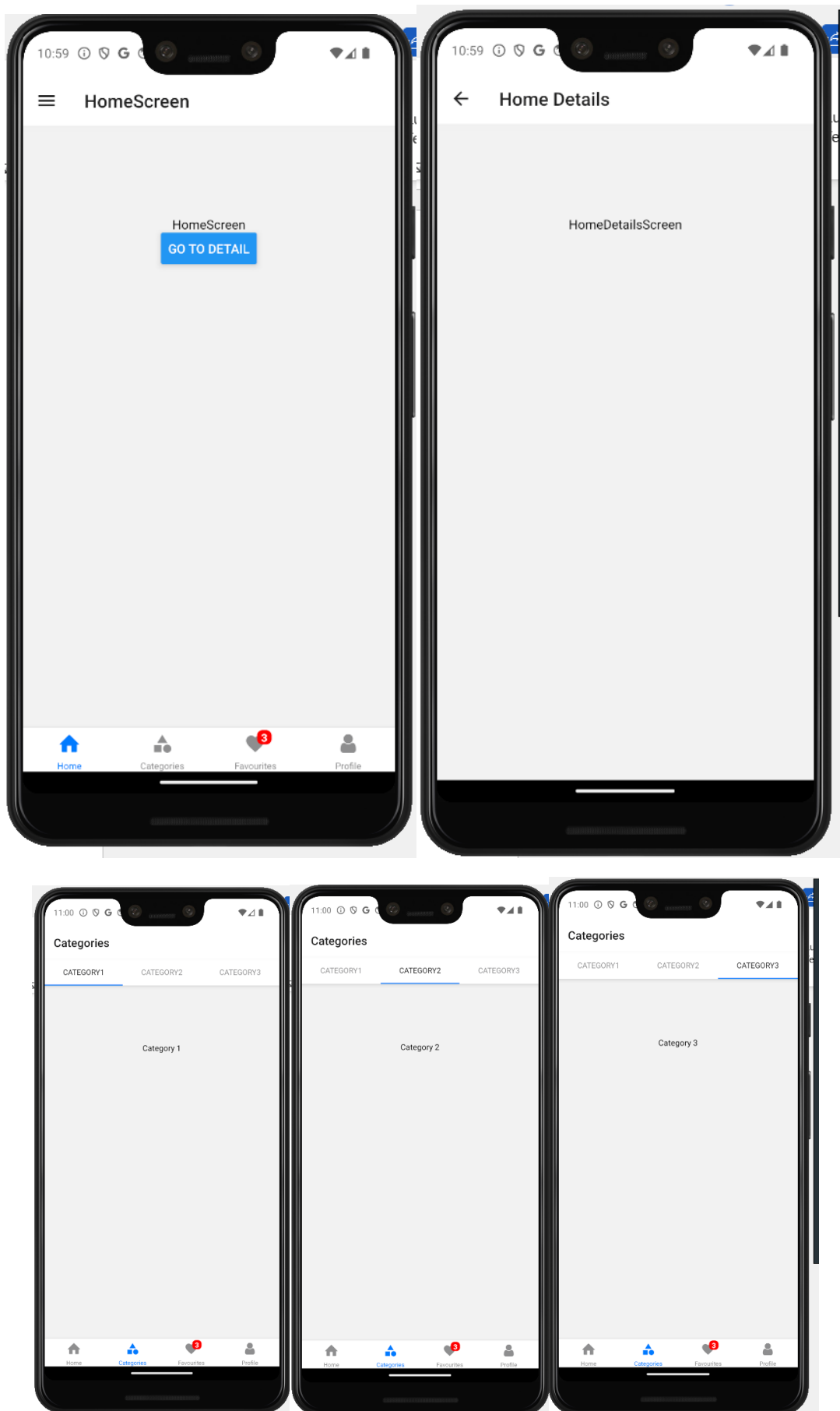
- App.js

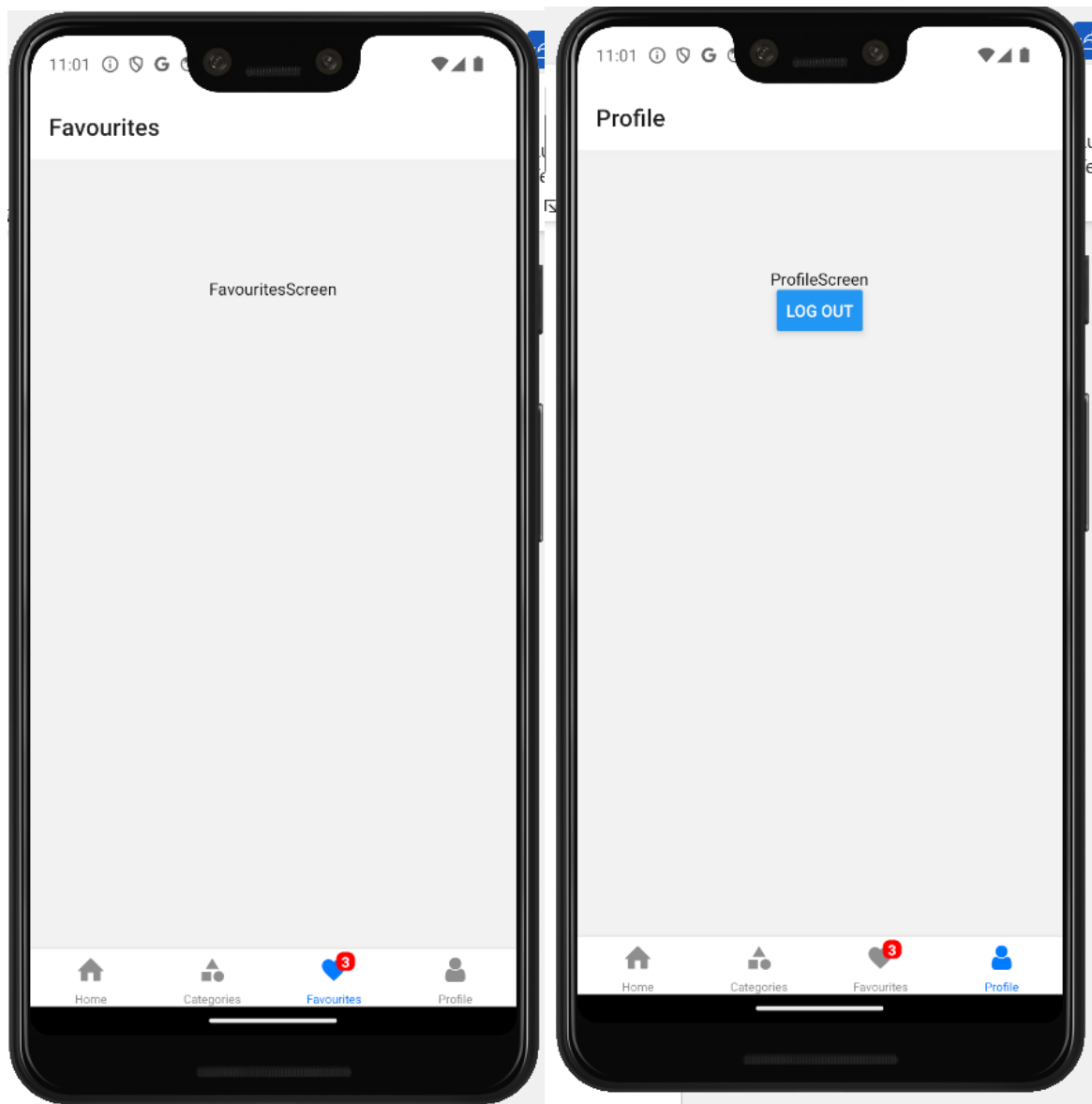
```

Bai1 > App.js > ...
1
2  import { AuthProvider } from './context/AuthContext';
3  import AppNavigator from './navigations/AppNavigator';
4
5  export default function App() {
6      return (
7          <AuthProvider>
8              <AppNavigator/>
9          </AuthProvider>
10     );
11 }
12 /*Thạch Minh Luân - 22520827*/

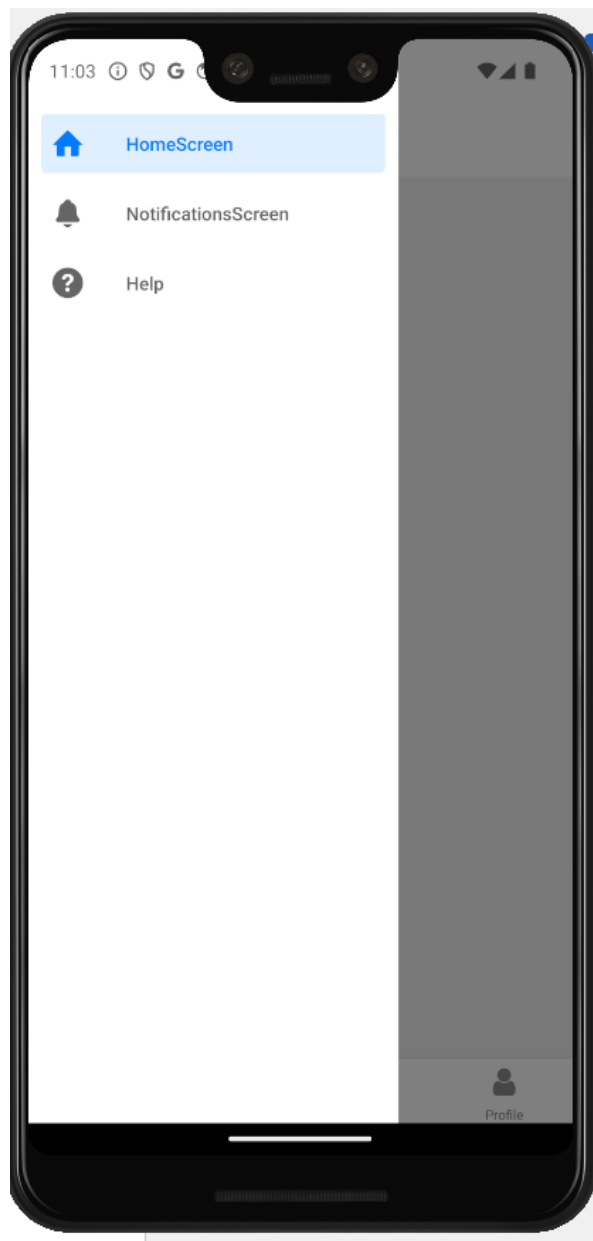
```

- Kết quả





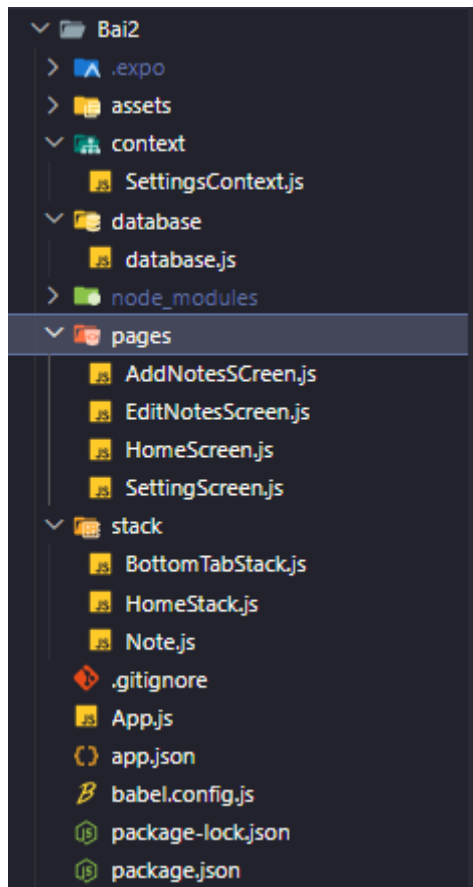
- Mở các màn hình ngăn kéo khi nhấn vào biểu tượng menu trong màn hình trang chủ.





## Bài 2: SQLite Database

- Cấu trúc các folder/file của dự án



- Nội dung code
  - SettingContext.js

```
SettingsContext.js M X
Bai2 > context > SettingsContext.js > SettingsProvider > SettingStyles > container
1 import React, { createContext, useState, useEffect } from 'react';
2 import { GetSettings, updateSettings } from '../database/database';
3 import { StyleSheet } from "react-native"
4
5
6 export const SettingsContext = createContext();
7
8 export const SettingsProvider = ({ children }) => {
9   const [darkMode, setDarkMode] = useState(false);
10  const [fontSize, setFontSize] = useState(16);
11
12  useEffect(() => {
13    GetSettings((settings) => {
14      if (settings) {
15        setDarkMode(!settings.darkMode);
16        setFontSize(settings.fontSize);
17      }
18    });
19  }, []);
20  // Thạc Minh Luân - 22520827
21  const updateSetting = (newDarkMode, newFontSize) => {
22    setDarkMode(newDarkMode);
23    setFontSize(newFontSize);
24    updateSettings(newDarkMode ? 1 : 0, newFontSize, () => {});
25  };
}
```

```

26
27 const SettingStyles = StyleSheet.create({
28   container: {
29     flex: 1,
30     backgroundColor: darkMode ? "#121212" : "#e0e0e0",
31   },
32   header: {
33     color: darkMode ? 'blue' : 'orange',
34     fontSize: fontSize + 10,
35     fontWeight: 'bold',
36     paddingTop: 20
37   },
38   btnAddNotes: {
39     width: 56,
40     height: 56,
41     borderRadius: 50,
42     backgroundColor: darkMode ? 'blue' : 'orange',
43     alignItems: 'center',
44     justifyContent: 'center'
45   },
46   txtAllNotes: {
47     fontSize: fontSize + 4,
48     fontWeight: 'bold',
49     color: darkMode ? 'white' : 'black',
50   },
51   txtContent: {
52     fontSize: fontSize + 2,
53     color: darkMode ? 'white' : 'black',
54   }
55 })
56
57 // Thạch Minh Luân - 22520827
58 return (
59   <SettingsContext.Provider value={{ darkMode, fontSize, updateSetting, SettingStyles }}>
60     {children}
61   </SettingsContext.Provider>
62 );
63
64

```

### ○ database.js

```

SettingsContext.js M  database.js M X
Bai2 > database > database.js > ...
1  import * as SQLite from 'expo-sqlite/legacy';
2
3  const db = SQLite.openDatabase('notes.db');
4
5  export const CreateTable = () => {
6    db.transaction(tx => {
7      tx.executeSql('CREATE TABLE IF NOT EXISTS notes (id INTEGER PRIMARY KEY AUTOINCREMENT, title TEXT NOT NULL, content TEXT);');
8      tx.executeSql('CREATE TABLE IF NOT EXISTS settings (id INTEGER PRIMARY KEY, darkMode BOOLEAN, fontSize INT);');
9    });
10 };
11 // Thạch Minh Luân - 22529827
12 export const GetNotes = (setNotes) => {
13   db.transaction(tx => {
14     tx.executeSql(
15       'SELECT * FROM notes;',
16       [],
17       (txObj, resultSet) => setNotes(resultSet.rows._array),
18       (txObj, error) => console.log("Error fetching notes", error)
19     );
20   });
21 };
22
23 export const insertNote = (title, content, callback) => {
24   db.transaction(tx => {
25     tx.executeSql('INSERT INTO notes (title, content) VALUES (?, ?);', [title, content],
26       (txObj, resultSet) => callback(),
27       (txObj, error) => console.log("Error inserting note", error)
28     );
29   });
30 };
31
32 export const updateNote = (id, title, content, callback) => {
33   db.transaction(tx => {
34     tx.executeSql('UPDATE notes SET title = ?, content = ? WHERE id = ?;', [title, content, id], callback);
35   });
36 };
37
38 export const deleteNote = (id) => {
39   db.transaction(tx => {
40     tx.executeSql('DELETE FROM notes WHERE id = ?;', [id]);
41   });
42 };

```

```

44 export const GetSettings = (callback) => {
45   db.transaction(tx => {
46     tx.executeSql('SELECT * FROM settings WHERE id = 1;', [], (_, result) => {
47       callback(result.rows._array[0]);
48     });
49   });
50 };
51 // Thạch Minh Luân - 22529827
52 export const insertSetting = (darkMode, fontSize, callback) => {
53   db.transaction(tx => {
54     tx.executeSql('INSERT INTO settings (id, darkMode, fontSize) VALUES (?, ?, ?);', [1, darkMode, fontSize], (_, result) => {
55       callback(result.rows._array[0]);
56     });
57   });
58 };
59
60 export const updateSettings = (darkMode, fontSize, callback) => {
61   db.transaction(tx => {
62     tx.executeSql('UPDATE settings SET darkMode = ?, fontSize = ? WHERE id = 1;', [darkMode, fontSize],
63       (_, result) => callback());
64   });
65 };
66

```

### ○ BottomTabStack.js

```

Bai2 > stack > js BottomTabStack.js > ...
2 import SettingScreen from "../pages/SettingScreen";
3 import { createBottomTabNavigator } from "@react-navigation/bottom-tabs";
4 import Icon from "react-native-vector-icons/FontAwesome";
5 import { useContext } from "react";
6 import { SettingsContext } from "../context/SettingsContext";
7
8 const Tab = createBottomTabNavigator();
9
10 const BottomTab = () => {
11   const {darkMode} = useContext(SettingsContext);
12   // Thạch Minh Luân - 22520827
13   return(
14     <Tab.Navigator
15       screenOptions={{
16         tabBarStyle: {
17           backgroundColor: darkMode ? '#333' : '#fff'
18         },
19         headerStyle: {
20           backgroundColor: darkMode ? '#333' : '#fff'
21         },
22         headerTintColor: darkMode ? '#fff' : '#333',
23         tabBarInactiveTintColor: darkMode ? '#888' : '#555',
24         tabBarActiveTintColor: darkMode ? '#fff' : '#333'
25       }}
26     >
27       <Tab.Screen name="Home" component={HomeStack}
28         options={{
29           headerShown: false,
30           tabBarIcon: ({color}) => <Icon name="home" size={24} color={color}/>
31         }}/>
32       <Tab.Screen name="Settings" component={SettingScreen}
33         options={{
34           tabBarIcon: ({color}) => <Icon name="gear" size={24} color={color}/>
35         }}/>
36     </Tab.Navigator>
37   )
38 }

```



- HomeStack.js

```

Bai2 > stack > JS HomeStack.js > [🔍] HomeStack
1  import { createStackNavigator } from "@react-navigation/stack";
2  import HomeScreen from "../pages/HomeScreen";
3  import AddNotesScreen from "../pages/AddNotesScreen";
4  import EditNotesScreen from "../pages/EditNotesScreen";
5  import { useContext } from "react";
6  import { SettingsContext } from "../context/SettingsContext";
7
8
9  const Stack = createStackNavigator();
10 // Thạch Minh Luân - 22520827
11 const HomeStack = () => {
12   const {darkMode} = useContext(SettingsContext);
13   return(
14     <Stack.Navigator initialRouteName="HomeScreen" screenOptions={{
15       tabBarStyle: {
16         backgroundColor: darkMode ? '#000' : '#fff'
17       },
18       headerStyle: {
19         backgroundColor: darkMode ? '#000' : '#fff'
20       },
21       headerTintColor: darkMode ? '#fff' : '#000',
22       tabBarInactiveTintColor: darkMode ? '#888' : '#555',
23       tabBarActiveTintColor: darkMode ? '#fff' : '#000'
24     }}>
25       <Stack.Screen name="HomeScreen" component={HomeScreen}
26         options={{headerShown: false}} />
27       <Stack.Screen name="AddNotesScreen" component={AddNotesScreen}/>
28       <Stack.Screen name="EditNotesScreen" component={EditNotesScreen}/>
29     </Stack.Navigator>
30   )
31 }
32
33 export default HomeStack;

```

- Note.js

```

Bai2 > stack > JS Note.js > [🔍] Note
1  import { View, Text, TouchableOpacity, StyleSheet } from "react-native"
2  import { SettingsContext } from "../context/SettingsContext"
3  import { useContext } from "react"
4  import Icon from "react-native-vector-icons/FontAwesome";
5  import { deleteNote } from "../database/database";
6
7  const Note = ({id, title, content, navigation, fetchNote}) => {
8    const {SettingStyles, darkMode} = useContext(SettingsContext)
9
10     const DeleteNote = () => {
11       deleteNote(id);
12       fetchNote()
13     }
14     // Thạch Minh Luân - 22520827
15     const styles = StyleSheet.create({
16       container: {
17         width: '100%',
18         borderWidth: 0.5,
19         marginVertical: 8,
20         flexDirection: "row",
21         borderColor: darkMode ? '#fff' : '#333',
22       },
23       noteItem: {
24         width: '90%',
25         padding: 10,
26       },
27       btnContainer: {
28         justifyContent: "center"
29       },
30     },
31   ))

```

```

32 // Thạch Minh Luân - 22520827
33 return (
34   <View style={styles.container}>
35     <View style={styles.noteItem}>
36       <TouchableOpacity onPress={() => navigation.navigate('EditNotesScreen', { noteId: id })}>
37         <Text style={SettingStyles.txtAllNotes}>{title}</Text>
38         <Text style={SettingStyles.txtContent}>{content}</Text>
39       </TouchableOpacity>
40     </View>
41
42     <View style={styles.btnContainer}>
43       <TouchableOpacity style={styles.Trash} onPress={DeleteNote}>
44         <Icon name="trash" size={36} color={darkMode ? "#fff" : "#555"} />
45       </TouchableOpacity>
46     </View>
47   </View>
48 )
49 }
50
51
52
53 export default Note;

```

○ AddNotesScreen.js

```

Bai2 > pages > JS AddNotesScreen.js > AddNotesScreen > styles
1  import { View, StyleSheet, TextInput, TouchableOpacity } from "react-native";
2  import { useContext, useState } from "react";
3  import Icon from 'react-native-vector-icons/FontAwesome';
4  import { SettingsContext } from "../context/SettingsContext";
5  import { insertNote } from "../database/database";
6
7
8  const AddNotesScreen = ({navigation}) => {
9    const [title, setTitle] = useState('');
10   const [content, setContent] = useState('');
11   const {darkMode, fontSize} = useContext(SettingsContext);
12
13   const saveNote = () => {
14     if (!title) {
15       alert('Please enter a title');
16       return;
17     }
18
19     // Thạch Minh Luân - 22520827
20     insertNote(title, content, () => {
21       navigation.goBack();
22     });
23   };

```

```

24 | // Thạch Minh Luân - 22520827
25 | const styles = StyleSheet.create({
26 |   container: {
27 |     flex: 1,
28 |     padding: 20,
29 |     backgroundColor: darkMode ? "#121212" : "#ebebcb"
30 |   },
31 |   input: {
32 |     borderWidth: 1,
33 |     borderColor: darkMode ? "#ebebcb" : "#121212",
34 |     marginBottom: 20,
35 |     padding: 10,
36 |     fontSize: fontSize + 6,
37 |     color: darkMode ? "#ebebcb" : "#121212"
38 |   },
39 |   buttonContainer: {
40 |     flexDirection: 'row',
41 |     justifyContent: 'center',
42 |   },
43 |   button: {
44 |     padding: 15,
45 |     borderRadius: 100,
46 |     marginHorizontal: 5
47 |   },
48 | });

```

```

50 | // Thạch Minh Luân - 22520827
51 | return (
52 |   <View style={styles.container}>
53 |     <TextInput
54 |       placeholder="Title"
55 |       placeholderTextColor={darkMode ? "#fff" : "#333"}
56 |       value={title}
57 |       onChangeText={(text) => setTitle(text)}
58 |       style={styles.input}
59 |     />
60 |     <TextInput
61 |       placeholder="Content"
62 |       placeholderTextColor={darkMode ? "#fff" : "#333"}
63 |       value={content}
64 |       onChangeText={(text) => setContent(text)}
65 |       style={[styles.input, { height: 100 }]}
66 |       multiline
67 |     />
68 |     <View style={styles.buttonContainer}>
69 |       <TouchableOpacity style={[styles.button, { backgroundColor: 'red' }]} onPress={() => navigation.goBack()} >
70 |         <Icon name='close' size={32} color={darkMode ? '#121212' : '#fff'} />
71 |       </TouchableOpacity>
72 |       <TouchableOpacity style={[styles.button, { backgroundColor: 'green' }]} onPress={saveNote}>
73 |         <Icon name='check' size={32} color={darkMode ? '#121212' : '#fff'} />
74 |       </TouchableOpacity>
75 |     </View>
76 |   </View>
77 | );
78 |
79 |
80 |
81 |
82 | export default AddNotesScreen;
83 |

```

- EditNotesScreen.js

```

Bai2 > pages > EditNotesScreen.js > EditNotesScreen > saveChanges > updateNote() callback
1 import { View, StyleSheet, TextInput, TouchableOpacity } from 'react-native';
2 import { useContext, useState, useEffect } from 'react';
3 import Icon from 'react-native-vector-icons/FontAwesome';
4 import { SettingsContext } from '../context/SettingsContext';
5 import { updateNote, GetNotes } from '../database/database';
6
7 const EditNotesScreen = ({ route, navigation }) => {
8   const { darkMode, fontSize } = useContext(SettingsContext);
9   const [title, setTitle] = useState('');
10  const [content, setContent] = useState('');
11  const { noteId } = route.params; // Lấy ID của ghi chú từ params
12  // Thạch Minh Luân - 22520827
13  useEffect(() => {
14    GetNotes((notes) => {
15      const note = notes.find(note => note.id === noteId);
16      if (note) {
17        setTitle(note.title);
18        setContent(note.content);
19      }
20    });
21  }, [noteId]);
22
23  const saveChanges = () => {
24    if (!title) {
25      alert('Please enter a title');
26      return;
27    }
28
29    updateNote(noteId, title, content, () => {
30      navigation.goBack();
31    });
32  };
33

```

```

34 // Thạch Minh Luân - 22520827
35 const styles = StyleSheet.create({
36   container: {
37     flex: 1,
38     padding: 20,
39     backgroundColor: darkMode ? "#121212" : "#ebeb"
40   },
41   input: {
42     borderWidth: 1,
43     borderColor: darkMode ? "#ebeb" : "#121212",
44     marginBottom: 20,
45     padding: 10,
46     fontSize: fontSize + 6,
47     color: darkMode ? "#ebeb" : "#121212"
48   },
49   buttonContainer: {
50     flexDirection: 'row',
51     justifyContent: 'center',
52   },
53   button: {
54     padding: 15,
55     borderRadius: 100,
56     marginHorizontal: 5
57   },
58 });
59

```

```

60 // Thạch Minh Luân - 22520827
61 return (
62   <View style={styles.container}>
63     <TextInput
64       placeholder="Title"
65       placeholderTextColor={darkMode ? "#fff" : "#333"}
66       value={title}
67       onChangeText={({text} => setTitle(text))}
68       style={styles.input}
69     />
70     <TextInput
71       placeholder="Content"
72       placeholderTextColor={darkMode ? "#fff" : "#333"}
73       value={content}
74       onChangeText={({text} => setContent(text))}
75       style={[styles.input, { height: 100 }]}
76       multiline
77     />
78     <View style={styles.buttonContainer}>
79       <TouchableOpacity
80         style={[styles.button, { backgroundColor: 'red' }]}
81         onPress={() => navigation.goBack()}
82         <Icon name="close" size={32} color={darkMode ? '#000' : '#fff'} />
83       </TouchableOpacity>
84       <TouchableOpacity
85         style={[styles.button, { backgroundColor: 'green' }]}
86         onPress={saveChanges}
87         <Icon name="check" size={32} color={darkMode ? '#000' : '#fff'} />
88       </TouchableOpacity>
89     </View>
90   </View>
91 );
92 ];
93
94
95
96 export default EditNotesScreen;

```

### ○ HomeScreen.js

```

Bal2 > pages > HomeScreen.js > HomeScreen
1 import { useContext, useState, useEffect } from "react";
2 import { View, StyleSheet, Text, TouchableOpacity, FlatList, SafeAreaView } from "react-native";
3 import Icon from 'react-native-vector-icons/FontAwesome';
4 import { SettingsContext } from "../context/SettingsContext";
5 import { useIsFocused } from '@react-navigation/native';
6 import { GetNotes, deleteNote } from "../database/database";
7 import Note from "../stack/Note";
8
9 const HomeScreen = ({navigation}) => {
10   const {darkMode, SettingStyles} = useContext(SettingsContext);
11   const [notes, setNotes] = useState([]);
12   const isFocused = useIsFocused();
13
14   useEffect(() => {
15     if (isFocused) {
16       fetchNotes();
17     }
18   }, [isFocused]);
19
20   const fetchNotes = () => {
21     GetNotes((fetchNotes) => {
22       setNotes(fetchNotes);
23     });
24   };
25
26   const NoteItem = ({item}) => {
27     return(
28       <Note id={item.id} title={item.title} content={item.content} navigation={navigation} fetchNote={fetchNotes}/>
29     )
30   }
31

```

```

32 | // Thạch Minh Luân - 22520827
33 | return (
34 |   <SafeAreaView style={SettingStyles.container}>
35 |     <View style={styles.header}>
36 |       <Text style={SettingStyles.header}>App Notes</Text>
37 |     </View>
38 |
39 |     <View style={styles.addnotesContainer}>
40 |       <Text style={SettingStyles.txtAllNotes}>All notes</Text>
41 |       <TouchableOpacity
42 |         style={SettingStyles.btnAddNotes}
43 |         onPress={() => navigation.navigate('AddNotesScreen')}>
44 |         <Icon name="plus" size={24} color={ darkMode ? '#333' : '#fff'}/>
45 |       </TouchableOpacity>
46 |     </View>
47 |
48 |     <View style={styles.viewListNote}>
49 |       <FlatList
50 |         data={notes}
51 |         keyExtractor={(item, index) => index.toString()}
52 |         renderItem={NoteItem}
53 |       />
54 |     </View>
55 |   </SafeAreaView>
56 | )
57 |

```

```

58 |
59 | // Thạch Minh Luân - 22520827
60 | const styles = StyleSheet.create ({
61 |   header: {
62 |     width: '100%',
63 |     alignItems: 'center',
64 |     margin: 8,
65 |     marginTop: 100
66 |   },
67 |   containerChild:{
68 |     width: '100%',
69 |     alignItems: 'center',
70 |     margin: 8
71 |   },
72 |   addnotesContainer: {
73 |     width: '85%',
74 |     flexDirection: 'row',
75 |     justifyContent: 'space-between',
76 |     alignItems: 'center',
77 |     alignSelf: 'center'
78 |   },
79 |   viewListNote: {
80 |     width: "90%",
81 |     alignSelf: "center",
82 |     marginTop: 5
83 |   },
84 | },
85 | });
86 |
87 | export default HomeScreen;
88 |

```

- SettingScreen.js

```

Bai2 > pages > SettingScreen.js > styles > container
1  import React, { useContext } from 'react';
2  import { View, Text, Switch, StyleSheet } from 'react-native';
3  import Slider from '@react-native-community/slider';
4  import { SettingsContext } from '../context/SettingsContext';
5
6  export default function SettingsScreen() {
7    const { darkMode, fontSize, updateSetting } = useContext(SettingsContext);
8    // Thạch Minh Luân - 22520827
9    return (
10     <View style={styles.container, darkMode ? styles.darkContainer : styles.lightContainer}>
11       <View style={styles.switchContainer}>
12         <Text style={darkMode ? styles.darkText : styles.lightText}>Dark mode</Text>
13         <Switch value={darkMode} onValueChange={(value) => updateSetting(value, fontSize, () => {})} />
14       </View>
15
16       <Text style={darkMode ? styles.darkText : styles.lightText, {paddingHorizontal: 20}}>Font Size: {fontSize}</Text>
17       <Slider
18         minimumValue={12}
19         maximumValue={36}
20         step={2}
21         value={fontSize}
22         onValueChange={(value) => updateSetting(darkMode, value, () => {})}
23       />
24     </View>
25   );
26 }
27

```

```

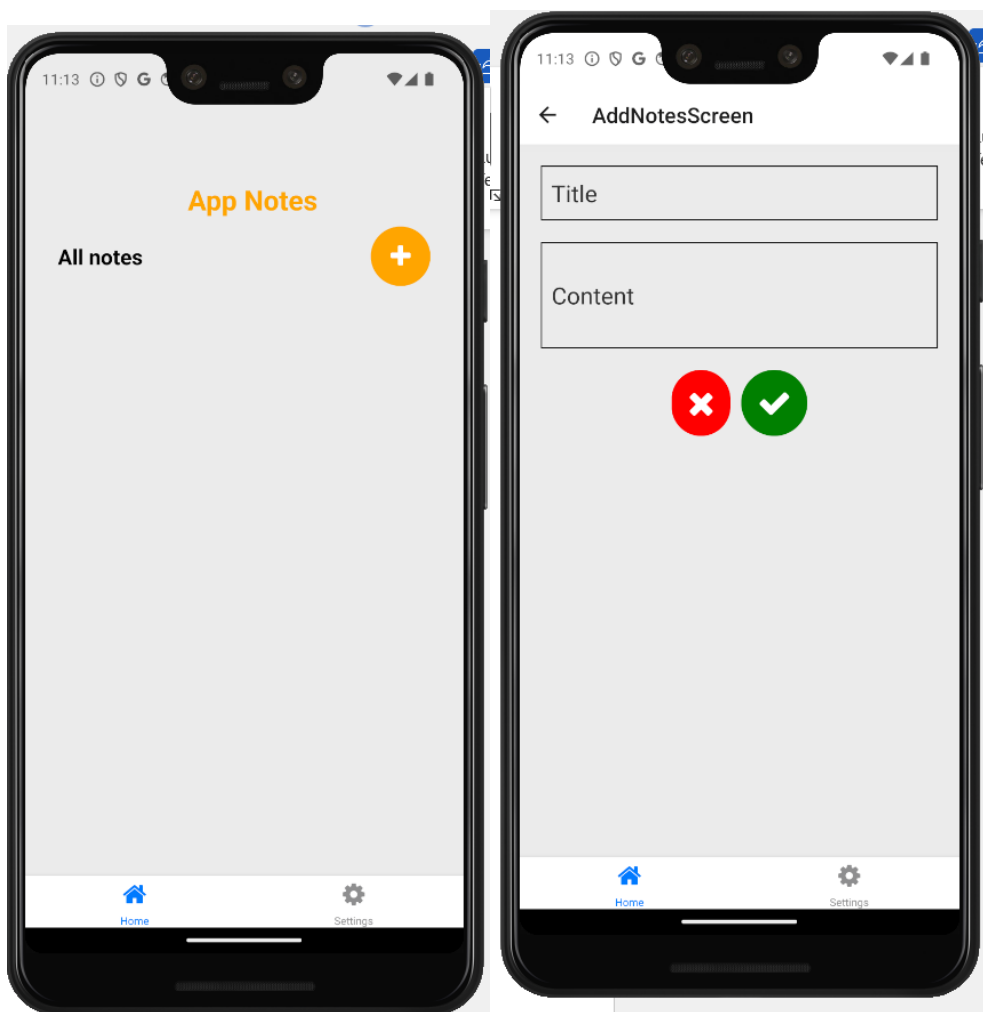
28 // Thạch Minh Luân - 22520827
29 const styles = StyleSheet.create({
30   container: {
31     flex: 1,
32     padding: 20,
33     paddingTop: 300,
34   },
35   darkContainer: {
36     backgroundColor: "#121212"
37   },
38   lightContainer: {
39     backgroundColor: "#ebebcb"
40   },
41   switchContainer: {
42     flexDirection: 'row',
43     justifyContent: 'space-between',
44     alignItems: 'center',
45     marginBottom: 5,
46     paddingHorizontal: 20
47   },
48   darkText: {
49     fontSize: 20,
50     color: "#fff"
51   },
52   lightText: {
53     fontSize: 20,
54     color: "#0a0a0a"
55   },
56 })

```

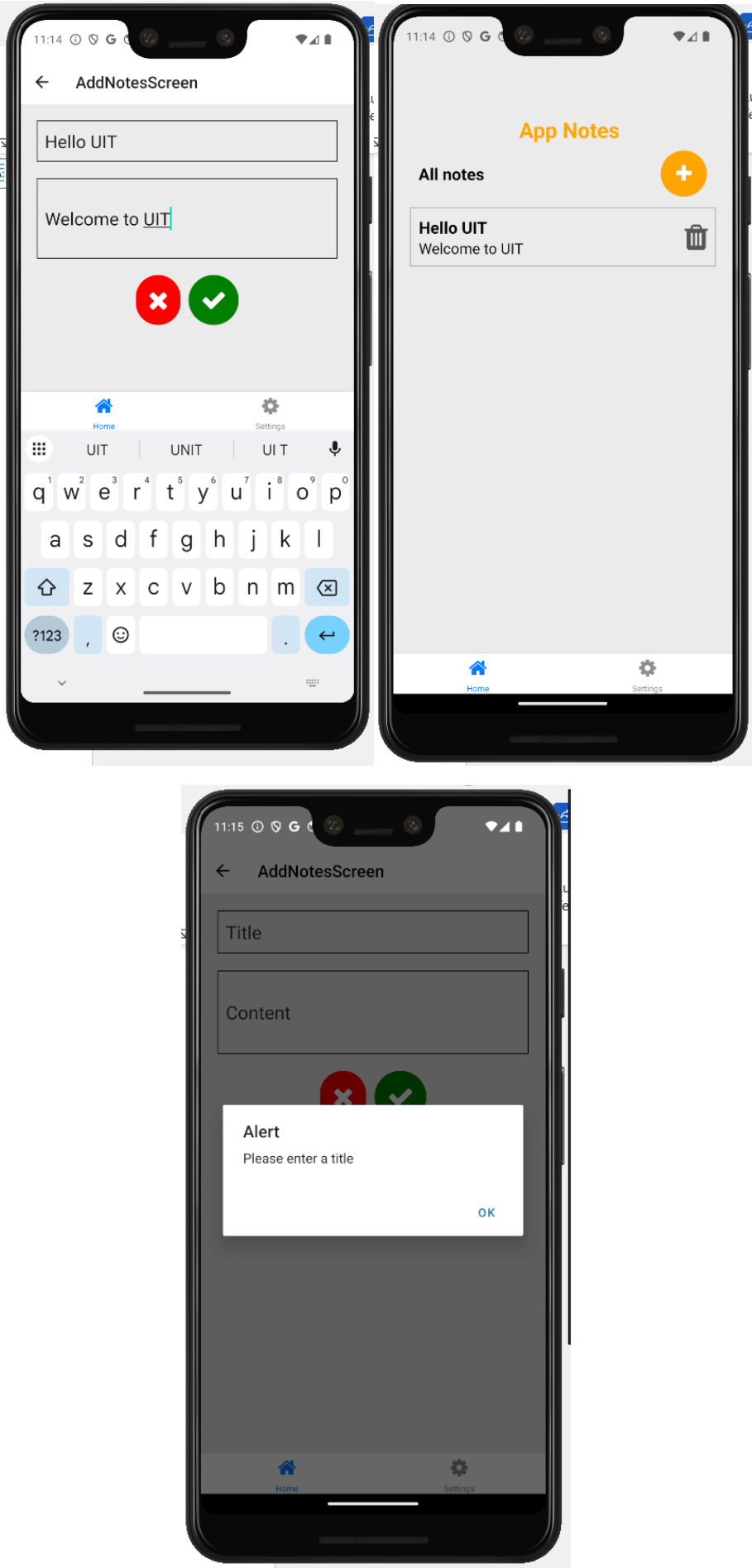
- App.js

```
Bai2 > js App.js > ...
1
2 import { CreateTable, initDb } from './database/database';
3 import { SettingsProvider } from './context/SettingsContext';
4 import React, { useEffect } from 'react';
5
6 import { NavigationContainer } from '@react-navigation/native';
7 import BottomTab from './stack/BottomTabStack';
8
9 // Thach Minh Luân - 22520827
10 export default function App() {
11   useEffect(() => {
12     CreateTable();
13   }, []);
14
15   return (
16     <SettingsProvider>
17       <NavigationContainer>
18         <BottomTab/>
19       </NavigationContainer>
20     </SettingsProvider>
21   );
22 }
23
```

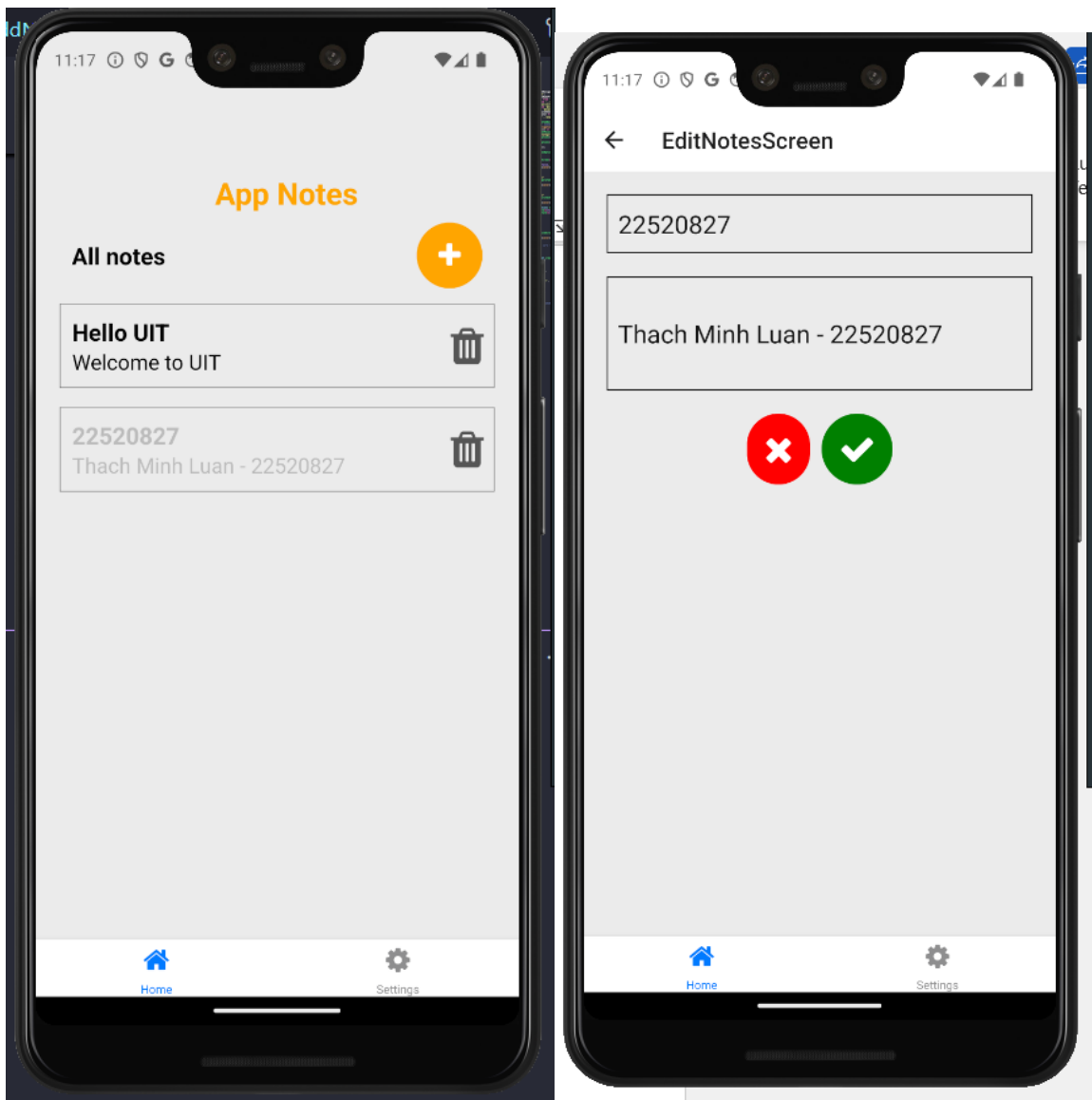
- Kết quả:



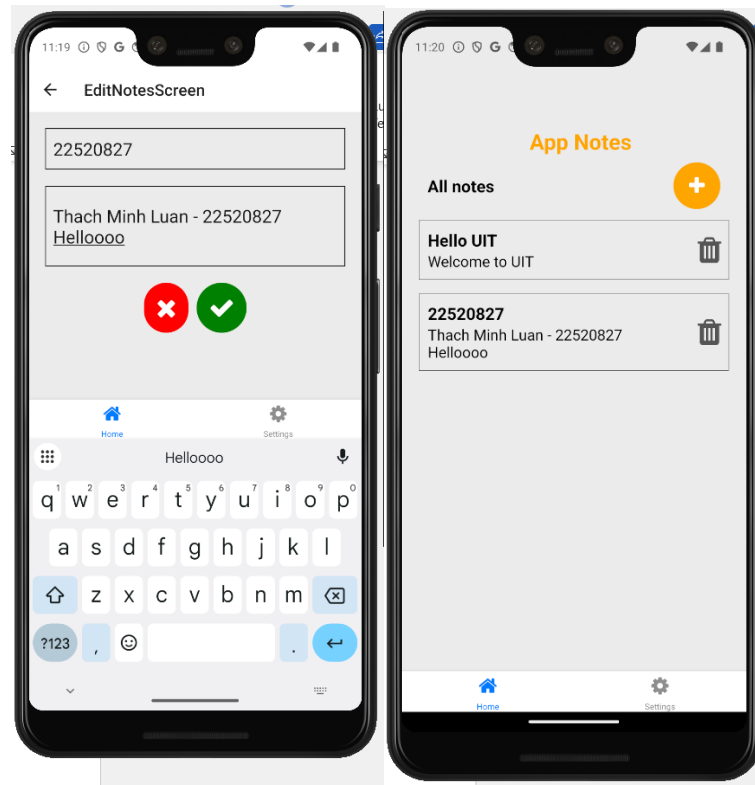




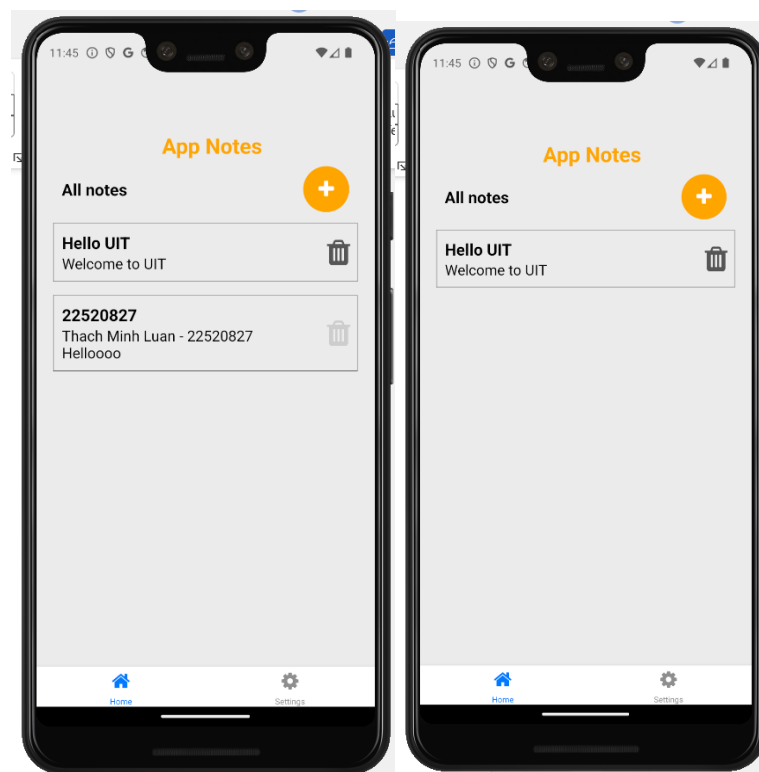
- Khi nhấn chọn vào một ghi chú, ứng dụng điều hướng sang màn hình chỉnh sửa với các thông tin đã có trước đó.



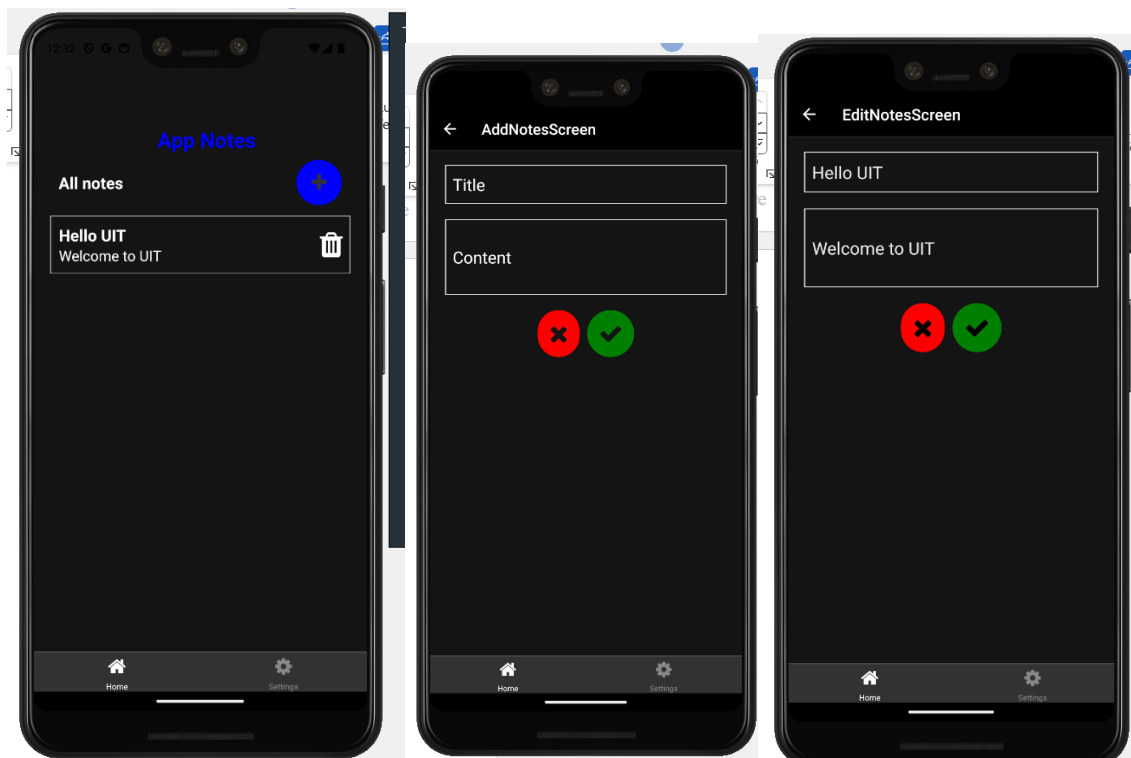
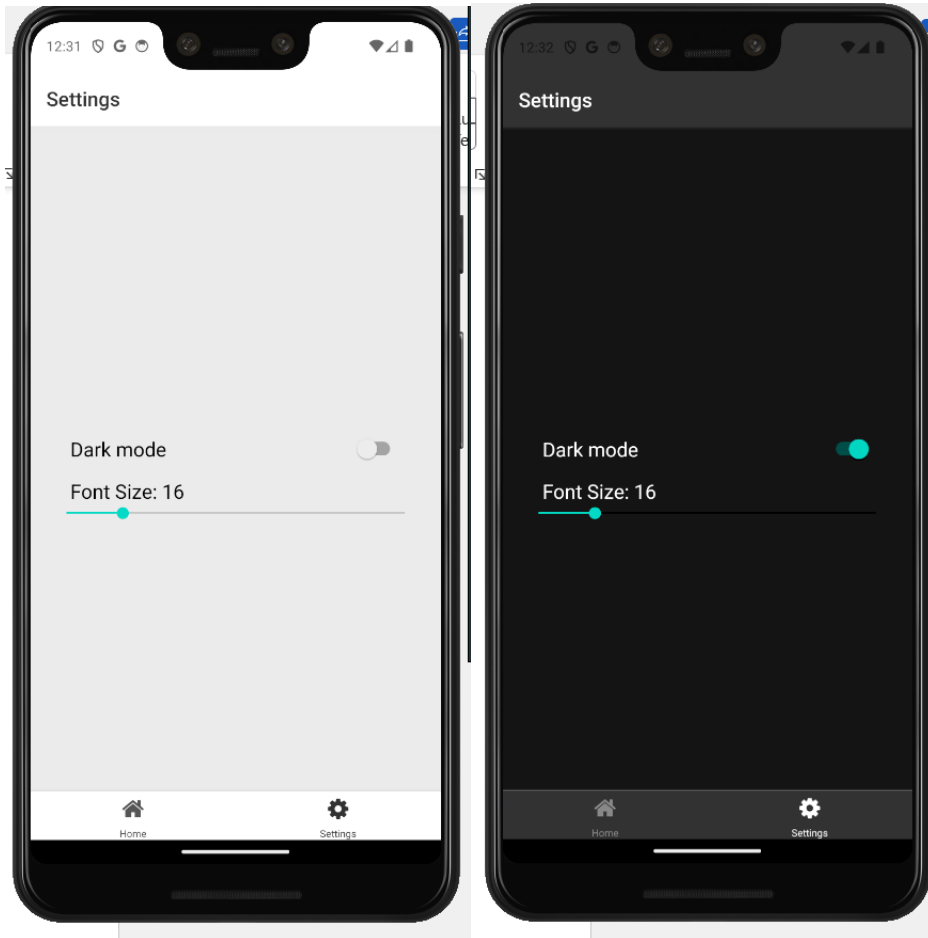
- Thực hiện chỉnh sửa và nhấn lưu, thông tin của ghi chú sẽ được cập nhật.

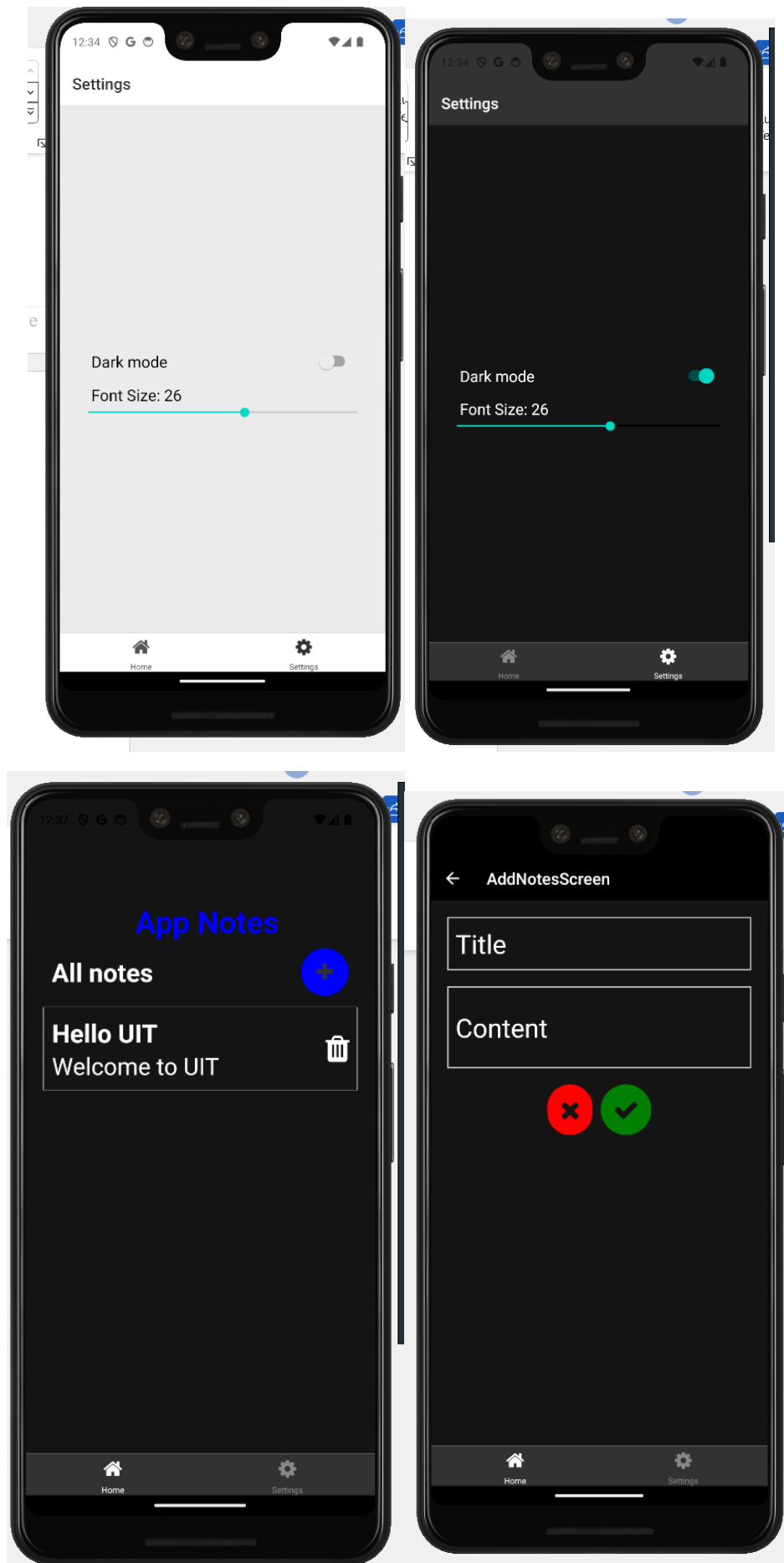


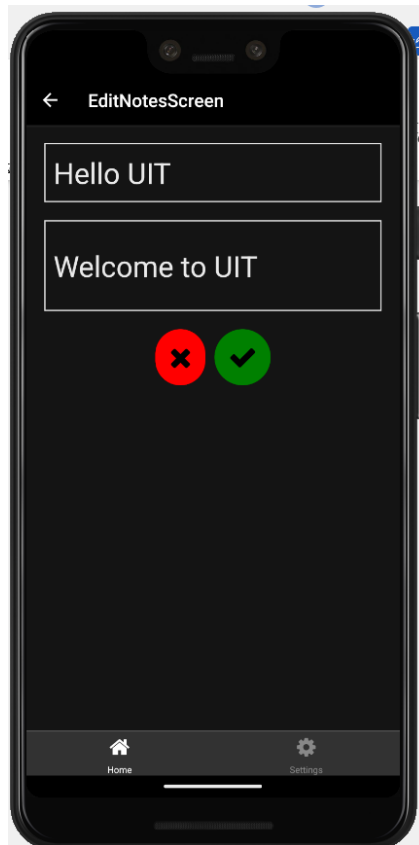
- Khi nhấn vào biểu tượng xóa, ghi chú tương ứng sẽ được xóa khỏi CSDL.



- Màn hình cài đặt. Khi người dùng bật công tắc chế độ tối, giao diện của màn hình cài đặt, thanh Header và TabBar cũng sẽ được thay đổi theo.







Link Google Drive video: [Video](#)