

MÔN: CÔNG NGHỆ LẬP TRÌNH ĐA NỀN TẢNG CHO ỨNG DỤNG DI ĐỘNG

BÀI TẬP THỰC HÀNH 3

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Bài 1: Nested Navigation

1.1. Cấu trúc thư mục:

The screenshot shows a code editor interface with the following details:

- EXPLORER:** Shows the project structure under "LAB3".
 - src
 - context
 - pages
 - auth
 - LoginScreen.tsx
 - RegisterScreen.tsx
 - mainScreen
 - Categories
 - CategoriesScreen1.tsx
 - CategoriesScreen2.tsx
 - CategoriesScreen3.tsx
 - MainCategory.tsx
 - Home
 - HelpDrawer.tsx
 - HomeDrawer.tsx
 - NotificationDrawer.tsx
 - FavoritesScreen.tsx
 - HomeScreen.tsx
 - NotificationDetailScreen.tsx
 - ProfileScreen.tsx
 - provider
 - AppContextProvider.tsx
 - routes
 - types
 - BottomTabNavigation.tsx
 - MainDrawerNavigation.tsx
 - type.ts
 - routes.tsx
 - .gitignore
 - app.json
 - AppContextProvider.tsx M**: Preview of the file content.
 - App.tsx**: Active tab, showing the code for the main application component.

Hình: Cấu trúc thư mục

1.2. Các file

1.2.1. App.tsx

The screenshot shows a code editor interface with the following details:

- EXPLORER** sidebar: Shows the project structure under `LAB3`. It includes `src`, `context`, `pages` (with `auth`, `mainScreen`, `Categories`, and `Home` subfolders), `provider`, `routes`, and `types` (with `BottomTabNavigation.tsx`, `MainDrawerNavigation.tsx`, `type.ts`, and `routes.tsx`). Also listed are `.gitignore`, `app.json`, `App.tsx` (which is selected and highlighted in blue), and `babel.config.js`.
- Code Editor**: The `App.tsx` file is open. The code is as follows:

```
// Phạm Hoài Vũ MSSV:21522804
// App.tsx
import React from "react" // 6.9k (gzipped: 2.7k)
import { AppContextProvider } from "./src/provider/AppContextProvider"
import { Screen } from "./src/routes/routes"
export default function App() {
  return (
    <AppContextProvider>
      <Screen />
    </AppContextProvider>
  )
}
```

The status bar at the bottom shows the path `D:\Nam4\monApp\TH\LAB3\21522804_Bai1\` and the terminal tab.

Hình : `App.tsx`

1.2.2. Các màn hình

1.2.2.1. Màn hình đăng nhập, đăng ký

```

LoginScreen.tsx
16  export const LoginScreen = () => {
17    const navigation = useNavigation();
18    const appContext = useContext(AppContext);
19    const [email, setEmail] = useState<string>("");
20    const [password, setPassword] = useState<string>("");
21
22    const AlertContent = () =>
23      Alert.alert("Incorrect email or password", "", [
24        {
25          onPress: () => {
26            appContext?.setIsloggedin("hasError");
27          },
28        },
29      ],
30    );
31
32    const handleSubmit = () => {
33      if (appContext?.data) {
34        if (appContext.data.some((e) => e.email === email && e.password === password)) {
35          AlertContent();
36          console.log("hasError");
37        } else {
38          appContext.setIsloggedin("success");
39          console.log("success");
40        }
41      }
42    };
43
44    return (
45      <SafeAreaView style={styles.safeArea}>
46        <View style={styles.container}>
47          <View style={styles.logoContainer}>
48            <fontAwesome5 name="react" size={52} color="#61dbfb" />
49          </View>
50          <Text style={styles.welcomeText}>Welcome</Text>
51          <View style={styles.inputContainer}>
52            <View style={styles.inputWrapper}>
53              <Feather name="mail" size={24} />
54              <TextInput
55                onChangeText={setEmail}
56                style={styles.input}
57                placeholder="Enter email"
58              />
59            </View>
60            <View style={styles.inputWrapper}>
61              <AntDesign name="lock1" size={24} />
62              <TextInput

```

```

RegisterScreen.tsx
17  export const LogInScreen = () => {
18    const styles = StyleSheet.create({
19      safeArea: {
20        flex: 1,
21      },
22    });
23
24    return (
25      <SafeAreaView style={styles.safeArea}>
26        <View style={styles.container}>
27          <View style={styles.inputWrapper}>
28            <Text style={styles.input}>
29              Enter email
30            </Text>
31            <AntDesign name="lock1" size={24} />
32            <TextInput
33              onChangeText={setEmail}
34              style={styles.input}
35              placeholder="Enter password"
36              secureTextEntry={true}
37            />
38          </View>
39          <Text style={styles.forgotPasswordText}>Forgot password?</Text>
40          <TouchableOpacity style={styles.loginButton} onPress={handleSubmit}>
41            <Text style={styles.loginButtonText}>LOG IN</Text>
42          </TouchableOpacity>
43          <View style={styles.socialLoginContainer}>
44            <Text style={styles.socialLoginText}>Or login with:</Text>
45            <View style={styles.facebookContainer}>
46              <fontAwesome5 name="facebook" color="blue" size={48} />
47              <AntDesign name="google" color="red" size={48} />
48            </View>
49          </View>
50          <Text style={styles.signUpText}>
51            Don't have an account? <Text style={styles.signInLink}>Sign up here!</Text>
52          </Text>
53        </View>
54      </SafeAreaView>
55    );
56  }
57
58  const styles = StyleSheet.create({
59    safeArea: {
60      flex: 1,
61    },
62  });
63
64  const AlertContent = () =>
65    Alert.alert("Incorrect email or password", "", [
66      {
67        onPress: () => navigation.navigate("SignUp" as never),
68        style={styles.signInLink}
69      },
70      {
71        text: "Sign up here!",
72        style={styles.signInLink}
73      }
74    ],
75  );
76
77  const handleSubmit = () => {
78    if (navigation.state.params?.data) {
79      if (navigation.state.params.data.some((e) => e.email === email && e.password === password)) {
80        AlertContent();
81        console.log("hasError");
82      } else {
83        navigation.navigate("Home");
84        console.log("success");
85      }
86    }
87  };
88
89  const setEmail = (text: string) => {
90    setEmail(text);
91  };
92
93  const setPassword = (text: string) => {
94    setPassword(text);
95  };
96
97  const AppContext = createContext({
98    data: null,
99    setIsloggedin: (status: string) => {
100      setIsloggedin(status);
101    },
102  });
103
104  const AppProvider = ({ children }: { children: React.ReactNode }) => {
105    return (
106      <Provider value={AppContext}>
107        {children}
108      </Provider>
109    );
110  };
111
112  const App = () => {
113    const [isloggedin, setIsloggedin] = useState("hasError");
114
115    const handleLogout = () => {
116      setIsloggedin("hasError");
117    };
118
119    return (
120      <AppProvider>
121        <LogInScreen />
122        <RegisterScreen />
123        <HomeScreen />
124      </AppProvider>
125    );
126  };
127
128  export default App;

```

Hình: Login

```
RegisterScreen.tsx X
21522804_Bai1 > src > pages > auth > RegisterScreen.tsx > ...
13 } from "react-native";
14
15 export const RegisterScreen = () => {
16   const navigation = useNavigation();
17   return (
18     <SafeAreaView style={styles.safeArea}>
19       <View style={styles.container}>
20         <View style={styles.logoContainer}>
21           <FontAwesome5 name="react" size={52} color="#61dbfb" />
22         </View>
23         <Text style={styles.title}>Create New Account</Text>
24         <View style={styles.inputContainer}>
25           <View style={styles.inputWrapper}>
26             <AntDesign name="user" size={24} />
27             <TextInput style={styles.input} placeholder="Enter username" />
28           </View>
29           <View style={styles.inputWrapper}>
30             <Feather name="mail" size={24} />
31             <TextInput style={styles.input} placeholder="Enter email" />
32           </View>
33           <View style={styles.inputWrapper}>
34             <AntDesign name="lock1" size={24} />
35             <TextInput style={styles.input} placeholder="Enter password" secureTextEntry />
36           </View>
37           <View style={styles.inputWrapper}>
38             <AntDesign name="lock1" size={24} />
39             <TextInput style={styles.input} placeholder="Confirm password" secureTextEntry />
40           </View>
41           <TouchableOpacity style={styles.createButton}>
42             <Text style={styles.createButtonText}>CREATE</Text>
43           </TouchableOpacity>
44         <View>
45           <Text style={styles.footerText}>
46             Already have an account?{" "}
47             <Text
48               style={styles.loginLink}
49               onPress={() => navigation.navigate("LogIn" as never)}
50             >Login now!
51           </Text>
52         </Text>
53       </View>
54     </View>
55   </SafeAreaView>
56 );
57 };
58
59 
```

Hình: Register

1.2.2.2. Màn hình thuộc Bottom Tab Navigation

```

HomeScreen.tsx M ...
21522804_Bai1 > src > pages > mainScreen > HomeScreen.tsx > ...
You, 1 minute ago | 1 author (You)
1 // Pham Hoai Vu MSSV:21522804
2 // HomeScreen.tsx
3 import React from "react";
4 import { SafeAreaView, View, Text, StyleSheet } from "react-native";
5
6 export const Home = () => {
7   return (
8     <SafeAreaView style={styles.safeArea}>
9       <View style={styles.container}>
10         <Text>Home Screen</Text>
11       </View>
12     </SafeAreaView>
13   );
14 };
15
16 const styles = StyleSheet.create({
17   safeArea: {
18     flex: 1,
19   },
20   container: {
21     flex: 1,
22     alignItems: "center",
23     justifyContent: "center",
24   },
25 });
26
27 export default Home;
28

FavoritesScreen.tsx ...
21522804_Bai1 > src > pages > mainScreen > FavoritesScreen.tsx > ...
You, last week | 1 author (You)
1 // Pham Hoai Vu MSSV:21522804
2 // Favorites.tsx
3 import React from "react"; 6.9k (gzipped: 2.7k)
4 import { SafeAreaView, View, Text, StyleSheet } from "react-native";
5
6 export const Favorites = () => {
7   return (
8     <SafeAreaView style={styles.safeArea}>
9       <View style={styles.container}>
10         <Text>Favorites Screen</Text>
11       </View>
12     </SafeAreaView>
13   );
14 };
15
16 const styles = StyleSheet.create({
17   safeArea: {
18     flex: 1,
19   },
20   container: {
21     flex: 1,
22     alignItems: "center",
23     justifyContent: "center",
24   },
25 });
26
27 export default Favorites;
28

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS COMMENTS

PS D:\Nam4\monApp\TH\LAB3\21522804_Bai1> []

Hình : HomeScreen và Favorite

```

HomeScreen.tsx M ...
21522804_Bai1 > src > pages > mainScreen > ProfileScreen.tsx > ...
You, last week | 1 author (You)
1 // Pham Hoai Vu MSSV:21522804
2 // Profile.tsx
3 import React from "react"; 6.9k (gzipped: 2.7k)
4 import { SafeAreaView, View, Text, TouchableOpacity, StyleSheet } from "react-native";
5 import { ApplicationContext } from "../../context/ApplicationContextProps ";
6
7 export const Profile = () => {
8   const applicationContext = React.useContext(ApplicationContext);
9
10  const handleLogOut = () => {
11    applicationContext?.setIsLoggedIn("idle");
12  };
13
14  return (
15    <SafeAreaView style={styles.safeArea}>
16      <View style={styles.container}>
17        <Text>Profile Screen</Text>
18        <TouchableOpacity onPress={handleLogOut}>
19          <Text style={styles.logoutText}>Log Out</Text>
20        </TouchableOpacity>
21      </View>
22    </SafeAreaView>
23  );
24 };
25
26 const styles = StyleSheet.create({
27   safeArea: {
28     flex: 1,
29   },
30   container: {
31     flex: 1,
32     alignItems: "center",
33     justifyContent: "center",
34   },
35 });
36
37 export default Profile;
38

FavoritesScreen.tsx ...
21522804_Bai1 > src > pages > mainScreen > NotificationDetailScreen.tsx > ...
You, last week | 1 author (You)
1 import { SafeAreaView, Text, View, StyleSheet } from "react-native";
2
3 export const NotificationDetailScreen = () => {
4   return (
5     <SafeAreaView style={styles.safeArea}>
6       <View style={styles.container}>
7         <Text style={styles.text}>Notification detail Screen</Text>
8       </View>
9     </SafeAreaView>
10   );
11 };
12
13 const styles = StyleSheet.create({
14   safeArea: {
15     flex: 1,
16   },
17   container: {
18     flex: 1,
19     alignItems: "center",
20     justifyContent: "center",
21   },
22   text: {
23     fontSize: 18,
24     fontWeight: "bold",
25   },
26 });
27
28 export default NotificationDetailScreen;
29

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS COMMENTS

PS D:\Nam4\monApp\TH\LAB3\21522804_Bai1> []

Hình: profile và notification

1.2.2.2. Màn hình thuộc Top Navigation.

```

MainCategories.tsx
1 import { createMaterialTopTabNavigator } from '@react-navigation/material-top'
2 import { CategoriesMaterialTopTabParamsList } from '../../routes/types/types'
3 import CategoriesScreen1 from './CategoriesScreen1'
4 import CategoriesScreen2 from './CategoriesScreen2'
5 import CategoriesScreen3 from './CategoriesScreen3'
6 const Tab = createMaterialTopTabNavigator<CategoriesMaterialTopTabParamsList>
7 export const Categories = () => {
8   return (
9     <Tab.Navigator initialRouteName="CATEGORIES1">
10       <Tab.Screen name="CATEGORIES1" component={CategoriesScreen1} />
11       <Tab.Screen name="CATEGORIES2" component={CategoriesScreen2} />
12       <Tab.Screen name="CATEGORIES3" component={CategoriesScreen3} />
13     </Tab.Navigator>
14   )
15 }

CategoriesScreen1.tsx
1 export const CategoriesScreen1 = () => {
2   return (
3     <SafeAreaView style={styles.safeArea}>
4       <View style={styles.container}>
5         <Text>Categories Screen 1</Text>
6       </View>
7     </SafeAreaView>
8   );
9 }

CategoriesScreen2.tsx
10 import { SafeAreaView, View, Text, StyleSheet } from 'react-native';
11 export const CategoriesScreen2 = () => {
12   return (
13     <SafeAreaView style={styles.safeArea}>
14       <View style={styles.container}>
15         <Text>Categories Screen 2</Text>
16       </View>
17     </SafeAreaView>
18   );
19 }

CategoriesScreen3.tsx
20 import { SafeAreaView, View, Text, StyleSheet } from 'react-native';
21 export const CategoriesScreen3 = () => {
22   return (
23     <SafeAreaView style={styles.safeArea}>
24       <View style={styles.container}>
25         <Text>Categories Screen 3</Text>
26       </View>
27     </SafeAreaView>
28   );
29 }

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS COMMENTS
PS D:\Nam4\monApp\TH\LAB3\21522804_Bai1>

```

Hình: categories

1.2.2.4. Các màn hình thuộc drawer navigation

```

HomeDrawer.tsx
1 import { useNavigation } from '@react-navigation/native';
2 import { SafeAreaView, View, Text, TouchableOpacity, StyleSheet } from 'react-native';
3
4 export const HomeDrawer = () => {
5   const navigation = useNavigation();
6
7   const handleGoToDetail = () => {
8     navigation.navigate("HomeDetailScreen");
9   };
10
11   return (
12     <SafeAreaView style={styles.safeArea}>
13       <View style={styles.container}>
14         <Text style={styles.text}>Home</Text>
15         <TouchableOpacity style={styles.button} onPress={handleGoToDetail}>
16           <Text style={styles.buttonText}>GO TO DETAIL</Text>
17         </TouchableOpacity>
18       </View>
19     </SafeAreaView>
20   );
21 }

const styles = StyleSheet.create({
22   safeArea: {
23     flex: 1,
24   },
25   container: {
26     flex: 1,
27     alignItems: "center",
28     justifyContent: "center",
29   },
30   text: {
31     fontSize: 18,
32     fontWeight: "bold",
33   },
34   button: {
35     paddingVertical: 8,
36   }
37 });

HelpDrawer.tsx
1 export const HelpDrawer: React.FC = () => {
2   const navigation = useNavigation();
3
4   const handleGoToDetail = () => {
5     navigation.navigate("NotificationDetailScreen");
6   };
7
8   return [
9     <SafeAreaView style={styles.safeArea}>
10       <View style={styles.container}>
11         <Text style={styles.text}>Notification</Text>
12         <TouchableOpacity style={styles.button} onPress={handleGoToDetail}>
13           <Text style={styles.buttonText}>GO TO DETAIL</Text>
14         </TouchableOpacity>
15       </View>
16     </SafeAreaView>
17   ];
18 }

NotificationDrawer.tsx
19 export const NotificationDrawer: React.FC = () => {
20   const navigation = useNavigation();
21
22   const handleGoToDetail = () => {
23     navigation.navigate("NotificationDetailScreen");
24   };
25
26   return [
27     <SafeAreaView style={styles.safeArea}>
28       <View style={styles.container}>
29         <Text style={styles.text}>Notification</Text>
30         <TouchableOpacity style={styles.button} onPress={handleGoToDetail}>
31           <Text style={styles.buttonText}>GO TO DETAIL</Text>
32         </TouchableOpacity>
33       </View>
34     </SafeAreaView>
35   ];
36 }

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS COMMENTS
PS D:\Nam4\monApp\TH\LAB3\21522804_Bai1>

```

Hình: drawe screen

1.2.2.5. Các file khác

The screenshot shows a code editor with two tabs open:

- AppContextProps.ts**: A TypeScript file defining an interface `AppContextProps`. It includes properties for `data` (an object with `email` and `password`), `isloggedIn` (a string), and `setIsloggedIn` (a `React.Dispatch<React.SetStateAction<'idle' | 'success' | 'hasError'>`). It also exports `ApplicationContext` as a `React.createContext`.
- AppContextProvider.tsx**: A React component that provides the `AppContextProps` to its children. It uses `React.useState` to manage the `isloggedIn` state and returns a `<AppContext.Provider>` component with the value set to an object containing `data`, `isloggedIn`, and `setIsloggedIn`.

The bottom of the screen shows the terminal output:

```
PS D:\Nam4\monApp\TH\LAB3\21522804_Bai1> [ ]
```

And the status bar indicates the current file is `node 21522...`.

Hình: *AppContext Props và AppProvider*

```

15  export const MainScreen = () => {
16    return (
17      <Tab.Navigator
18        initialRouteName="HomeTab"
19        screenOptions={({ route }) => ({
20          tabBarIcon: ({ focused }) => {
21            const iconColor = focused ? "blue" : "black";
22            let IconComponent;
23
24            switch (route.name) {
25              case "HomeTab":
26                IconComponent = <AntDesign name="home" size={24} color={iconColor} />;
27                break;
28              case "Categories":
29                IconComponent = <AntDesign name="appstore" size={24} color={iconColor} />;
30                break;
31              case "Favorites":
32                IconComponent = <Octicons name="heart-fill" size={24} color={iconColor} />;
33                break;
34              case "Profile":
35                IconComponent = <FontAwesome name="user" size={24} color={iconColor} />;
36                break;
37              default:
38                IconComponent = null;
39            }
40
41            return <View style={styles.iconContainer}>{IconComponent}</View>;
42          },
43          tabBarShowLabel: false,
44        })}
45      <Tab.Screen name="HomeTab"
46        options={{ headerShown: false }}
47        component={MainDrawer} />
48      <Tab.Screen name="Categories" component={Categories} />
49      <Tab.Screen name="Favorites"
50        options={{
51          tabBarBadge: favouritesCount > 0 ? favouritesCount : undefined, // Hide badge if count is 0
52        }}>

```

Hình: Bottom Tab navigation

```

1  import { AntDesign, Feather } from "@expo/vector-icons"
2  import { createDrawerNavigator } from "@react-navigation/drawer"
3  import { MainDrawerParamsList } from "./type"
4  import { HomeDrawer } from "../../pages/mainScreen/Home/HomeDrawer"
5  import { NotificationDrawer } from "../../pages/mainScreen/Home/NotificationDrawer"
6  import { HelpDrawer } from "../../pages/mainScreen/Home/HelpDrawer"
7
8  const Drawer = createDrawerNavigator<MainDrawerParamsList>()
9  export const MainDrawer = () => {
10    return (
11      <Drawer.Navigator
12        initialRouteName="Home"
13        screenOptions={({ route }) => ({
14          drawerIcon: () => {
15            if (route.name === "Home") return <AntDesign name="home" size={24} />;
16            if (route.name === "Notification") return <AntDesign name="notification" size={24} />;
17            if (route.name === "Helps") return <Feather name="help-circle" size={24} />;
18          },
19        })}
20      <Drawer.Screen name="Home"
21        component={HomeDrawer} />
22      <Drawer.Screen name="Notification" component={NotificationDrawer} />
23      <Drawer.Screen name="Helps" component={HelpDrawer} />
24    </Drawer.Navigator>
25  }

```

Hình: Drawer navigation

The screenshot shows the VS Code interface with the following details:

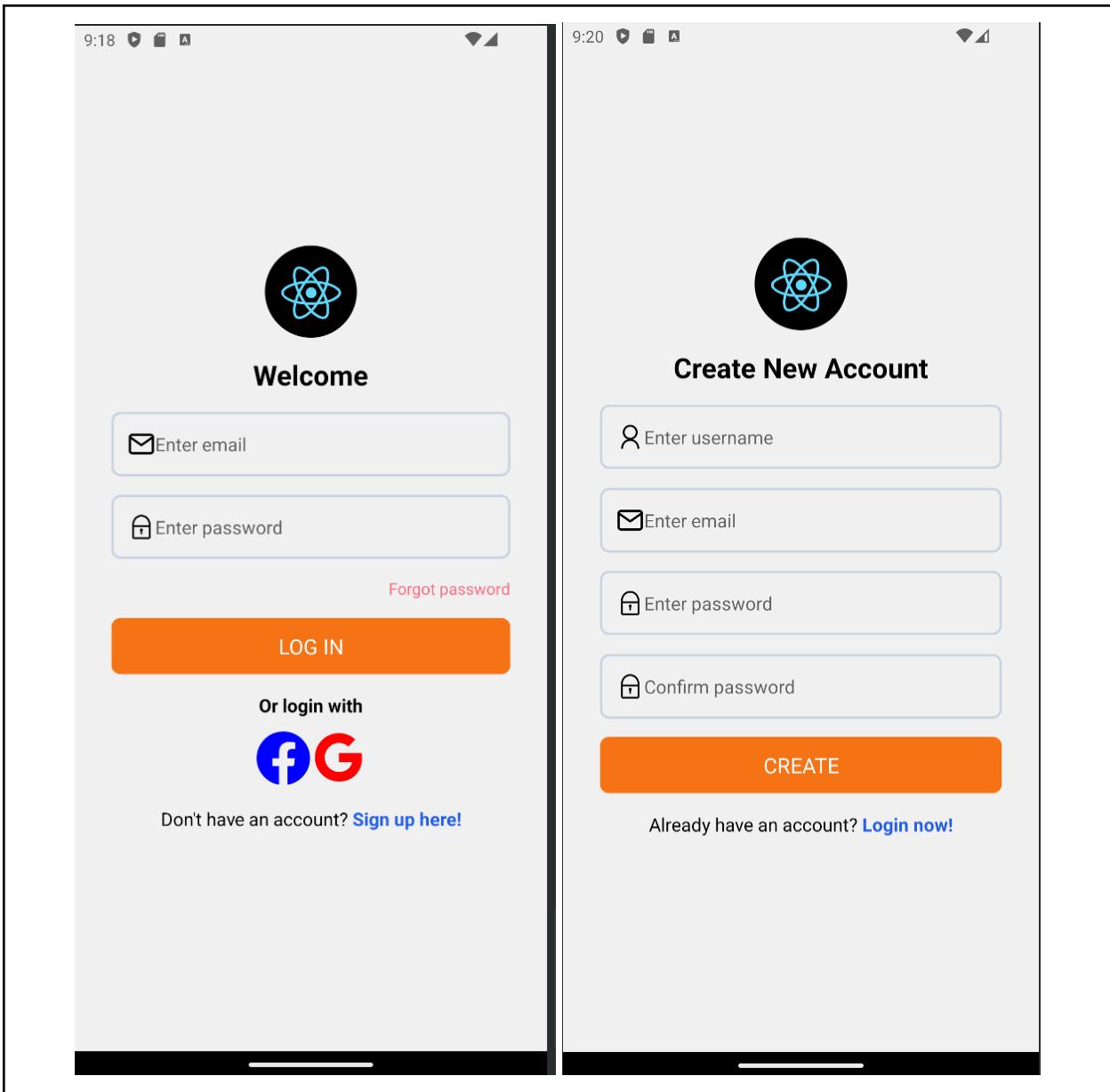
- EXPLORER** sidebar: Shows the project structure under `LAB3`, including `21522804_Bai1`, `node_modules`, `src` (containing `context`, `pages`, `auth`, `mainScreen`, `provider`, `routes`, `types`, and `routes.tsx`), and files like `.gitignore`, `app.json`, `App.tsx`, `babel.config.js`, `package-lock.json`, `package.json`, and `tsconfig.json`.
- routes.tsx** file content:

```
11 import Home from "../pages/mainScreen/HomeScreen"
12 import { NotificationDetailScreen } from "../pages/mainScreen/NotificationDetailScreen"
13 const Stack = createNativeStackNavigator<RootNativeStackParamList>()
14 export const Screen = () => {
15   const appContext = React.useContext(AppContext)
16
17   return (
18     <NavigationContainer>
19       <Stack.Navigator
20         screenOptions={({ headerShown: false })
21         initialRouteName="LogIn"
22       >
23         {appContext?.isLoggedIn === "success" ? (
24           <Stack.Screen name="HomeScreen" component={MainScreen} />
25           <Stack.Screen
26             options={({ headerShown: true })
27             name="HomeDetailsScreen"
28             component={Home}
29           />
30           <Stack.Screen
31             options={({ headerShown: true })
32             name="NotificationDetailsScreen"
33             component={NotificationDetailScreen}
34           />
35         ) : (
36           <>
37             <Stack.Screen name="LogIn" component={LogInScreen} />
38             <Stack.Screen name="SignUp" component={RegisterScreen} />
39           </>
40         )
41       </Stack.Navigator>
42     </NavigationContainer>
43   )
44 }
45 }
```
- TABBAR**: `BottomTabNavigation.tsx` and `routes.tsx` are open.
- STATUS BAR**: Shows the path `PS D:\NamA\monApp\TH\LAB3\21522804_Bai1>` and icons for node.js and powershell.

Hình: Main navigation

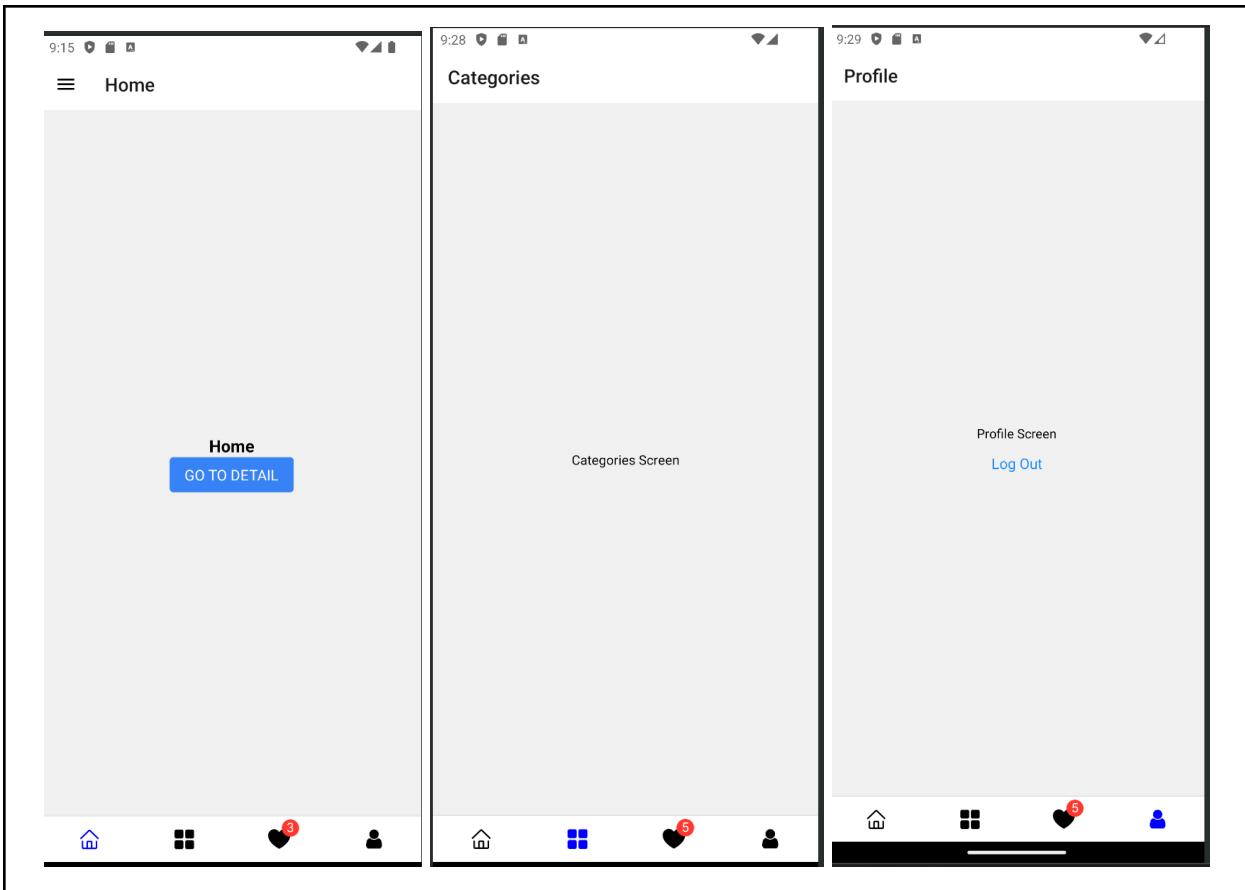
1.4. Màn hình ứng dụng

3.4.1. Màn hình đăng nhập, đăng ký



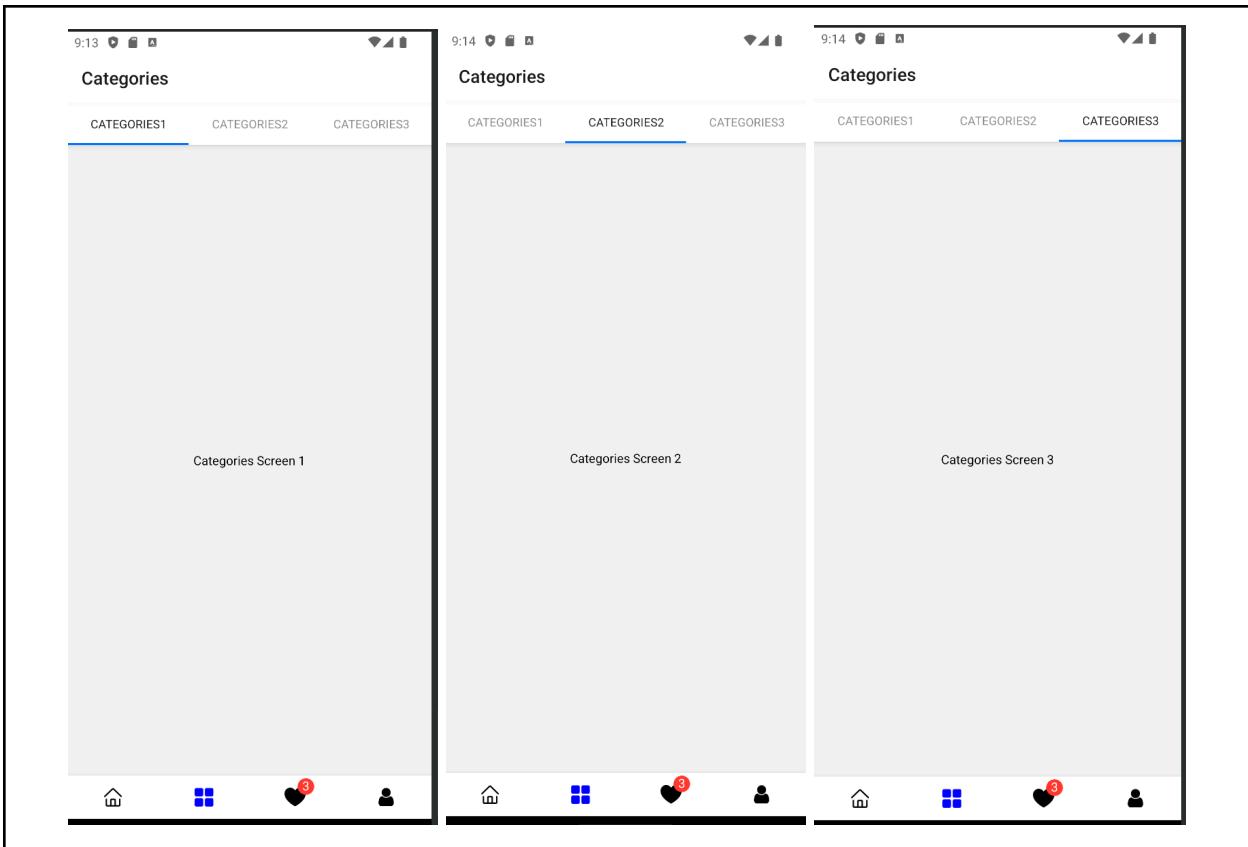
Hình: Màn hình đăng nhập, đăng ký

3.4.2. Màn hình thuộc bottom Tab



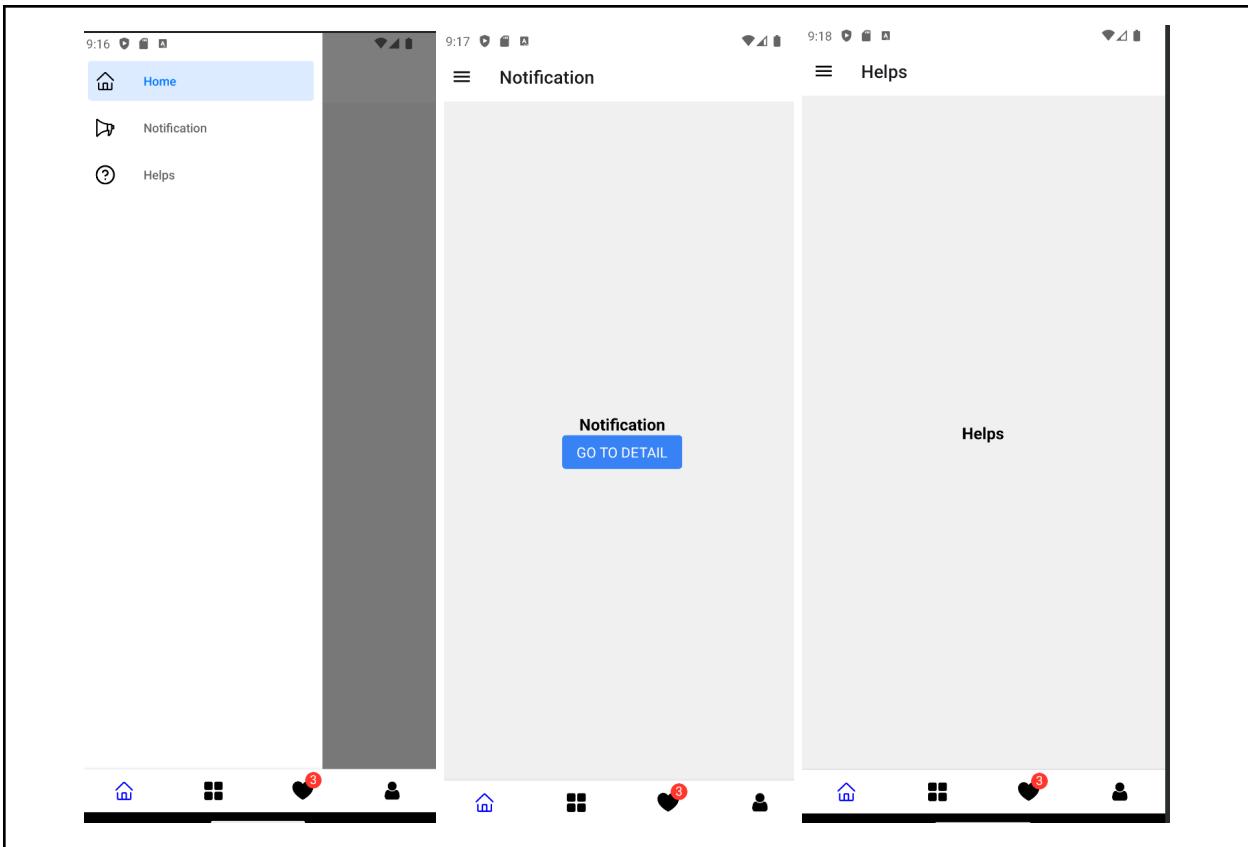
Hình: Bottom Tab navigation

3.4.2. Màn hình thuộc Top Tab



Hình: TopTab navigation

3.4.2. Màn hình thuộc Drawer Navigation



Hình: Drawer navigation

1.5. Demo

Linh drive:

<https://drive.google.com/drive/folders/1afnSoYUunpD0Z0ekHPip0ZmbrAhCVE4R?usp=sharing>

Bài 2: SQLite Database

2.1. Cấu trúc thư mục:

The screenshot shows a code editor interface with the following details:

- EXPLORER** sidebar: Shows the project structure under 'LAB3' (21522804_Bai2). It includes folders for .expo, .vscode, assets, node_modules, and src. The src folder contains Components (Item.ts, ListItem.ts, MainHomeScreen.tsx, NoteAppHome.tsx), hooks (hookNote, useCreateNote.ts, useDeleteNote.ts, useGetNote.ts, useUpdateNote.ts), Navigation (BottomTabNavigation.tsx, MainStackNavigation.tsx, Type.ts), Screens (HomeScreen.tsx, SettingScreen.tsx), stores (atom.tsx, export.tsx), and configuration files (.gitignore, app.json, App.tsx, babel.config.js).
- App.tsx** tab: The active file is App.tsx. The code is as follows:

```

21522804_Bai2 > App.tsx > App > React.useEffect() callback > db.transaction() callback
You last week | 1 author (You)
1 import React from "react" 6.9k (gzipped: 2.7k)
2 import { NavigationContainer } from "@react-navigation/native" 35.5k (gzipped: 12.1k)
3 import { MainStackNavigation } from "./src/Navigation/MainStackNavigation"
4 import * as SQLite from "expo-sqlite"
5 import { RecoilRoot } from "recoil" 78.6k (gzipped: 23.6k)
6 import { db } from "./config"
7 export default function App() {
8   React.useEffect(() => {
9     db.transaction((tx) => {
10       tx.executeSql(
11         `create table if not exists Note (id varchar primary key not null, title varchar, note varchar);`,
12         [],
13         () => console.log("success create table Notes")
14       )
15     }, [])
16   return (
17     <RecoilRoot>
18       <NavigationContainer>
19         <MainStackNavigation />
20       </NavigationContainer>
21     </RecoilRoot>
22   )
23 }

```

- TABBAR**: PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, GITLENS, COMMENTS.
- COMMANDS**: PS D:\Nam4\monApp\TH\LAB3\21522804_Bai2>, node 2152..., powershell...>.

Hình: Cấu trúc thư mục

2.2. Các file:

2.2.1. App.tsx

```

EXPLORER          ⚡ App.tsx
LABS
21522804_Bai2
  .expo
  .vscode
  assets
  node_modules
src
  Components
    Item.tsx
    ListItem.tsx
    MainHomeScreen.tsx
    NoteAppHome.tsx
  hooks
    hookNote
      TS hooksNote.ts
      TS useCreateNote.ts
      TS useDeleteNote.ts
      TS useGetNote.ts
      TS useUpdateNote.ts
  Navigation
    BottomTabNavigation.tsx
    MainStackNavigation.tsx
    Type.ts
  Screens
    HomeScreen
      HomeScreen.tsx
  SettingScreen
    SettingScreen.tsx
stores
  atom.tsx
  exporttsx
  .gitignore
  app.json
  App.tsx
  babel.config.js
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  GITLENS  COMMENTS
PS D:\Nam4\monApp\TH\LAB3\21522804_Bai2>

```

Hình : App.tsx

2.2.2. Các component

```

Item.tsx
21522804_Bai2 > src > Components > Item.tsx > ItemNoteScreenComponent
  type TItemNoteScreenComponentProps = {
    id: string
    title: string
    note: string
  }
  export const ItemNoteScreenComponent: React.FC<TItemNoteScreenComponentProps> = ({ id, title, note }) => {
    const navigation = useNavigation<NavigationProp<HomeNativeStackNavigatorParamList, 'NoteApp'>>();
    const { theme, fontSize } = useRecoilValue<ThemeState>();
    const setUpDateNote = useSetRecoilState<UpdateNoteState>();
    const handleDeleteNote = hooksNote.useDeleteNote();
    const handleGetListNote = hooksNote.useGetListNote();

    const handleSetUpdateNote = () => {
      setUpDateNote({
        state: "hasValue",
        content: { id, title, note },
      });
    }

    return (
      <TouchableOpacity
        style={styles.touchable}
        onPress={() => {
          handleSetUpdateNote();
          navigation.navigate("NoteApp", { id });
        }}
      >
        <View
          style={[styles.noteContainer, { borderColor: theme === "Dark" ? "#333" : "#ccc" }]}
        >
          <View style={styles.textContainer}>
            <Text style={[styles.titleText, { fontSize, color: theme === "Dark" ? "#fff" : "#000" }]}>{title}</Text>
            <Text style={[styles.noteText, { fontSize, color: theme === "Dark" ? "#fff" : "#000" }]}>{note}</Text>
          </View>
          <TouchableOpacity
            style={styles.deleteIcon}
            onPress={() => {
              handleDeleteNote(id);
              handleGetListNote();
            }}
          >
            <EvilIcons name="trash" size={42} color={theme === "Dark" ? "#333" : "#ccc"} />
          </TouchableOpacity>
        </View>
      </TouchableOpacity>
    );
  }
  const styles = StyleSheet.create({
    touchable: {
      margin: 10,
      marginVertical: 15,
      padding: 10,
      borderRadius: 10,
      backgroundColor: "#fff",
      elevation: 5,
      shadowColor: "#000",
      shadowOffset: { width: 0, height: 2 },
      shadowRadius: 5,
      shadowOpacity: 0.5,
    },
    noteContainer: {
      padding: 10,
      margin: 10,
      border: 1px solid #ccc,
      borderRadius: 10,
    },
    titleText: {
      margin: 0,
      padding: 0,
      marginVertical: 5,
      color: "#000",
      fontSize: 18,
      fontWeight: "bold",
    },
    noteText: {
      margin: 0,
      padding: 0,
      color: "#000",
      fontSize: 16,
      lineHeight: 1.5,
    },
    deleteIcon: {
      width: 42,
      height: 42,
      margin: 10,
    },
  });
  PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  GITLENS  COMMENTS
  PS D:\Nam4\monApp\TH\LAB3\21522804_Bai2>

```

Hình: Item.tsx

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows the project structure with a tree view of files and folders. The `src` folder is expanded, showing subfolders like `Components`, `hooks`, `Screens`, and `stores`. Inside `Components`, `Item.tsx` and `Listitem.tsx` are listed.
- Editor**: The active file is `Listitem.tsx` located at `src/Components`. The code implements a `ScrollView` component that maps an array of items to `ItemNoteScreenComponent` elements. It also defines styles for touchable areas and note containers.
- Bottom Status Bar**: Shows the file path `PS D:\Nam4\monApp\TH\LAB3\21522804_Bai2>`.

Hình: `Listitem.tsx`

```
8
9  export const MainHomeScreen = () => {
10    const navigation = useNavigation<NavigationProp<HomeNativeStackParamList>>();
11    const handleNavigateToNoteApp = (id: string | null) => {
12      return navigation.navigate("NoteApp", { id });
13    };
14    const { theme, fontSize } = useRecoilValue(themeState);
15    const isDarkTheme = theme === "Dark";
16
17    return (
18      <View
19        style={[
20          styles.container,
21          isDarkTheme && styles.darkContainer,
22        ]}>
23        <View style={styles.header}>
24          <Text
25            style={[
26              styles.title,
27              { fontSize },
28              isDarkTheme && styles.darkTitle,
29            ]}>
30            All Notes
31          </Text>
32          <TouchableOpacity onPress={() => handleNavigateToNoteApp(null)}>
33            <View>
34              <AntDesign
35                name="pluscircle"
36                color={isDarkTheme ? "blue" : "orange"}
37                size={42}
38              />
39            </View>
40          </TouchableOpacity>
41        </View>
42        <ListItemNoteScreenComponent />
43      </View>
44    );
45  };

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS COMMENTS

PS D:\Nam4\monApp\TH\LAB3\21522804_Bai2>

Hình: MainHomeScreen.tsx

```

15522804_Bai2 > src > Components > NoteAppHomeScreen.tsx
15522804_Bai2 > src > Components > NoteAppHome.tsx

```

```

NoteAppHome.tsx
1 import { RouteProp, useRoute } from '@react-navigation/native';
2 import { HomeNativeStackParamList } from '../Navigation/type';
3 export const NoteAppHomeScreen = () => {
4   const {
5     params: { id },
6   } = useRoute>();
7   const getCreateNoteState = useRecoilValue(createNoteState);
8   const getUpdateNoteState = useRecoilValue(updateNoteState);
9   const { theme, font_size } = useRecoilValue(themeState);
10  const setCreateNoteState = useSetRecoilState(createNoteState);
11  const setUpdNoteState = useSetRecoilState(updateNoteState);
12  const { handleCreateNote } = hookNote.useCreateNote();
13  const { handleGetListNote } = hookNote.useGetListNote();
14  const { handleUpdateNote } = hookNote.useUpdateNote();
15  const isDarkTheme = theme === 'dark';
16
17  return (
18    <View style={[styles.container, isDarkTheme && styles.darkContainer]}>
19      <View style={styles.inputContainer}>
20          <TextInput
21              style={[styles.textInput, { font_size }, isDarkTheme && styles.darkText]}
22              placeholderTextColor={isDarkTheme ? 'white' : 'gray'}
23              placeholder="Enter your title"
24              value={getUpdateNoteState.content.title ?? ''}
25              onChangeText={(text) => {
26                if (id) {
27                  setCreateNoteState((preState) => ({
28                    state: 'hasValue',
29                    contents: {
30                      ...preState.contents,
31                      title: text,
32                    },
33                  }));
34                } else {
35                  setUpdateNoteState((preState) => ({
36                    state: 'hasValue',
37                    content: {
38                      ...preState.content,
39                      title: text,
40                    },
41                  }));
42                }
43              })
44            }>
45        
```

```

NoteAppHomeScreen.tsx
1 export const NoteAppHomeScreen = () => {
2   const styles = {
3     textInput: {
4       fontSize: 16,
5       width: 300,
6       height: 40,
7       padding: 10,
8       margin: 10,
9       border: 1px solid #ccc,
10      color: '#333',
11      backgroundColor: '#fff',
12      '&:placeholder': {
13        color: '#ccc',
14      },
15    },
16    actionContainer: {
17      display: 'flex',
18      gap: 10,
19      align-items: 'center',
20    },
21    circle: {
22      width: 24,
23      height: 24,
24      border-radius: 50%,
25      background-color: 'red',
26      display: 'flex',
27      align-items: 'center',
28      justify-content: 'center',
29      '&:pressed': {
30        background-color: 'blue',
31      },
32    },
33    checkcircle: {
34      width: 24,
35      height: 24,
36      border-radius: 50%,
37      background-color: 'green',
38      display: 'flex',
39      align-items: 'center',
40      justify-content: 'center',
41      '&:pressed': {
42        background-color: 'blue',
43      },
44    },
45  };
46
47  const [note, setNote] = useState('');
48
49  const handleCreateNote = () => {
50    const noteData = {
51      id: id,
52      title: note,
53      content: note,
54    };
55    setCreateNoteState((state) => ({ ...state, notes: [...state.notes, noteData] }));
56  };
57
58  const handleGetListNote = () => {
59    const noteData = {
60      id: id,
61      title: note,
62      content: note,
63    };
64    setUpdateNoteState((state) => ({ ...state, notes: [...state.notes, noteData] }));
65  };
66
67  const handleUpdateNote = (id) => {
68    const noteData = {
69      id: id,
70      title: note,
71      content: note,
72    };
73    setUpdateNoteState((state) => ({ ...state, notes: state.notes.map((note) => (note.id === id ? noteData : note)) }));
74  };
75
76  const handleDeleteNote = (id) => {
77    setCreateNoteState((state) => ({ ...state, notes: state.notes.filter((note) => (note.id !== id)) }));
78  };
79
80  return (
81    <View style={styles.container}>
82      <View style={styles.inputContainer}>
83          <TextInput
84              style={styles.textInput}
85              value={note}
86              onChangeText={(text) => {
87                if (id) {
88                  setCreateNoteState((preState) => ({
89                    state: 'hasValue',
90                    contents: {
91                      ...preState.contents,
92                      title: text,
93                    },
94                  }));
95                } else {
96                  setUpdateNoteState((preState) => ({
97                    state: 'hasValue',
98                    content: {
99                      ...preState.content,
100                     title: text,
101                   },
102                 }));
103               })
104             }>
105         
```

Hình: NoteAppHome.tsx

2.2.3. Hooks

```
10
11  export const useCreateNote = () => {
12    const navigation = useNavigation<Props['navigation']>();
13    const {
14      contents: { title, note },
15    } = useRecoilValue(createNoteState)
16    const alert = () =>
17      Alert.alert("Warning", "Please enter a title", [
18        { text: "Oke", style: "default" },
19      ])
20    const reset = useResetRecoilState(createNoteState)
21    const handleCreateNote = () => {
22      if (!title || !note) {
23        console.log("Not true")
24        alert()
25        return
26      } else {
27        const id = uuid()
28        db.transaction((tx) => {
29          tx.executeSql(`insert into Note (id, title, note) values(?, ?, ?)`, [
30            id,
31            title,
32            note,
33          ])
34        })
35        reset()
36        navigation.navigate("Main");
37      }
38    }
39  }
40  return { handleCreateNote }
41}
42
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS COMMENTS

S D:\Nam4\monApp\TH\LAB3\21522804_Bai2>

Hình: useCreateNote.ts

```
1  import { useRecoilValue, useResetRecoilState } from "recoil"  78.7k (gzipped: 23.6k)
2  import { updateNoteState } from "../../stores/atom"
3  import "react-native-get-random-values"  3k (gzipped: 1.4k)
4  import { Alert } from "react-native"
5  import { db } from "../../config"
6  import { SQLiteProvider, useSQLiteContext, type SQLiteDatabase } from 'expo-sqlite';
7  export const useUpdateNote = () => {
8    const {
9      content: { title, note },
10     } = useRecoilValue(updateNoteState)
11    const alert = () =>
12      Alert.alert("Warning", "Please enter a title", [
13        { text: "Oke", style: "default" },
14      ])
15    const reset = useResetRecoilState(updateNoteState)
16    const handleUpdateNote = (id: string) => {
17      if (!title || !note) {
18        console.log("Not true")
19        alert()
20        return
21      } else {
22        db.transaction((tx) => {
23          tx.executeSql(`update Note set title = ?, note = ? where id = ?`, [
24            title,
25            note,
26            You, last week via PR #10 + test
27            id,
28          ])
29        })
30        reset()
31      }
32    return { handleUpdateNote }
33  }
34
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS COMMENTS

+ ⌂ ⌄ ⌅ ⌆ ⌇ ⌈ ⌉ ×

PS D:\Nam4\monApp\TH\LAB3\21522804_Bai2>

| node 21522...

| powershell...

Hình: useUpdateNote.tsx

```

TS useDeleteNote.ts
21522804_Bai2 > src > hooks > hookNote > TS useDeleteNote.ts > ...
You, last week | 1 author (You)
1 import "react-native-get-random-values"
2 import { db } from "../../config"
3 export const useDeleteNote = () => {
4   const handleDeleteNote = (id: string) => {
5     db.transaction((tx) => {
6       tx.executeSql(`delete from Note where id = ?`, [id])
7     })
8   }
9   return { handleDeleteNote }
10 }
11

TS useGetListNote.ts
21522804_Bai2 > src > hooks > hookNote > TS useGetListNote.ts > ...
You, last week | 1 author (You)
1 import { useSetRecoilState } from "recoil" 78.6k (gzipped: 23.6k)
2 import { db } from "../../config"
3 import { listNoteState } from "../../stores/atom"
4 export const useGetListNote = () => {
5   const setListNote = useSetRecoilState(listNoteState)
6   const handleGetListNote = () => {
7     db.transaction((tx) => {
8       tx.executeSql(`select * from Note`, [], (_, { rows }) => {
9         setListNote({
10           state: "hasValue",
11           contents: rows._array,
12         })
13       })
14     })
15   }
16   return { handleGetListNote }
17 }
18

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS COMMENTS

PS D:\Nam4\monApp\TH\LAB3\21522804_Bai2>

Hình: useDeleteNote.tsx và useGetListNote.tsx

2.2.4. Navigation

```

EXPLORER
LAB3
  21522804_Bai1
  21522804_Bai2
    expo
    .vscode
    assets
    node_modules
  src
    Components
      Item.tsx
      ListItem.tsx
      MainHomeScreen.tsx
      NoteAppHome.tsx
    hooks
      hookNote
        hooksNote.ts
        useCreateNote.ts
        useDeleteNote.ts
        useGetNote.ts
        useUpdateNote.ts
    Navigation
      BottomTabNavigation.tsx
        MainStackNavigator.tsx
        Type.ts
      Screens
        HomeScreen
          HomeScreen.tsx
        SettingScreen
          SettingScreen.tsx
      stores
        atom.tsx
        export.tsx
      .gitignore
      app.json
      App.tsx
      babel.config.js

BottomTabNavigation.tsx
21522804_Bai2 > src > Navigation > BottomTabNavigation.tsx > ...
11
12 export const HomeView = () => {
13   const { theme } = useRecoilValue(themeState);
14   const isDarkTheme = theme === "Dark";
15
16   return (
17     <Tab.Navigator
18       initialRouteName="Home"
19       screenOptions={({ route }) => ({ const isDarkTheme: boolean
20         tabBarActiveBackgroundColor: isDarkTheme ? "black" : "white",
21         tabBarInactiveBackgroundColor: isDarkTheme ? "black" : "white",
22         headerShown: false,
23         tabBarIcon: ({ focused }) => {
24           const iconColor = focused ? "blue" : "#ccc";
25           const borderStyle = focused ? styles.focusedBorder : undefined;
26
27           if (route.name === "Home")
28             return (
29               <View style={[styles.iconContainer, borderStyle]}>
30                 <Feather name="home" size={24} color={iconColor} />
31               </View>
32             );
33
34           if (route.name === "Settings")
35             return (
36               <View style={[styles.iconContainer, borderStyle]}>
37                 <AntDesign name="setting" size={24} color={iconColor} />
38               </View>
39             );
40         },
41       )},
42       <Tab.Screen name="Home" component={HomeScreen} />
43       <Tab.Screen name="Settings" component={SettingView} />
44     </Tab.Navigator>
45   );
46 }
47

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS COMMENTS

PS D:\Nam4\monApp\TH\LAB3\21522804_Bai2>

Hình: Bottom Tab Navigation

```
1 import { createNativeStackNavigator } from "@react-navigation/native-stack"
2 import { RootNativeStackParamList } from "./Type"
3 import { HomeView } from "./BottomTabNavigation"
4 import hookNote from "../hooks/hookNote/hooksNote"
5 import React from "react"
6
7 const NativeStack = createNativeStackNavigator<RootNativeStackParamList>()
8 export const MainStackNavigation = () => {
9   const handleGetListNote = hookNote.useGetListNote()
10  React.useEffect(() => {
11    handleGetListNote()
12  }, [])
13  return (
14    <NativeStack.Navigator initialRouteName="HomeScreen">
15      <NativeStack.Screen
16        options={{
17          headerShown: false,
18        }}
19        name="HomeScreen"
20        components={HomeView}
21      />
22    </NativeStack.Navigator>
23  )
24}
```

Hình: Main Stack Navigation

2.3.5. Screen

```
1 import { themestate } from "../../stores/export"
2 const HomeNativeStack = createNativeStackNavigator<HomeNativeStackParamList>()
3
4 export const HomeScreen = () => {
5   const [ theme ] = useRecoilValue(themestate);
6   const isDarkTheme = theme === "Dark";
7
8   return (
9     <HomeNativeStack.Navigator
10       screenOptions={({ route, navigation }) => ({
11         animationDuration: 100,
12         animation: "fade_from_bottom",
13         header: () => {
14           if (route.name === "Main") {
15             return (
16               <SafeAreaView style={[ styles.headerContainer, isDarkTheme && styles.headerContainerDark ]}>
17                 <View style={styles.centeredContainer}>
18                   <Text style={[ styles.headerText, isDarkTheme ? styles.whiteText : styles.oran ]}>Note App</Text>
19                 </View>
20               </SafeAreaView>
21             );
22           }
23           if (route.name === "NoteApp") {
24             return (
25               <SafeAreaView>
26                 <View style={[
27                   styles.noteAppHeaderContainer,
28                   isDarkTheme && styles.darkGrayBackground,
29                 ]}>
30                   <TouchableOpacity
31                     style={styles.goBackButton}
32                     onPress={() => navigation.navigate("Main")}>
33                     <Text style={isDarkTheme ? styles.whiteText : styles.oran}>Go back</Text>
34                   </TouchableOpacity>
35                   <Text style={[
36                     styles.headerText,
37                     isDarkTheme ? styles.whiteText : styles.oran
38                   ]}>
39                     {route.params && route.params.id ? "EditNote" :
40                       "New Note"}</Text>
41                 </View>
42               </SafeAreaView>
43             );
44           }
45         }
46       })
47     )
48   );
49 }
50
51
52
```

Hình: HomeScreen

```
5
6 export const SettingView = () => {
7     const [getThemeState, setThemeState] = useRecoilState(themeState);
8     const isDarkTheme = getThemeState.theme === "Dark";
9
10    const handleChangeTheme = () => {
11        setThemeState((preState) => ({
12            ...preState,
13            theme: isDarkTheme ? "Light" : "Dark",
14        }));
15    };
16
17    return (
18        <SafeAreaView style={styles.safeArea}>
19            <View style={[styles.header, isDarkTheme && styles.darkBackground]}>
20                <Text style={[styles.headerText, isDarkTheme && styles.whiteText]}>Settings</Text>
21            </View>
22            <View style={[styles.container, isDarkTheme && styles.darkContainer]}>
23                <View style={styles.row}>
24                    <Text style={[styles.text, { fontSize: getThemeState.fontSize }, isDarkTheme && styles.whiteText]}>
25                        Dark Mode
26                    </Text>
27                    <Switch onChange={handleChangeTheme} value={isDarkTheme} />
28                </View>
29                <View style={styles.column}>
30                    <View style={styles.row}>
31                        <Text style={[styles.text, { fontSize: getThemeState.fontSize }, isDarkTheme && styles.whiteText]}>
32                            Font Size
33                        </Text>
34                        <Text style={[styles.text, { fontSize: getThemeState.fontSize }, isDarkTheme && styles.whiteText]}>
35                            {getThemeState.fontSize}
36                        </Text>
37                    </View>
38                    <Slider
39                        style={styles.slider}
40                        value={getThemeState.fontSize}
41                        onValueChange={(fontSize) => {
42                            setThemeState((preState) => ({
43                                ...preState,
44                                fontSize: Math.round(fontSize),
45                            }));
46                        })
47                        minimumValue={1}
48                        maximumValue={32}
49                    />
50                </View>
51            </View>
52        </SafeAreaView>
53    );
54};
55
56 const styles = StyleSheet.create({
57     safeArea: {
58         flex: 1,
59     },

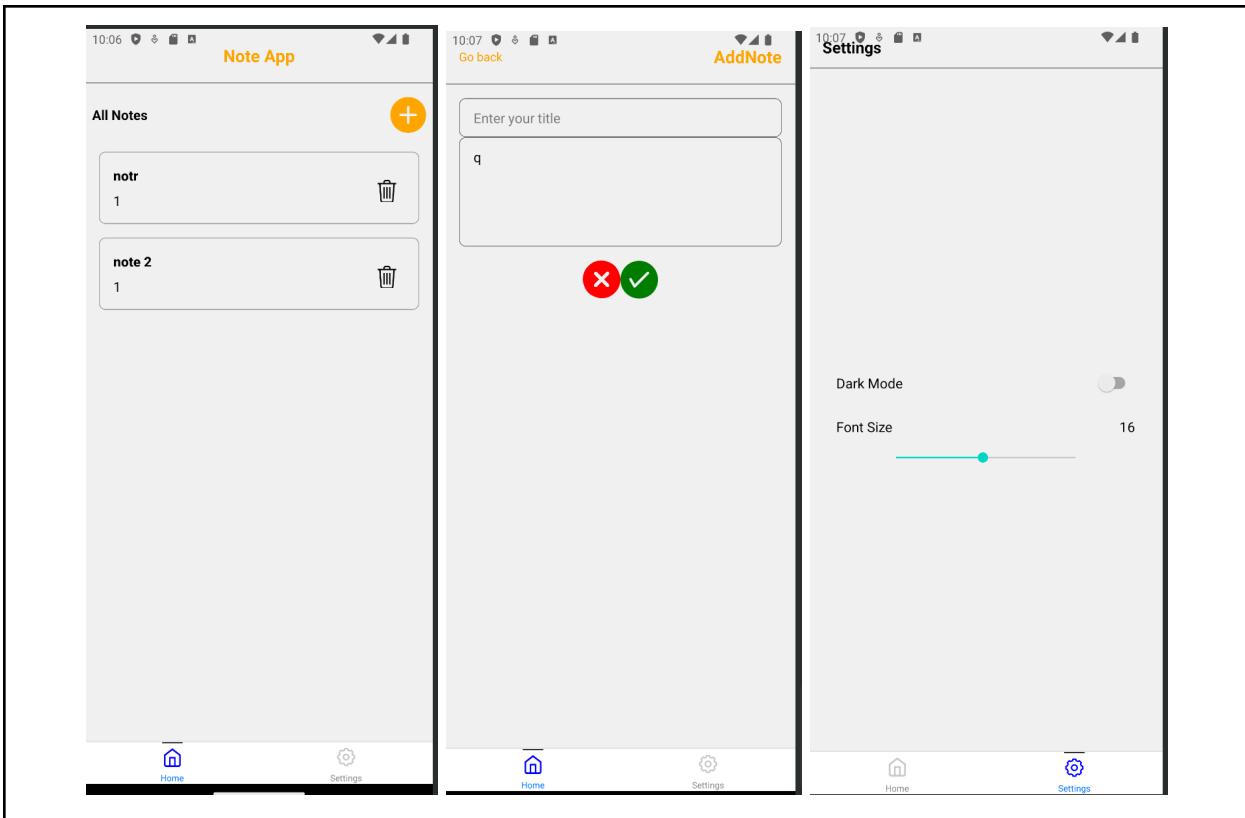
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS COMMENTS

PS D:\Nam4\monApp\TH\LAB3\21522804_Bai2>

Hình: Setting Screen

2.3. Màn hình ứng dụng



2.4. Demo

Linh drive:

<https://drive.google.com/drive/folders/1afnSoYUunpD0Z0ekHPip0ZmbrAhCVE4R>