Simple Note Application

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Github - https://github.com/MADHURANGA-SKP/Add_Note

Introduction

Simple note application that store notes using an array and React Native and Expo used to develop and its includes pages of *Login page*, *Registration page*, *Home page*, *Add Note page*, *View Note page*.

Project Requirements

Login Page

- A user-friendly login interface where users can enter their username and password.
- Use form validation techniques to ensure proper input.
- Redirect users to the Home Page upon successful login.

Registration Page

- Allow new users to sign up by providing the necessary details.
- Validate form inputs and navigate back to the Login Page after registration.

Home Page

- Display a welcome message with the user's name after a successful login.
- Show a list of notes specific to the logged-in user with options to view notes.
- Provide a button to add a new note.

Add Note Page

- Allow users to create and save new notes with a title and content.

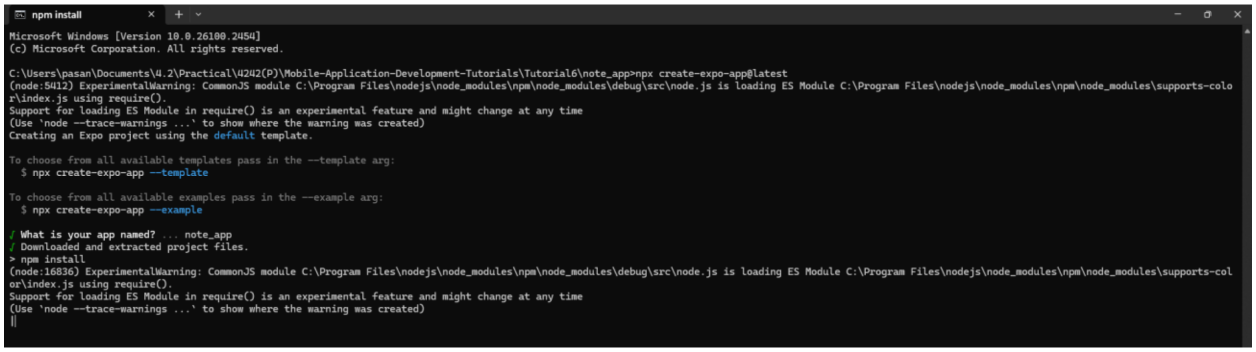
View Note Page

- Display the full content of a selected note.

Development Process

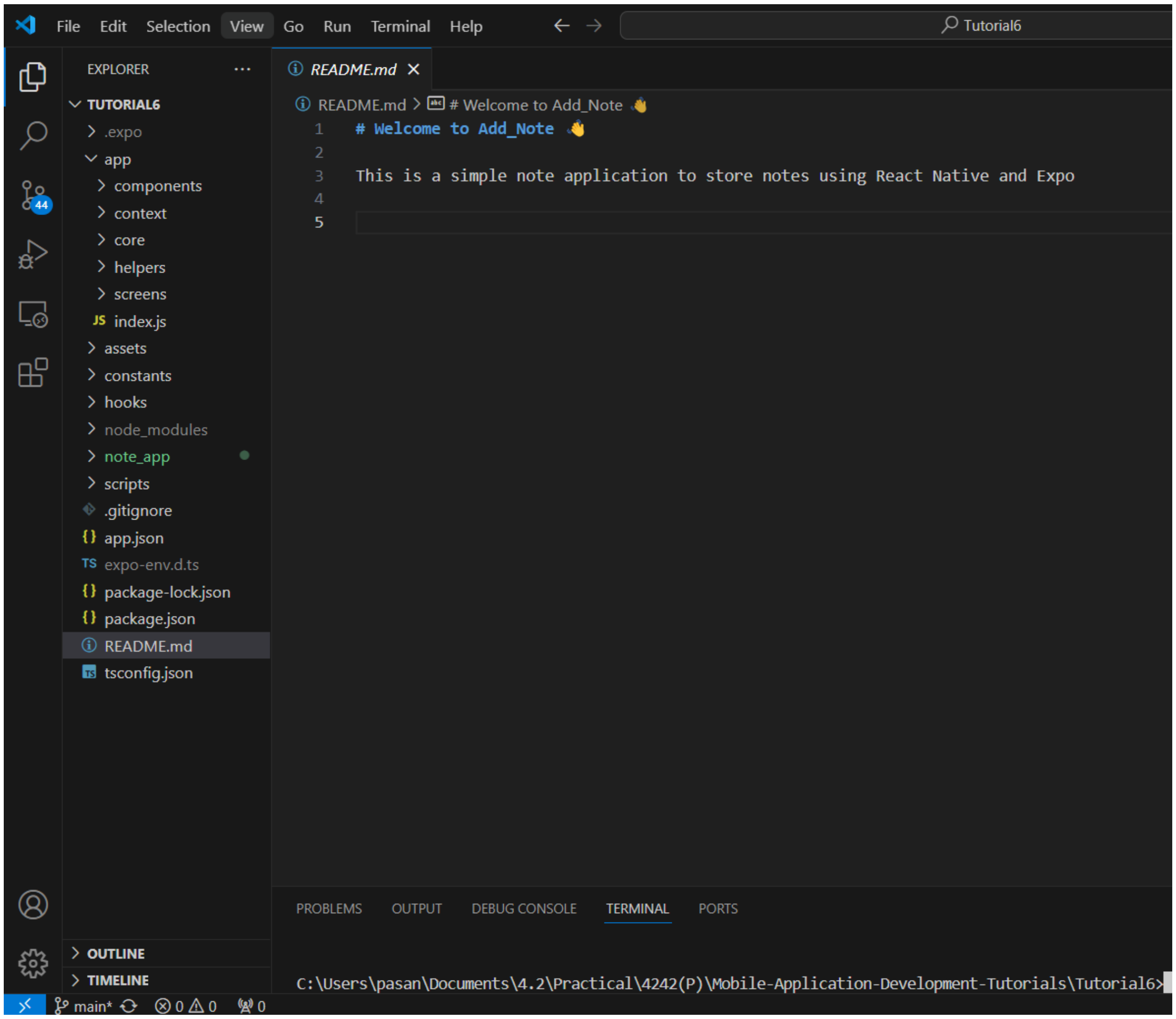
Initial Setup

creating the project using `npx create-expo-app@latest`



```
Microsoft Windows [Version 10.0.26100.2454]
(c) Microsoft Corporation. All rights reserved.

C:\Users\pasan\Documents\4.2\Practical\4242(P)\Mobile-Application-Development-Tutorials\Tutorial6\note_app>npx create-expo-app@latest
(node:5412) ExperimentalWarning: CommonJS module C:\Program Files\nodejs\node_modules\npm\node_modules\debug\src\node.js is loading ES Module C:\Program Files\nodejs\node_modules\npm\node_modules\supports-colo
r\index.js using require().
Support for loading ES Module in require() is an experimental feature and might change at any time
(Use `node --trace-warnings ...` to show where the warning was created)
Creating an Expo project using the default template.

To choose from all available templates pass in the --template arg:
  $ npx create-expo-app --template

To choose from all available examples pass in the --example arg:
  $ npx create-expo-app --example

√ What is your app named? ... note_app
√ Downloaded and extracted project files.
> npm install
(node:16836) ExperimentalWarning: CommonJS module C:\Program Files\nodejs\node_modules\npm\node_modules\debug\src\node.js is loading ES Module C:\Program Files\nodejs\node_modules\npm\node_modules\supports-col
or\index.js using require().
Support for loading ES Module in require() is an experimental feature and might change at any time
(Use `node --trace-warnings ...` to show where the warning was created)
```

File Structure



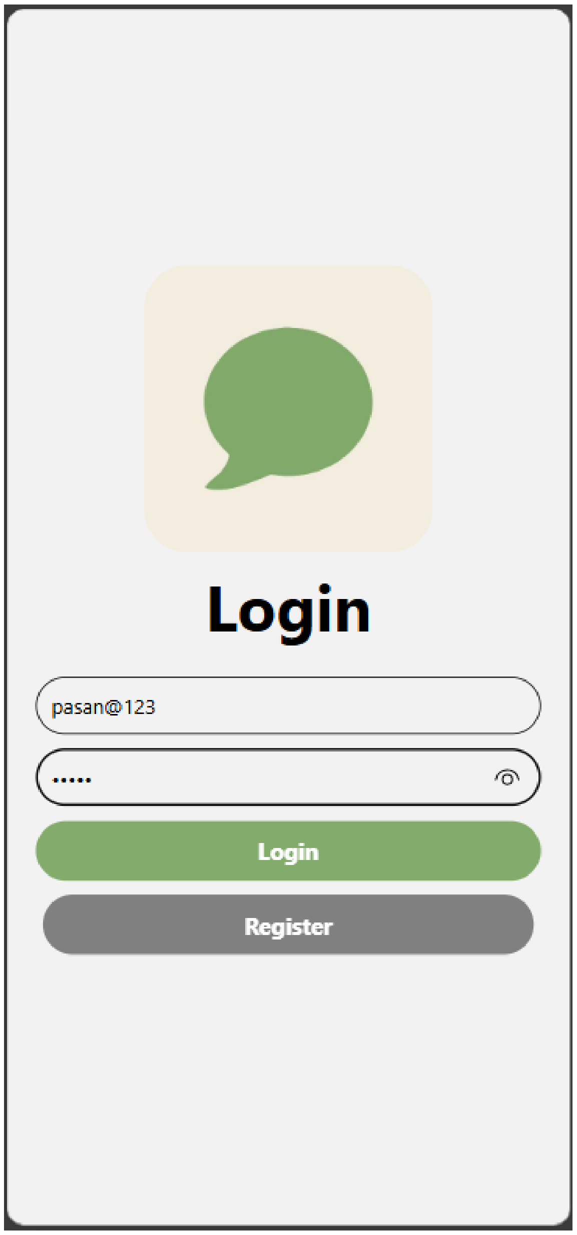
```
TUTORIAL6
  > .expo
  v app
    > components
    > context
    > core
    > helpers
    > screens
    JS index.js
  > assets
  > constants
  > hooks
  > node_modules
  > note_app
  > scripts
  .gitignore
  app.json
  expo-env.d.ts
  package-lock.json
  package.json
  README.md
  tsconfig.json
```

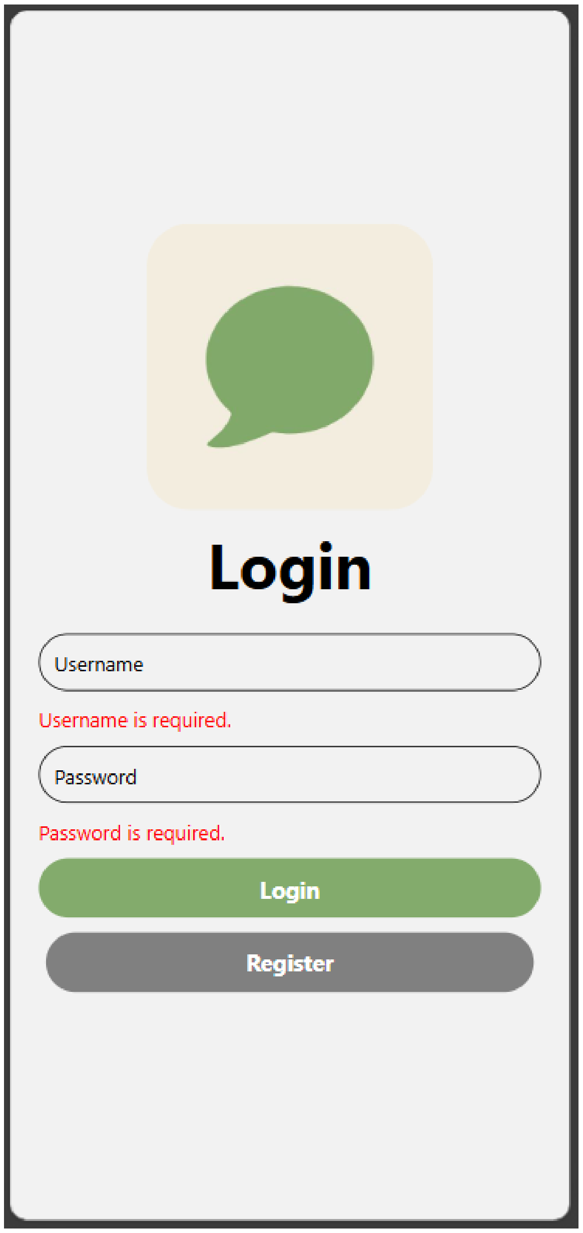
```
# Welcome to Add_Note 👋

This is a simple note application to store notes using React Native and Expo

```

```
C:\Users\pasan\Documents\4.2\Practical\4242(P)\Mobile-Application-Development-Tutorials\Tutorial6>
```

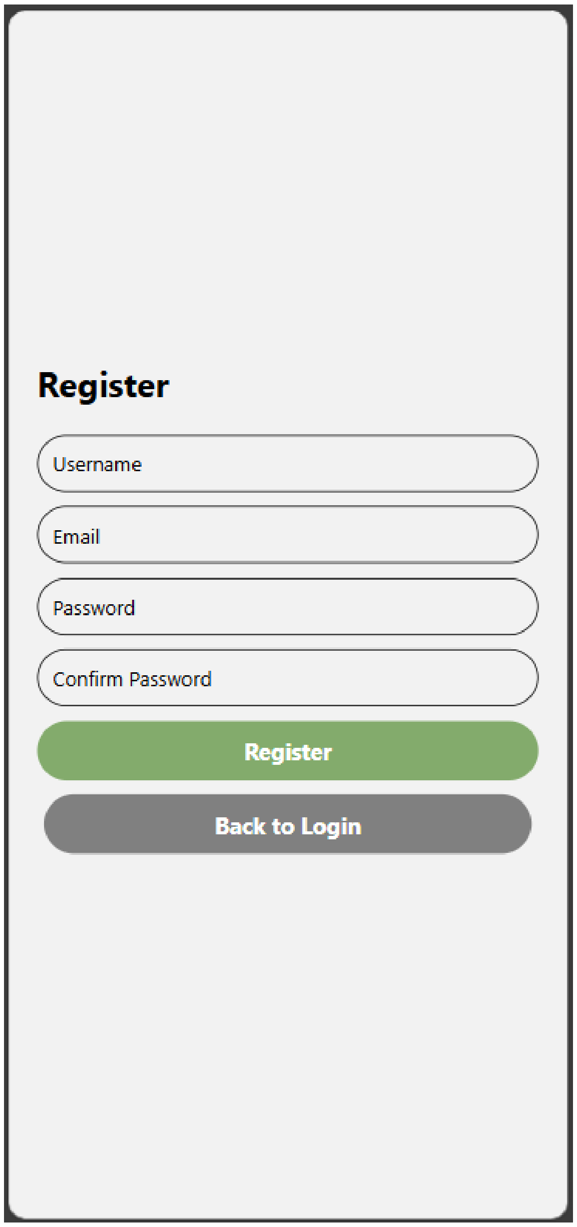
Application Screenshots

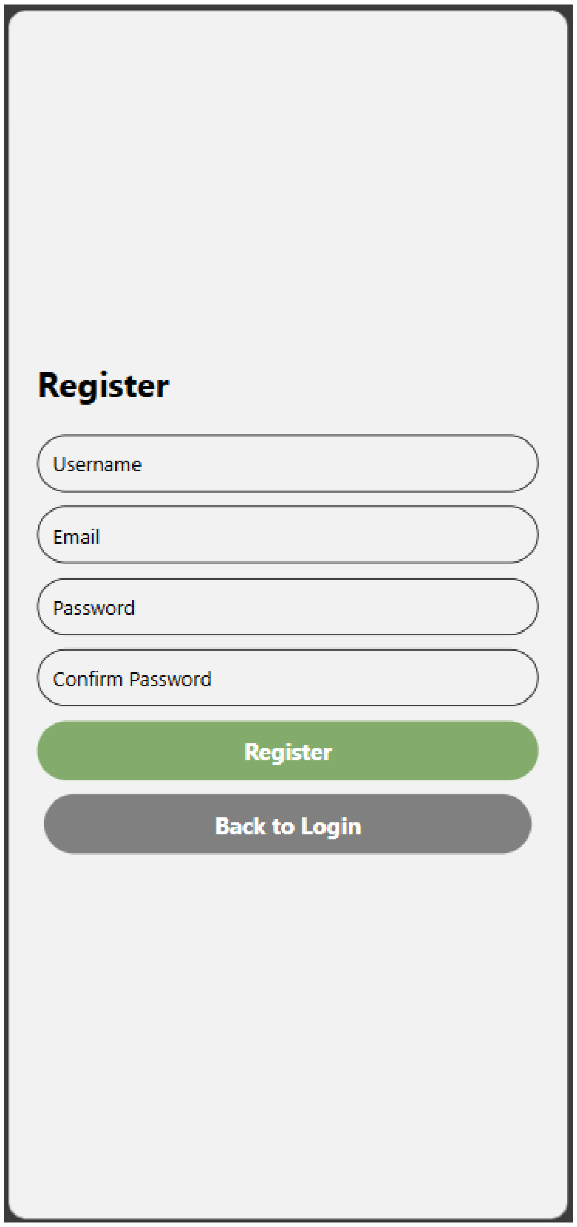
Login Page



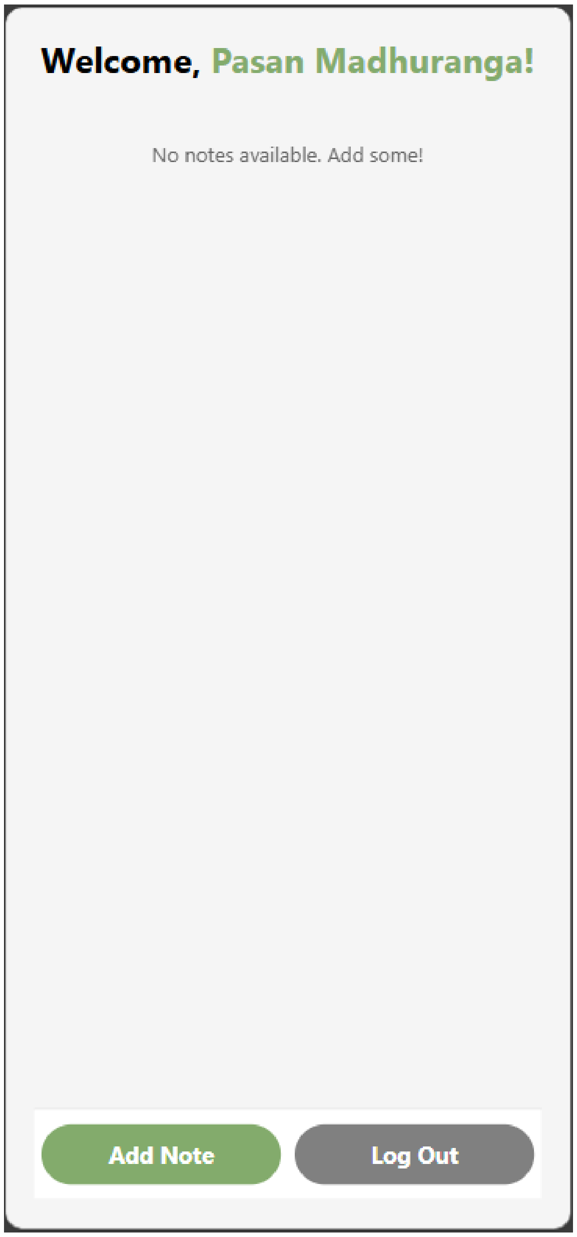


Registration Page

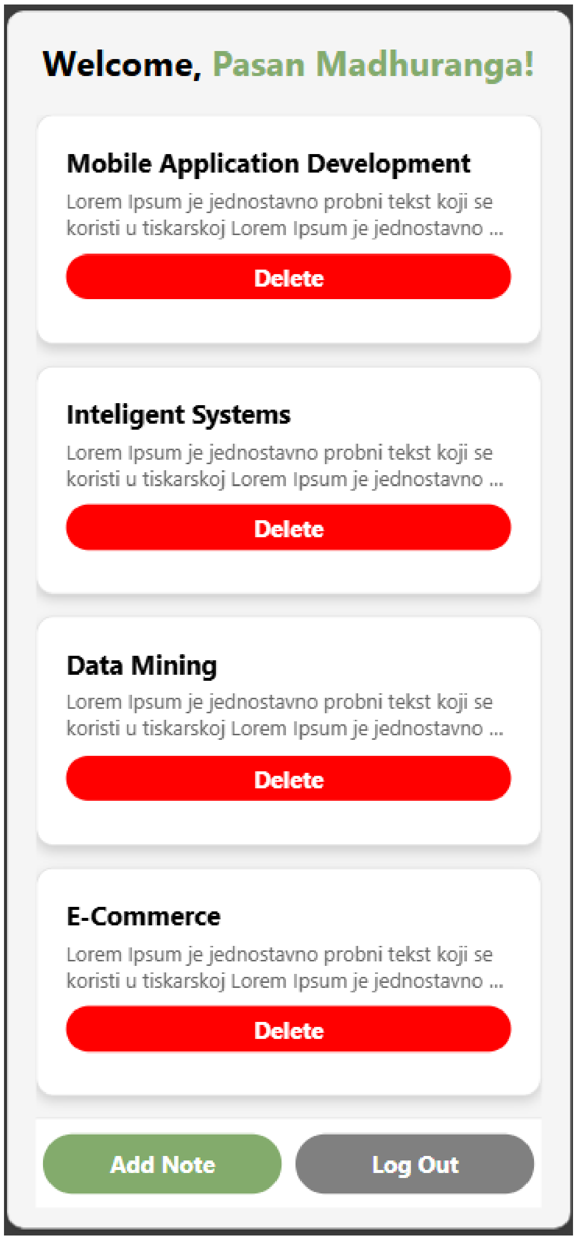




Home Page


Welcome, Pasan Madhuranga!

No notes available. Add some!


Welcome, Pasan Madhuranga!

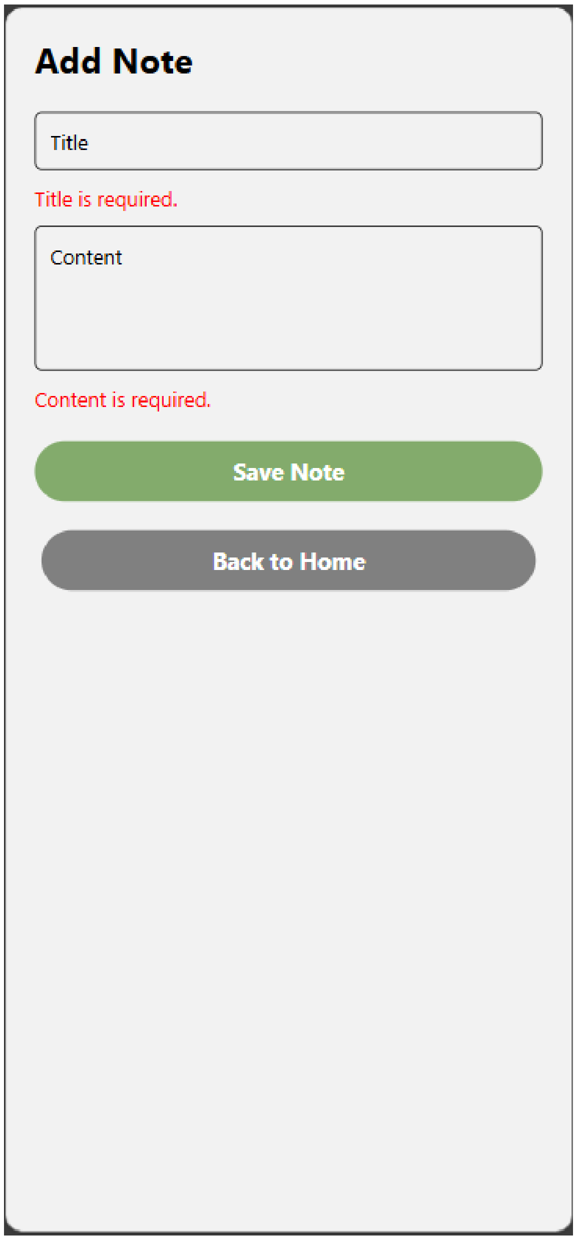
Mobile Application Development
Lorem Ipsum je jednostavno probni tekst koji se koristi u tiskarskoj Lorem Ipsum je jednostavno ...

Inteligent Systems
Lorem Ipsum je jednostavno probni tekst koji se koristi u tiskarskoj Lorem Ipsum je jednostavno ...

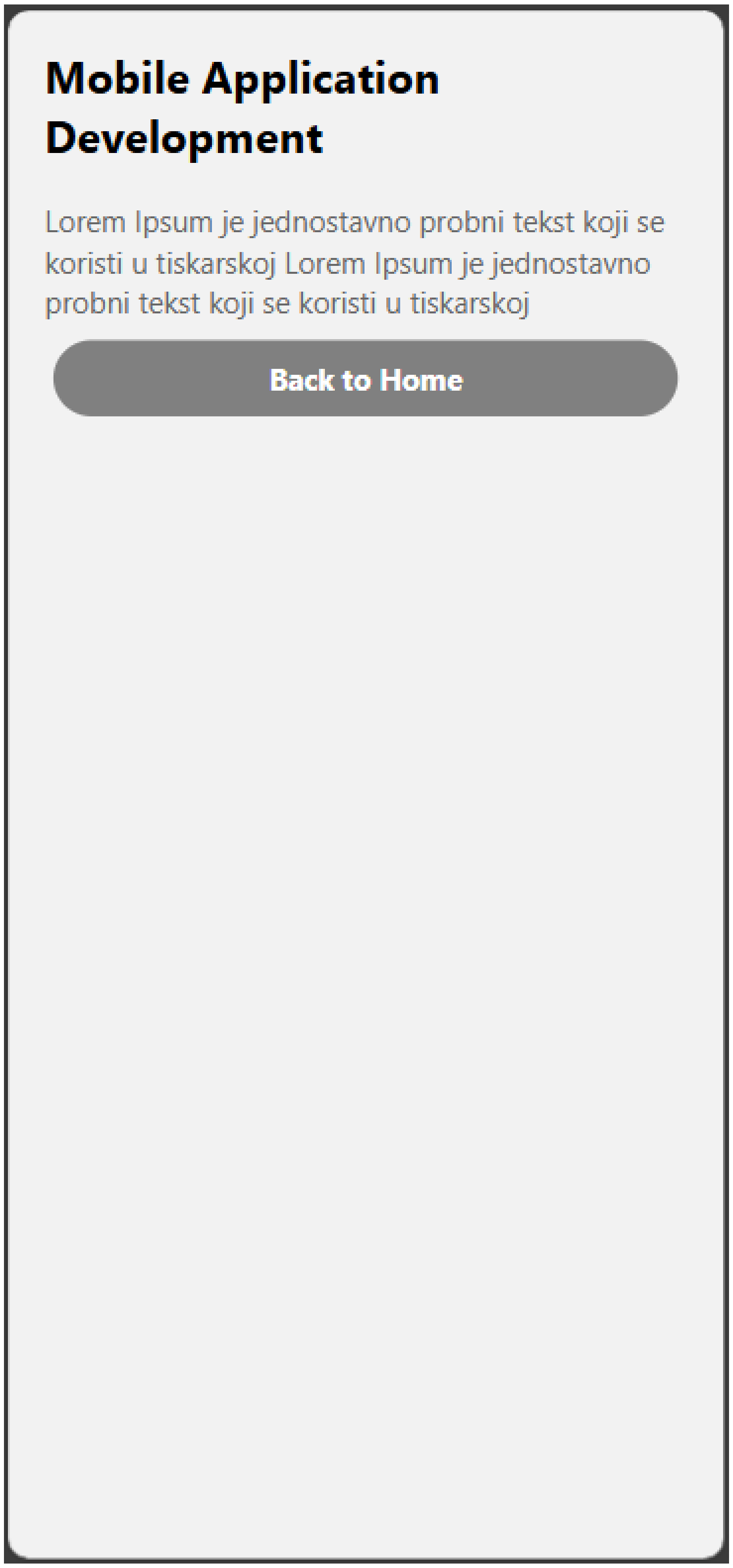
Data Mining
Lorem Ipsum je jednostavno probni tekst koji se koristi u tiskarskoj Lorem Ipsum je jednostavno ...

E-Commerce
Lorem Ipsum je jednostavno probni tekst koji se koristi u tiskarskoj Lorem Ipsum je jednostavno ...

Add Note Page



View Note Page


Mobile Application Development

Lorem Ipsum je jednostavno probni tekst koji se koristi u tiskarskoj Lorem Ipsum je jednostavno probni tekst koji se koristi u tiskarskoj

Code Sections

Context API Implementation - Context API is used to manage application state for users and notes.

```
import React, { createContext, useState, useContext } from "react";

const AppContext = createContext();

export const AppProvider = ({ children }) => {
  const [users, setUsers] = useState([
    { username: "pasan@123", email: "john@example.com", password: "12345",
name : "Pasan Madhuranga" },
  ]);
  const [user, setUser] = useState(null);
  const [notes, setNotes] = useState([]);
  const login = (username, password) => {
  const existingUser = users.find((u) => u.username === username &&
u.password === password);
    if (existingUser) {
      setUser(existingUser);
      return true;
    }
    return false;
  };

  const register = (newUser) => {
    const exists = users.some((u) => u.username === newUser.username ||
u.email === newUser.email);
    if (!exists) {
      setUsers((prev) => [...prev, newUser]);
      return true;
    }
    return false;
  };

  const logout  = () => setUser(null)
  const addNote = (note) => {
    setNotes((prevNotes) => [...prevNotes, note]);
  };
  const removeNote = (noteId) => {
    setNotes((prevNotes) => prevNotes.filter((note) => note.id !== noteId));
  };
  return (
    <AppContext.Provider
    value={{
        user,
        login,
        logout,
        register,
        addNote,
        removeNote,
        notes,
        setUser,
        }}>
      {children}
    </AppContext.Provider>
  );
};

export const useAppContext = () => useContext(AppContext);
```

Form Validation Techniques - form validation ensures input integrity.

```
export const validateLogin = ({ username, password }) => {
    const errors = {};
    if (!username.trim()) errors.username = "Username is required.";
    if (!password.trim()) errors.password = "Password is required.";
    return errors;
  };

export const validateRegister = ({ username, email, password, confirmPassword })
=> {
    const errors = {};
    if (!username.trim()) errors.username = "Username is required.";
    if (!email.trim() || !email.includes("@")) errors.email = "Valid email is
required.";
    if (!password.trim()) errors.password = "Password is required.";
    if (password !== confirmPassword) errors.confirmPassword = "Passwords must
match.";
    return errors;
  };

export const validateNote = ({ title, content }) => {
    const errors = {};
    if (!title.trim()) errors.title = "Title is required.";
    if (!content.trim()) errors.content = "Content is required.";
    return errors;
  };
```

Note Management

Add Note

```
import React, { useState } from "react";
import { View, Text, TextInput, Button, StyleSheet, TouchableOpacity } from
"react-native";
import { useAppContext } from "../context/AppContext";
import { validateNote } from "../helpers/validation";

export default function AddNoteScreen({ navigation }) {
  const { addNote } = useAppContext() || {};
  if (!addNote) {
    console.log("addNote function is not available");
  }

  console.log("addNote:", addNote);
  const [form, setForm] = useState({ title: "", content: "" });
  const [errors, setErrors] = useState({});

  const handleSubmit = () => {
    const validationErrors = validateNote(form);
    if (Object.keys(validationErrors).length > 0) {
      setErrors(validationErrors);
      return;
    }

    addNote({
      id: Date.now(),
      ...form,
    });
    navigation.goBack();
  };

  return (
    <View style={styles.container}>
      <Text style={styles.title}>Add Note</Text>
      <TextInput
```

```
        style={styles.input}
        placeholder="Title"
        value={form.title}
        onChangeText={(text) => setForm({ ...form, title: text })}
      />
      {errors.title && <Text style={styles.error}>{errors.title}</Text>}

      <TextInput
        style={[styles.input, styles.textArea]}
        placeholder="Content"
        value={form.content}
        multiline
        numberOfLines={5}
        onChangeText={(text) => setForm({ ...form, content: text })}
      />
      {errors.content && <Text style={styles.error}>{errors.content}</Text>}

      <View style={styles.btnwrap}>
        <TouchableOpacity
          style={styles.customButton1}
          onPress={handleSubmit}
        >
          <Text style={styles.buttonText}>Save Note</Text>
        </TouchableOpacity>
      </View>

      <View style={styles.btnwrap}>
        <TouchableOpacity
          style={styles.customButton2}
          onPress={() => navigation.navigate("HomeScreen")}
        >
          <Text style={styles.buttonText}>Back to Home</Text>
        </TouchableOpacity>
      </View>
    </View>
  );
}

const styles = StyleSheet.create({
  container: { flex: 1, padding: 20 },
  title: { fontSize: 24, fontWeight: "bold", marginBottom: 20 },
  input: { borderWidth: 1, padding: 10, marginBottom: 10, borderRadius: 5 },
  textArea: { height: 100, textAlignVertical: "top" },
  error: { color: "red", marginBottom: 10 },
  btnwrap: {marginBottom: 10,marginTop: 10,},
  buttonText: {
    color: "white",
    fontSize: 16,
    fontWeight: "bold",
  },
  customButton1: {
    backgroundColor: "#83ab6c",
    paddingVertical: 10,
    paddingHorizontal: 20,
    borderRadius: 30,
    alignItems: "center",
  },
  customButton2: {
    backgroundColor: "gray",
    paddingVertical: 10,
    paddingHorizontal: 20,
    borderRadius: 30,
    alignItems: "center",
    flex: 1,
    marginHorizontal: 5,
  },
});
```

View Note

```
import React from "react";
import { View, Text, StyleSheet, TouchableOpacity } from "react-native";

export default function ViewNoteScreen({ route, navigation }) {
  const { note } = route.params;

  if (!note) {
    return (
      <View style={styles.container}>
        <Text>No note found.</Text>
      </View>
    );
  }

  return (
    <View style={styles.container}>
      <Text style={styles.title}>{note.title}</Text>
      <Text style={styles.content}>{note.content}</Text>
      <View style={styles.btnwrap}>
        <TouchableOpacity
          style={styles.customButton2}
          onPress={() => navigation.navigate("HomeScreen")}
        >
          <Text style={styles.buttonText}>Back to Home</Text>
        </TouchableOpacity>
      </View>
    </View>
  );
}

const styles = StyleSheet.create({
  container: { flex: 1, padding: 20 },
  title: { fontSize: 24, fontWeight: "bold", marginBottom: 20 },
  content: { fontSize: 16, color: "#666", lineHeight: 22 },
  btnwrap: {marginTop: 10},
  customButton2: {
    backgroundColor: "gray",
    paddingVertical: 10,
    paddingHorizontal: 20,
    borderRadius: 30,
    alignItems: "center",
    flex: 1,
    marginHorizontal: 5,
  },
  buttonText: {
    color: "white",
    fontSize: 16,
    fontWeight: "bold",
  },
});
```

Navigation

```
export { default as HomeScreen} from './HomeScreen'
export { default as AddNoteScreen} from './AddNoteScreen'
export { default as LoginScreen} from './LoginScreen'
export { default as RegisterScreen} from './RegisterScreen'
export { default as ViewNoteScreen} from './ViewNoteScreen'
import React from "react";
import { Provider } from "react-native-paper";
import { NavigationContainer } from "@react-navigation/native";
import { createStackNavigator } from "@react-navigation/stack";
import { theme } from "./core/theme";
import { AppProvider } from "./context/AppContext";
import { LoginScreen, AddNoteScreen,HomeScreen ,RegisterScreen,ViewNoteScreen}
from "./screens";

const Stack = createStackNavigator();

export default function App() {
  return (
    <AppProvider>
      <Provider theme={theme}>
        <Stack.Navigator
          initialRouteName="LoginScreen"
          options={{ headerShown: false}}


        >
        <Stack.Screen name="LoginScreen" component={LoginScreen} options={{
headerShown: false }}/>
        <Stack.Screen name="AddNoteScreen" component={AddNoteScreen} options={{
headerShown: false }}/>
        <Stack.Screen name="HomeScreen" component={HomeScreen} options={{
headerShown: false }}/>
        <Stack.Screen name="RegisterScreen" component={RegisterScreen} options={{
headerShown: false }}/>
        <Stack.Screen name="ViewNoteScreen" component={ViewNoteScreen} options={{
headerShown: false }}/>
      </Stack.Navigator>
      </Provider>
    </AppProvider>
  );
}
```

Features

- Navigation
- Form Validation
- Context API
- Array-based Data Management

Application Screens

- **Login Page -** Include validation errors and successful login behavior.
- **Registration Page -** Include validation errors and successful registration behavior.
- **Home Page -** Include notes list, add note button, and logout option.
- **Add Note Page -** Include form validation and note-saving behavior.
- **View Note Page -** Include full content of a selected note.

References

Color Palette from Image - ColorKitcolorkit.co

Pinterestin.pinterest.com

Stack Overflowstackoverflow.com

Mediummattclaffey.medium.com

https://legacy.reactjs.org/docs/context.html