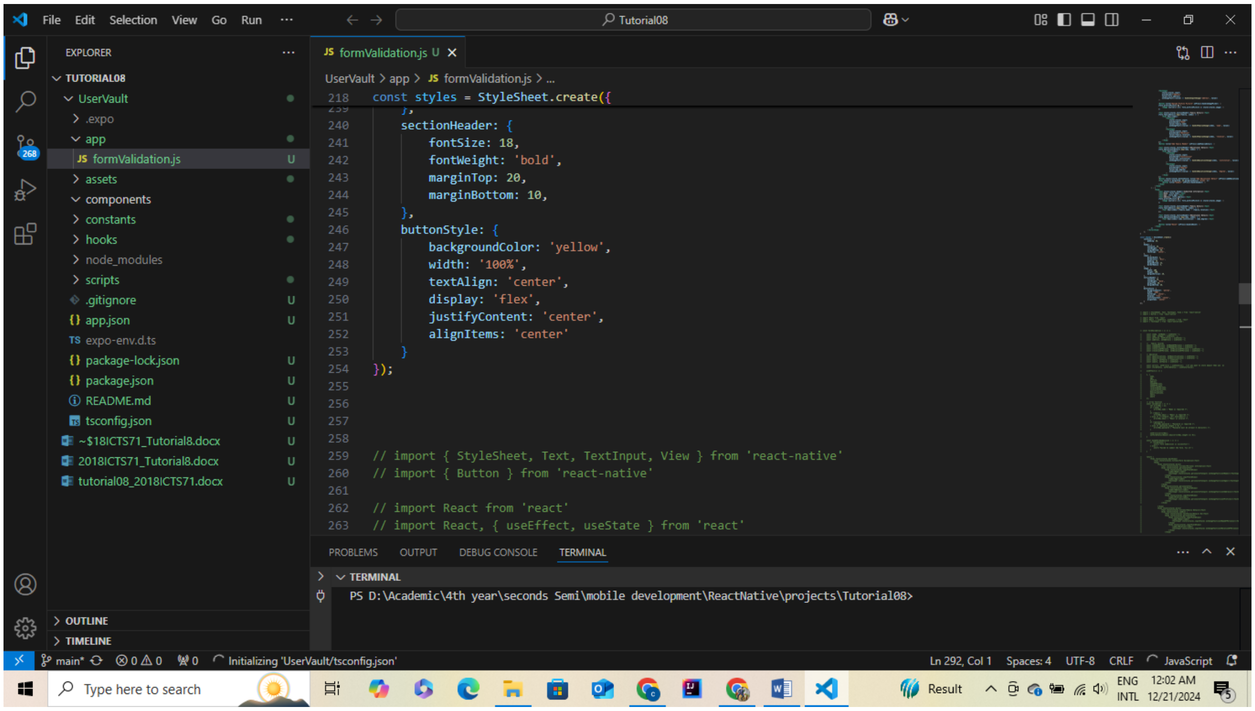
Code Explanation

The provided code is a simple React Native application that form validation of input values. It consists of a functional component called FormValidation, which manages user inputs and validate and handles input validation to ensure that the fields are not empty and satisfy the requirement.

1. Functional Components

In React, a functional component is a JavaScript function that returns a React element. It can accept props as an argument and use hooks for state management. In this project, FormValidation is a functional component.

Step1

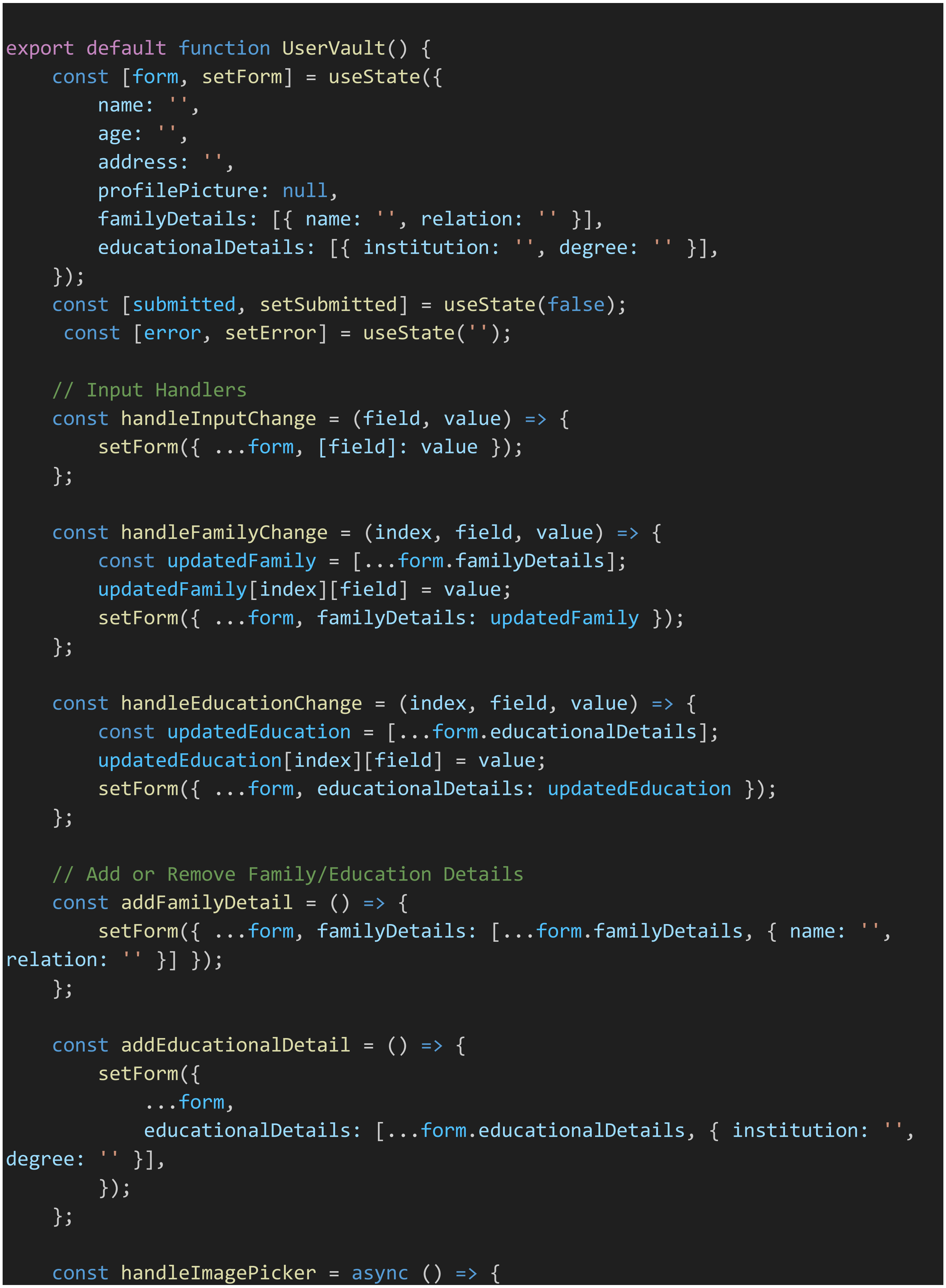


```
const styles = StyleSheet.create({
    },
    sectionHeader: {
        fontSize: 18,
        fontWeight: 'bold',
        marginTop: 20,
        marginBottom: 10,
    },
    buttonStyle: {
        backgroundColor: 'yellow',
        width: '100%',
        textAlign: 'center',
        display: 'flex',
        justifyContent: 'center',
        alignItems: 'center'
    }
});




// import { StyleSheet, Text, TextInput, View } from 'react-native'
// import { Button } from 'react-native'

// import React from 'react'
// import React, { useEffect, useState } from 'react'
```

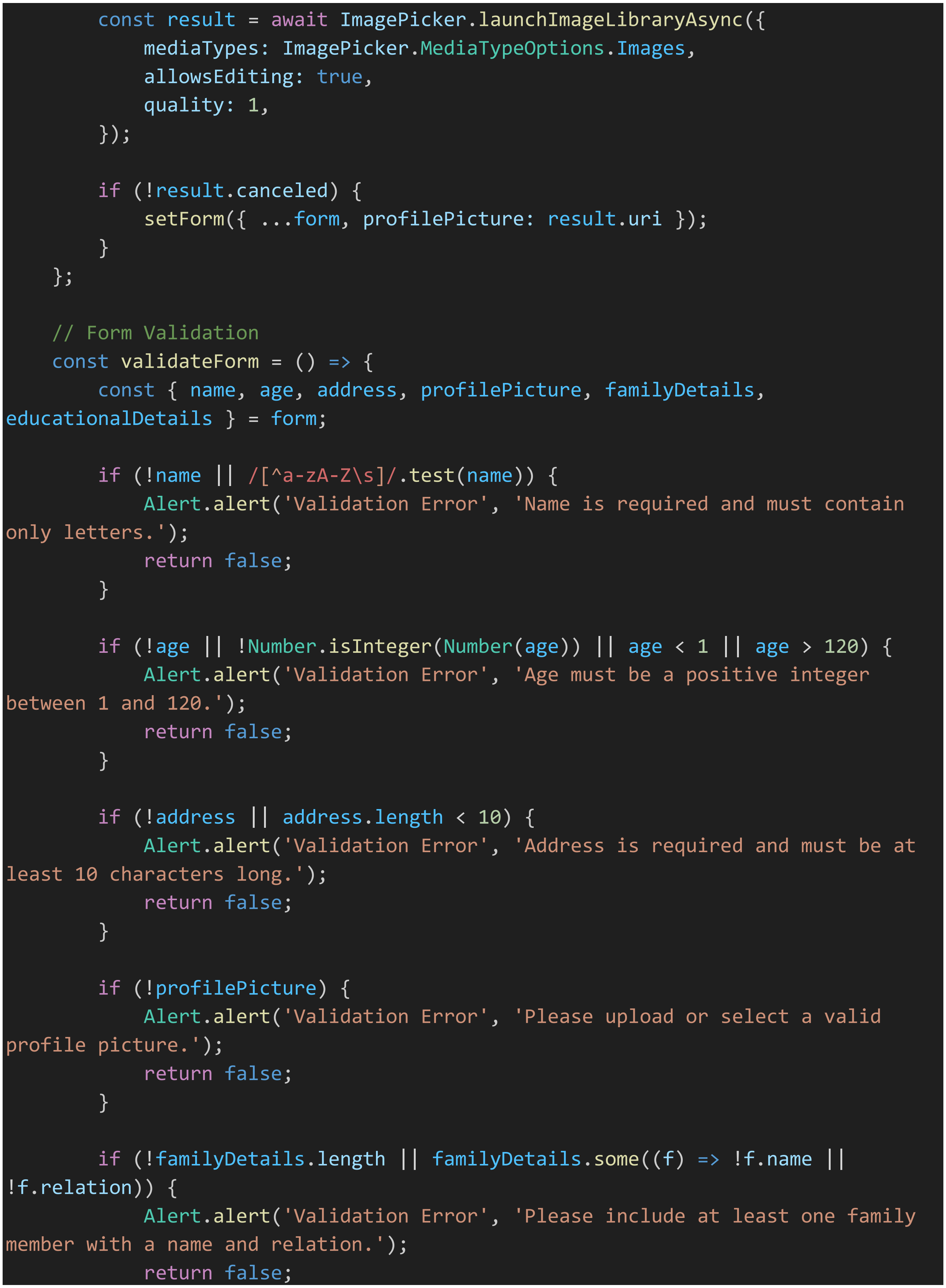
```
PS D:\Academic\4th year\seconds Semi\mobile development\ReactNative\projects\Tutorial08>
```

Coding

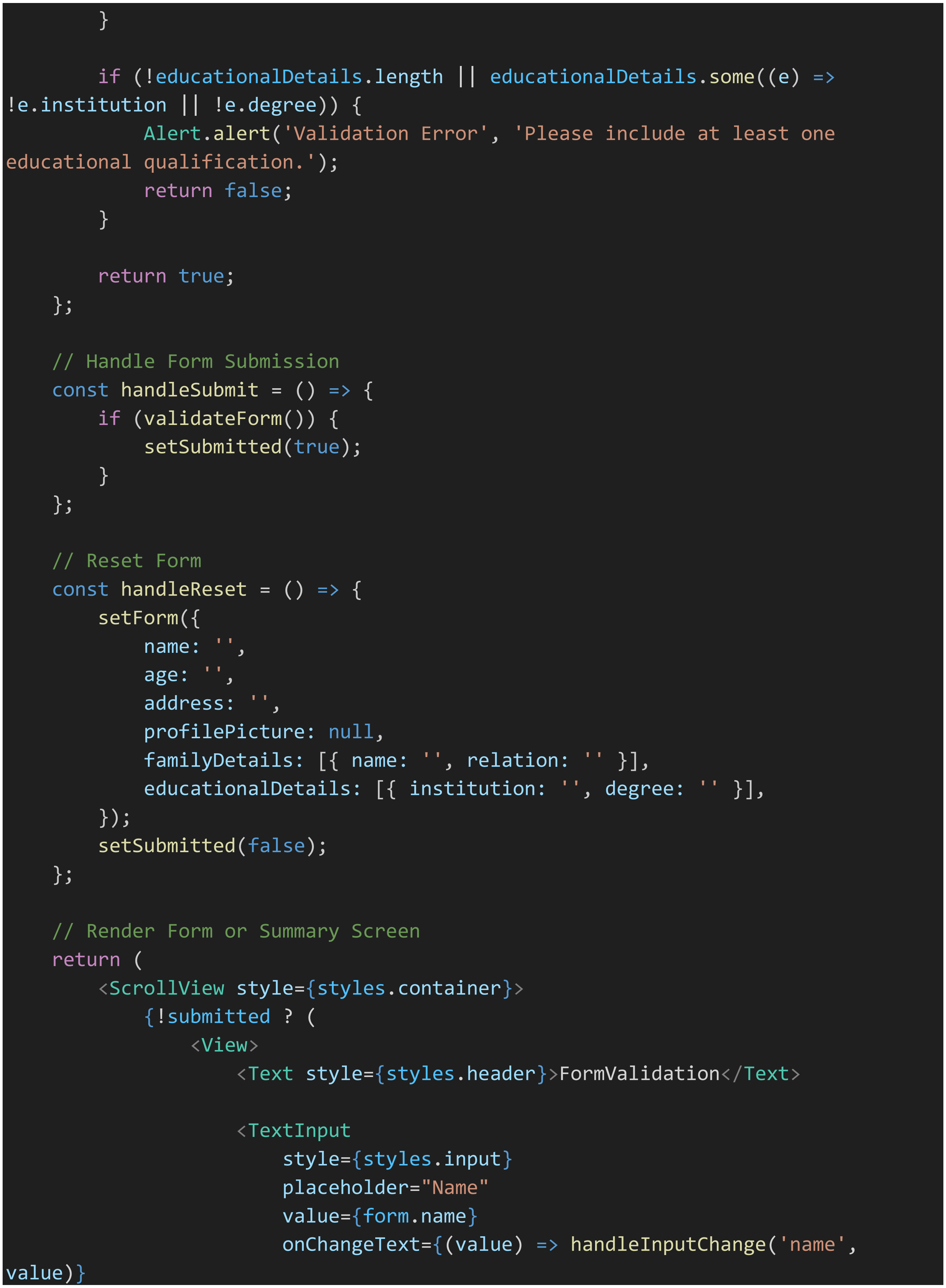
```
 // UserVault App Implementation

import React, { useState } from 'react';
import { View, Text, TextInput, Button, StyleSheet, Image, ScrollView, Alert }
from 'react-native';
import * as ImagePicker from 'expo-image-picker';
```



```
export default function UserVault() {
    const [form, setForm] = useState({
        name: '',
        age: '',
        address: '',
        profilePicture: null,
        familyDetails: [{ name: '', relation: '' }],
        educationalDetails: [{ institution: '', degree: '' }],
    });
    const [submitted, setSubmitted] = useState(false);
     const [error, setError] = useState('');

    // Input Handlers
    const handleInputChange = (field, value) => {
        setForm({ ...form, [field]: value });
    };

    const handleFamilyChange = (index, field, value) => {
        const updatedFamily = [...form.familyDetails];
        updatedFamily[index][field] = value;
        setForm({ ...form, familyDetails: updatedFamily });
    };

    const handleEducationChange = (index, field, value) => {
        const updatedEducation = [...form.educationalDetails];
        updatedEducation[index][field] = value;
        setForm({ ...form, educationalDetails: updatedEducation });
    };

    // Add or Remove Family/Education Details
    const addFamilyDetail = () => {
        setForm({ ...form, familyDetails: [...form.familyDetails, { name: '',
relation: '' }] });
    };

    const addEducationalDetail = () => {
        setForm({
            ...form,
            educationalDetails: [...form.educationalDetails, { institution: '',
degree: '' }],
        });
    };

    const handleImagePicker = async () => {
```

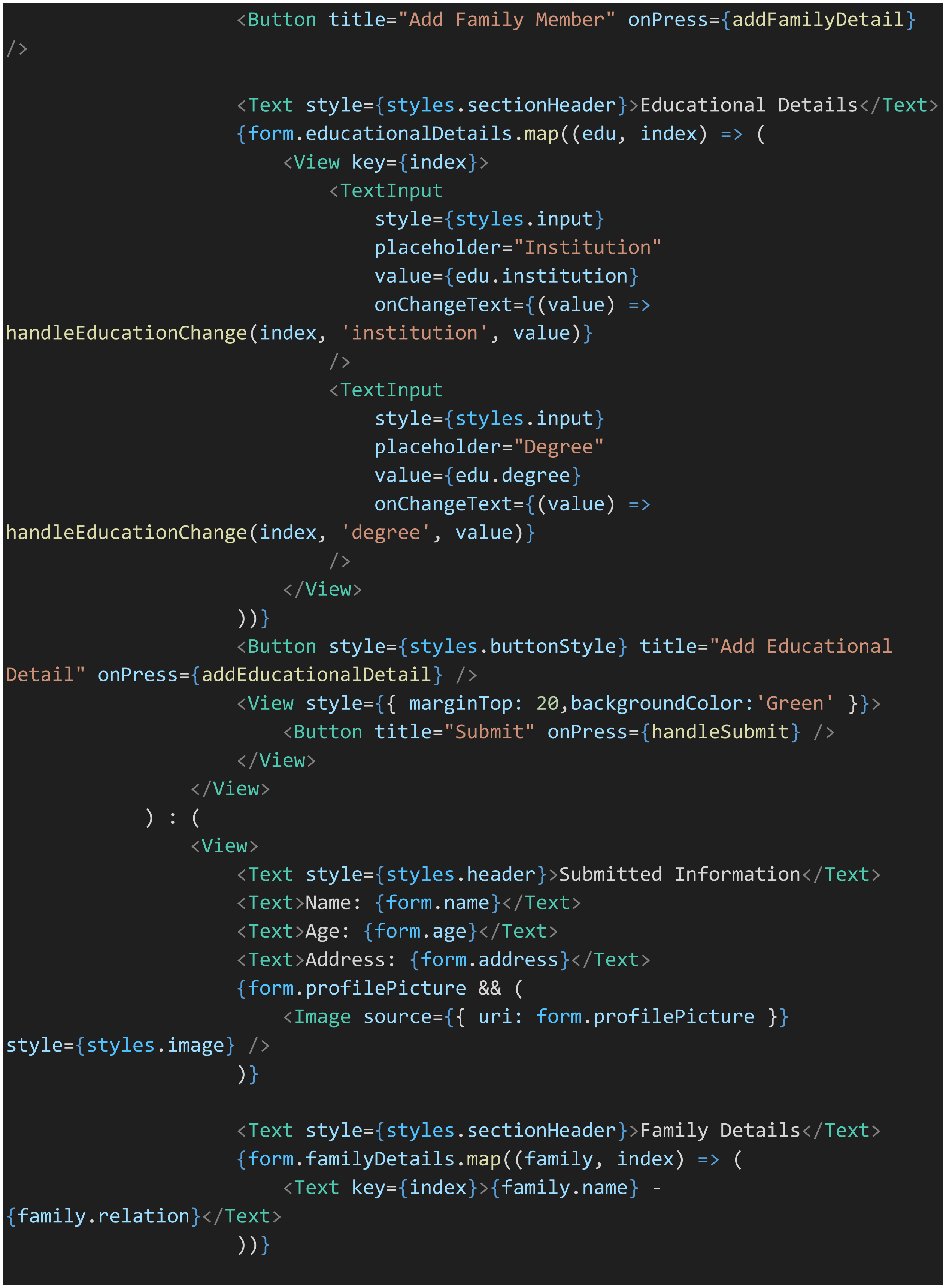


```
        const result = await ImagePicker.launchImageLibraryAsync({
            mediaTypes: ImagePicker.MediaTypeOptions.Images,
            allowsEditing: true,
            quality: 1,
        });

        if (!result.canceled) {
            setForm({ ...form, profilePicture: result.uri });
        }
    };

    // Form Validation
    const validateForm = () => {
        const { name, age, address, profilePicture, familyDetails,
educationalDetails } = form;

        if (!name || /[^a-zA-Z\s]/.test(name)) {
            Alert.alert('Validation Error', 'Name is required and must contain
only letters.');
            return false;
        }

        if (!age || !Number.isInteger(Number(age)) || age < 1 || age > 120) {
            Alert.alert('Validation Error', 'Age must be a positive integer
between 1 and 120.');
            return false;
        }

        if (!address || address.length < 10) {
            Alert.alert('Validation Error', 'Address is required and must be at
least 10 characters long.');
            return false;
        }

        if (!profilePicture) {
            Alert.alert('Validation Error', 'Please upload or select a valid
profile picture.');
            return false;
        }

        if (!familyDetails.length || familyDetails.some((f) => !f.name ||
!f.relation)) {
            Alert.alert('Validation Error', 'Please include at least one family
member with a name and relation.');
            return false;
```

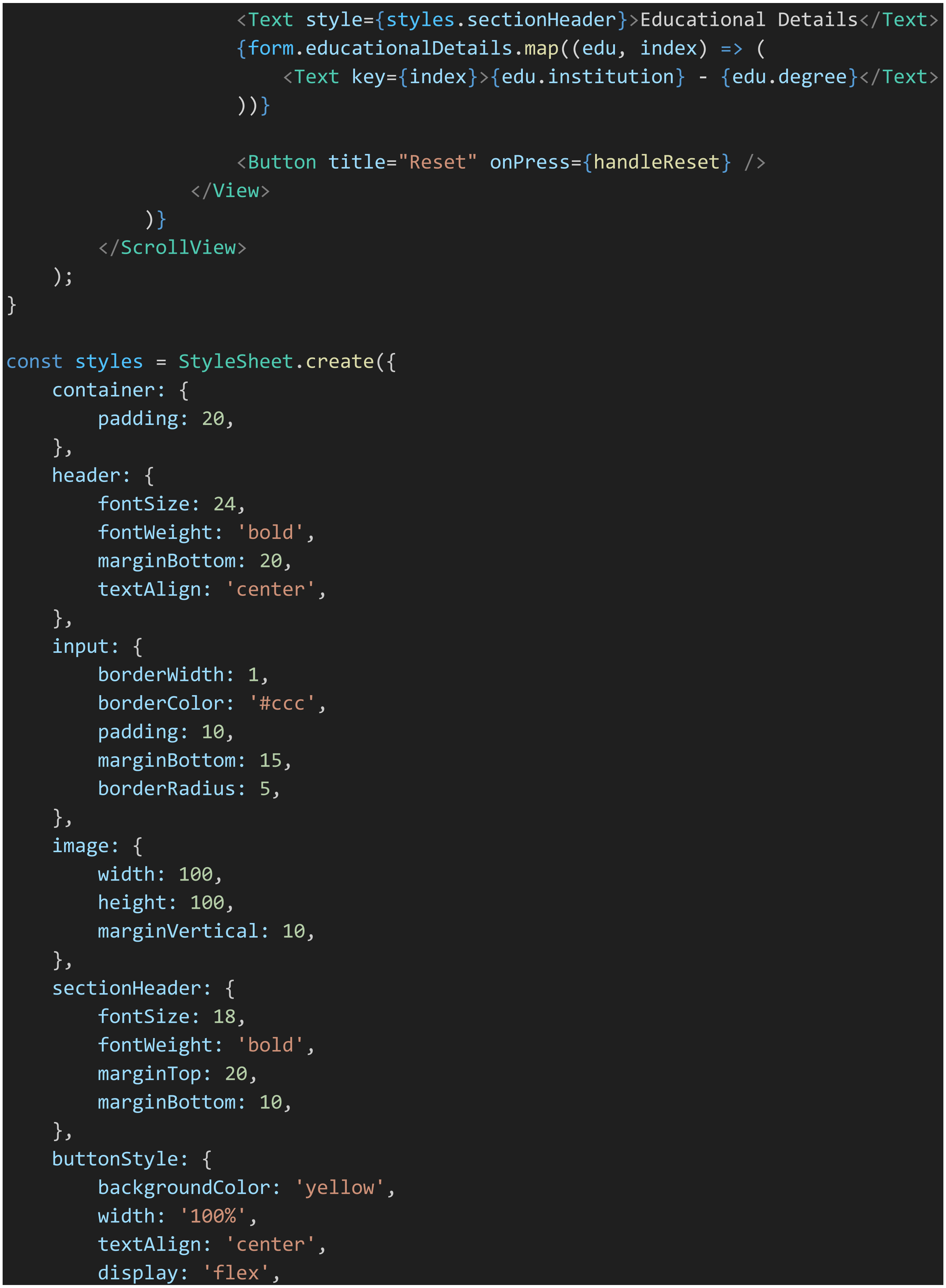


```
        }

        if (!educationalDetails.length || educationalDetails.some((e) =>
!e.institution || !e.degree)) {
            Alert.alert('Validation Error', 'Please include at least one
educational qualification.');
            return false;
        }

        return true;
    };

    // Handle Form Submission
    const handleSubmit = () => {
        if (validateForm()) {
            setSubmitted(true);
        }
    };

    // Reset Form
    const handleReset = () => {
        setForm({
            name: '',
            age: '',
            address: '',
            profilePicture: null,
            familyDetails: [{ name: '', relation: '' }],
            educationalDetails: [{ institution: '', degree: '' }],
        });
        setSubmitted(false);
    };

    // Render Form or Summary Screen
    return (
        <ScrollView style={styles.container}>
            {!submitted ? (
                <View>
                    <Text style={styles.header}>FormValidation</Text>

                    <TextInput
                        style={styles.input}
                        placeholder="Name"
                        value={form.name}
                        onChangeText={(value) => handleInputChange('name',
value)}
```

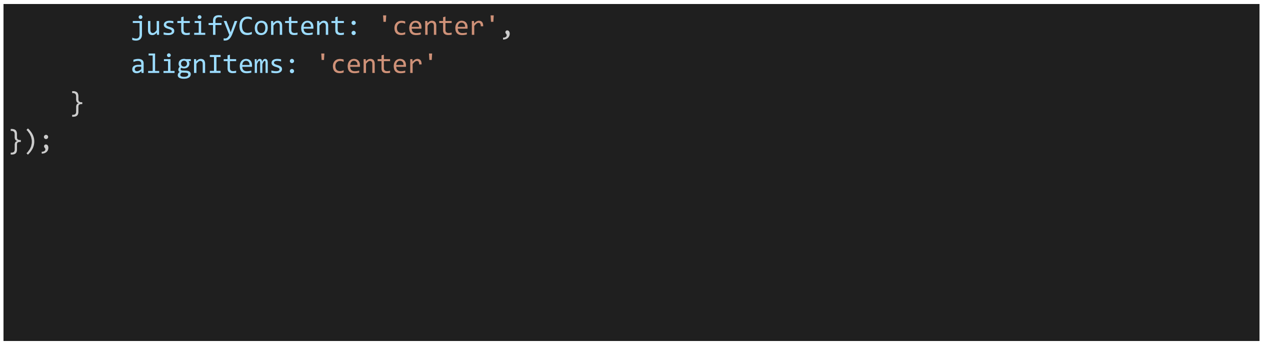
```
                    />

                    <TextInput
                        style={styles.input}
                        placeholder="Age"
                        keyboardType="numeric"
                        value={form.age}
                        onChangeText={(value) => handleInputChange('age', value)}
                    />

                    <TextInput
                        style={styles.input}
                        placeholder="Address"
                        value={form.address}
                        onChangeText={(value) => handleInputChange('address',
value)}
                    />

                    <Button title="Upload Profile Picture"
onPress={handleImagePicker} />
                    {form.profilePicture && (
                        <Image source={{ uri: form.profilePicture }}
style={styles.image} />
                    )}

                    <Text style={styles.sectionHeader}>Family Details</Text>
                    {form.familyDetails.map((family, index) => (
                        <View key={index}>
                            <TextInput
                                style={styles.input}
                                placeholder="Name"
                                value={family.name}
                                onChangeText={(value) =>
handleFamilyChange(index, 'name', value)}
                            />
                            <TextInput
                                style={styles.input}
                                placeholder="Relation"
                                value={family.relation}
                                onChangeText={(value) =>
handleFamilyChange(index, 'relation', value)}
                            />
                        </View>
                    ))}
```



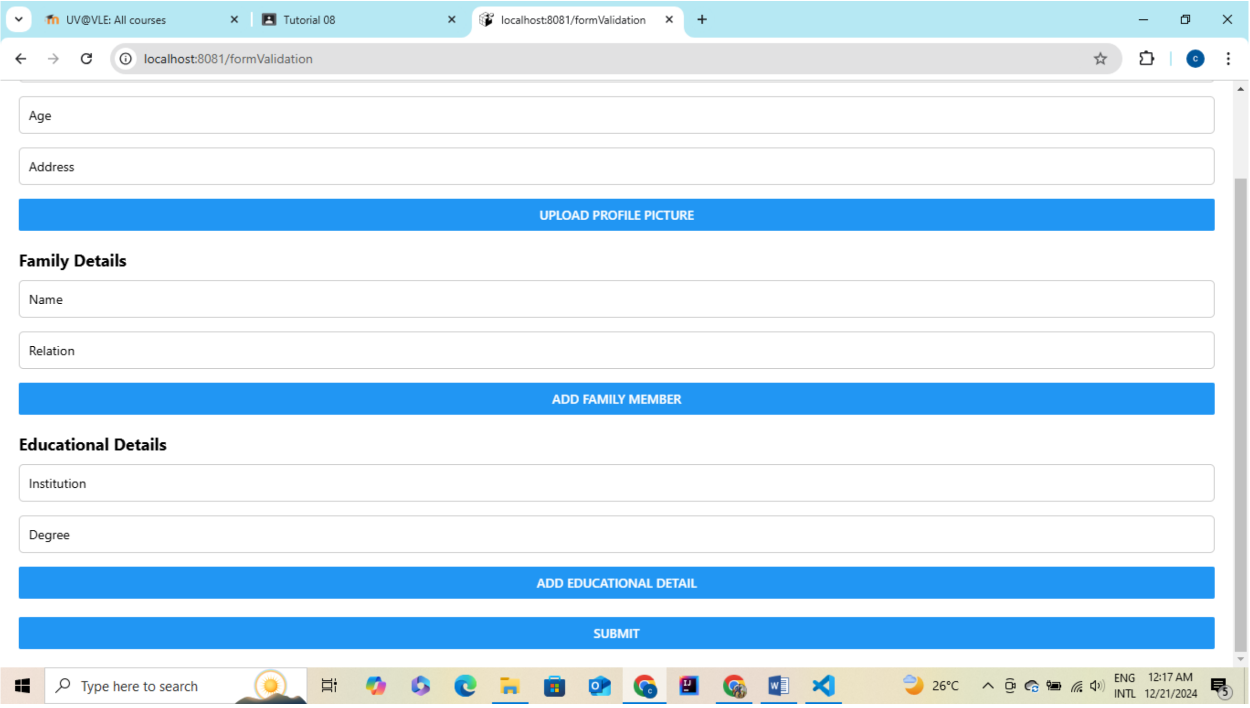
```
                    <Button title="Add Family Member" onPress={addFamilyDetail}
/>

                    <Text style={styles.sectionHeader}>Educational Details</Text>
                    {form.educationalDetails.map((edu, index) => (
                        <View key={index}>
                            <TextInput
                                style={styles.input}
                                placeholder="Institution"
                                value={edu.institution}
                                onChangeText={(value) =>
handleEducationChange(index, 'institution', value)}
                            />
                            <TextInput
                                style={styles.input}
                                placeholder="Degree"
                                value={edu.degree}
                                onChangeText={(value) =>
handleEducationChange(index, 'degree', value)}
                            />
                        </View>
                    ))}
                    <Button style={styles.buttonStyle} title="Add Educational
Detail" onPress={addEducationalDetail} />
                    <View style={{ marginTop: 20,backgroundColor:'Green' }}>
                        <Button title="Submit" onPress={handleSubmit} />
                    </View>
                </View>
            ) : (
                <View>
                    <Text style={styles.header}>Submitted Information</Text>
                    <Text>Name: {form.name}</Text>
                    <Text>Age: {form.age}</Text>
                    <Text>Address: {form.address}</Text>
                    {form.profilePicture && (
                        <Image source={{ uri: form.profilePicture }}
style={styles.image} />
                    )}

                    <Text style={styles.sectionHeader}>Family Details</Text>
                    {form.familyDetails.map((family, index) => (
                        <Text key={index}>{family.name} -
{family.relation}</Text>
                    ))}
```

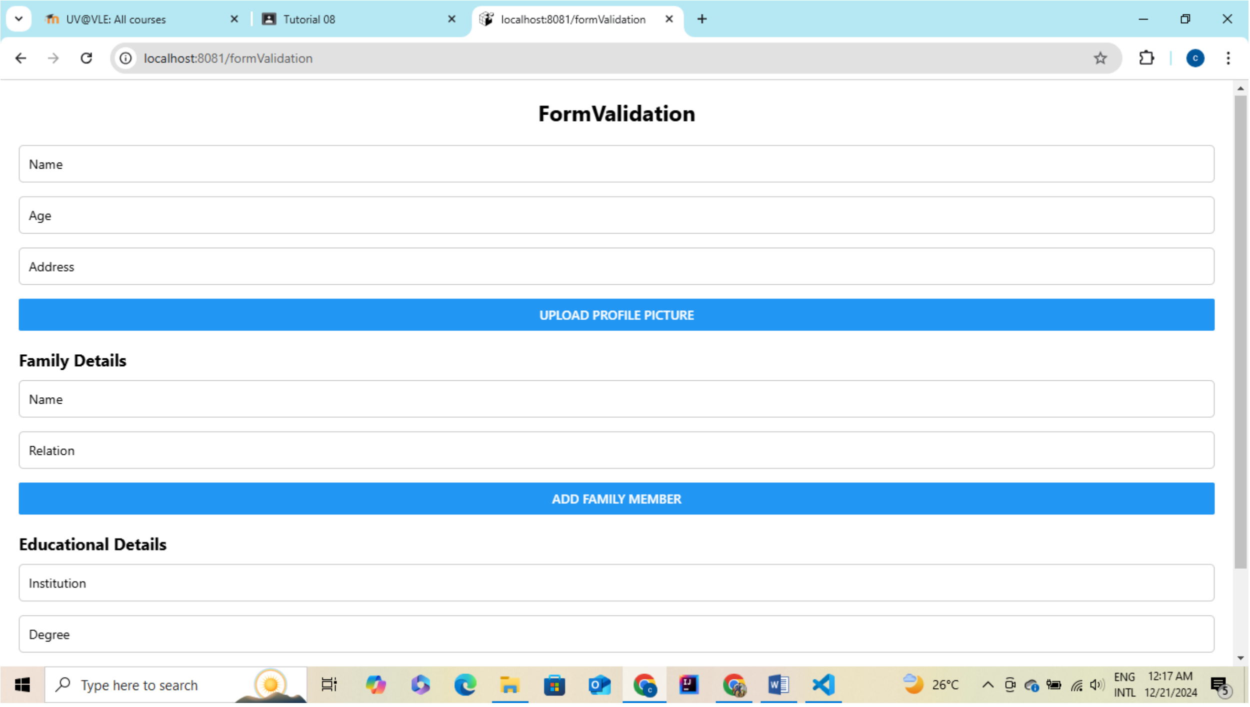


```
                    <Text style={styles.sectionHeader}>Educational Details</Text>
                    {form.educationalDetails.map((edu, index) => (
                        <Text key={index}>{edu.institution} - {edu.degree}</Text>
                    ))}

                    <Button title="Reset" onPress={handleReset} />
                </View>
            )}
        </ScrollView>
    );
}

const styles = StyleSheet.create({
    container: {
        padding: 20,
    },
    header: {
        fontSize: 24,
        fontWeight: 'bold',
        marginBottom: 20,
        textAlign: 'center',
    },
    input: {
        borderWidth: 1,
        borderColor: '#ccc',
        padding: 10,
        marginBottom: 15,
        borderRadius: 5,
    },
    image: {
        width: 100,
        height: 100,
        marginVertical: 10,
    },
    sectionHeader: {
        fontSize: 18,
        fontWeight: 'bold',
        marginTop: 20,
        marginBottom: 10,
    },
    buttonStyle: {
        backgroundColor: 'yellow',
        width: '100%',
        textAlign: 'center',
        display: 'flex',
```



```
        justifyContent: 'center',
        alignItems: 'center'
    }
});
```





FormValidation

Name

Age

Address

Family Details

Name

Relation

Educational Details

Institution

Degree