



DEPARTMENT:

Computer Science

FACULTY SPONSOR:

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PROJECT TITLE:

Colorado Adventure Trail

Colorado Adventure Trail

By Aaron Gossage, Brandon
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Domonic Tafoya

The Problem

- Western Colorado economy
 - Tourism
 - Jobs
- Lesser known towns
 - Ridgeway, Silverton, Norwood, etc...

Requirements

Client requested a mobile application that contains a:

1. Travel guide to explore Western Colorado
 - Restaurants
 - Trails
 - Lodging
2. Passport system
 - Asserts the user's location and allows them to check in
3. Measure economic impact of CAT
 - Information retrieved upon check-in

Design

Software Stack

- Android Studio
- Flutter
 - Better for cross-platform
 - Faster
 - Allows access to various google services
- Firebase (Database), Google Maps

Testing

Unit testing

Sign in/ sign up pages

Check-in page

Test package

Widget testing

User Interface

Widgets are in every aspect of the app

Flutter_test package

Unit testing

```
import 'package:test/test.dart';

import
'package:coloroadventuretrail/SignIn/validator.dart';

void main() {

  test('Email entered is correct', () {

    FieldValidator.validateEmail('test@gmail.com');

    expect(result, null);

  });}
```

Widget Testing

```
import 'package:flutter/material.dart';

import 'package:coloradoadventuretrail/main.dart';

import 'package:flutter_test/flutter_test.dart';

void main(){

  testWidgets('Sign In widget test', (WidgetTester tester)
  async {

    await tester.pumpWidget(MyApp());

    var textField = find.byType(TextField);

    expect(textField, findsOneWidget);

  });

}
```


Interesting Code

```
Set<Marker> markers = new Set(); // create a class that  
extends markers
```

```
markers.add(Marker(  
  
    markerId: MarkerId("Fruita"),  
  
    position: LatLng(39.1589, -108.7290),  
  
    onTap: () {  
  
        Navigator.push(context,  
  
            MaterialPageRoute(builder: (context) =>  
                Fruita_Home()));  
  
    }));
```

More Interesting Code

```
Future<void> signIn() async{

    final formState = _formKey.currentState;

    if (formState.validate()) {

        formState.save();

        try{

            FirebaseUser user = (await
            FirebaseAuth.instance.signInWithEmailAndPassword(email:
            _email.trim(), password: _password)).user;

            Navigator.push(context,
            MaterialPageRoute(builder:(context) =>HomePage()));

        }catch(e){print(e.message);}}
```

Demo