

RomaniaTravel

Documentation

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Programming for Mobile Devices

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1. Abstract

This report includes an overview of the proposed mobile application, as well as a description of the application.

2. Goals and users

The goal of the application is to help people discover amazing places from Romania as well as providing information about that place, like restaurants, hotels to stay in, prices for the ski resorts. The users of this application will be the people that want to travel across Romania and need some information about the place where they are heading to.

3. Introduction

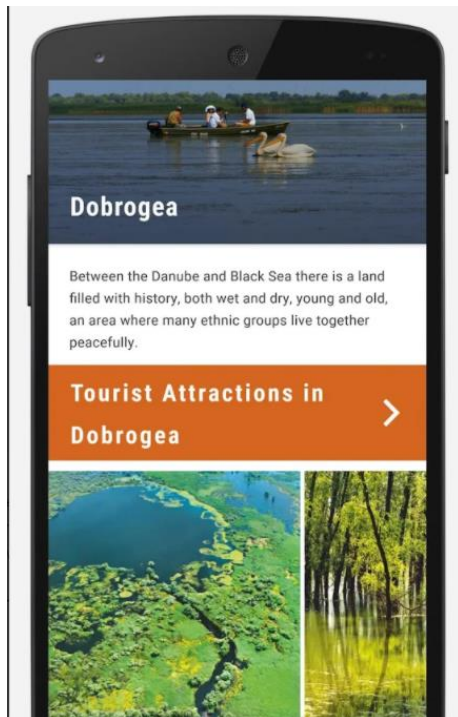
A lot of people would like to know the most about the place where they will be travelling to and this is the intent of my application.

4. State of art

Similar applications:

Explore Romania





Explore Romania allows the traveller to "discover the last wild corner of Europe... which gives you a sense of timelessness" (Prince Charles). It tells the story of a country which delivers a unique mix of Latin, Byzantine and Balkan cultures and traditions in the heart of Europe.

This applications sums up some of the destinations that tourists can discover in Romania.

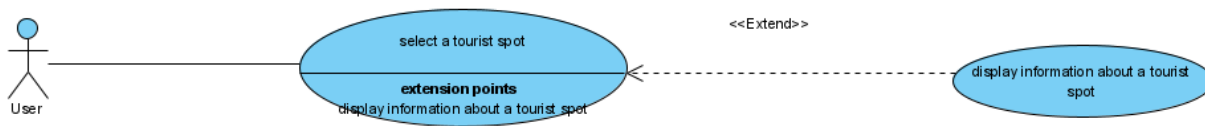
5. What is the original contribution of the author?

The original contribution is that I will include ski resorts, those cannot be found in the application mentioned above, as well as places to eat, to stay in, information about ski slopes, ticket prices.

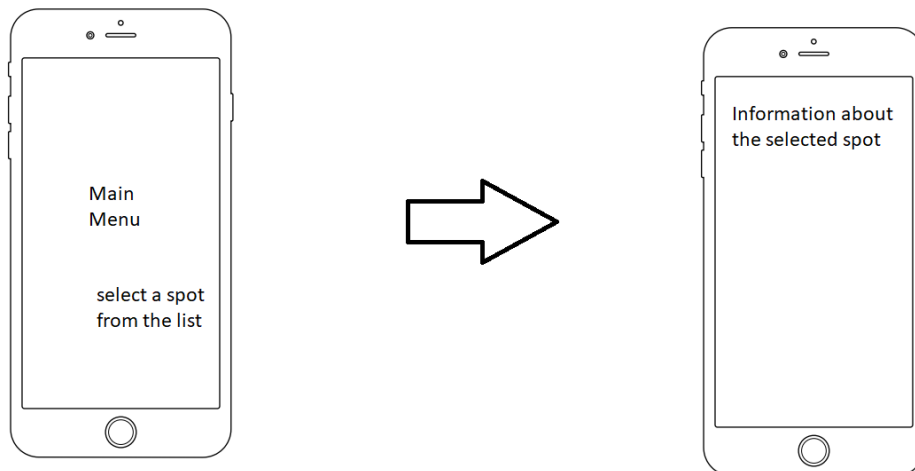
6. Development plan

I will develop the application using Android Studio IDE using Java as primary programming language.

I have the following features in mind represented by this diagram:

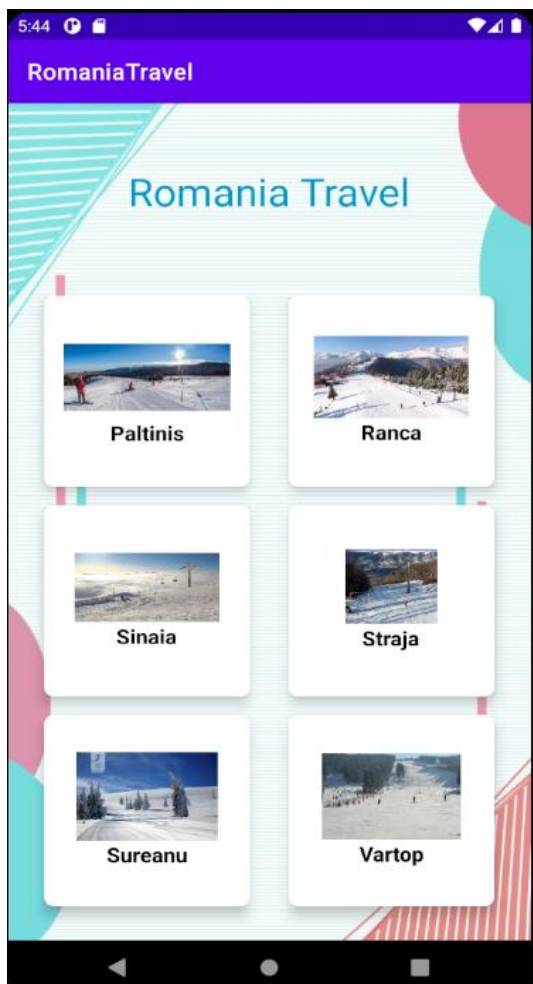


I have the following user interface in mind represented by this picture:



7. User Guide

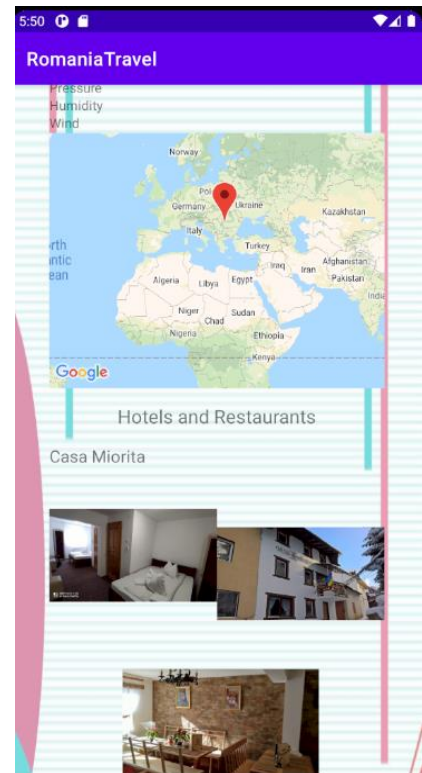
The app starts with the main screen where the user has 6 ski places from Romania from which he can choose. To access the location the user has to just press it and a new screen with information about that place will appear.



Main screen

After the user chooses one location a new scrollable screen with details about that ski resort will open up. It contains restaurant and hotels, information about the ski

slopes, ticket prices and a map with the location of the place.



Screen for the ski resort Straja



8. Technical Manual

There is one activity and one layout model for each of the ski resorts and for the main screen as well.

The layout for the main screen is made of a linear layout that contains a grid layout with 2 columns and 3 rows.

The linear layout contains clickable card views that represent each spot. Each of it looks like the code below.

```
<!--Column 1 -->
<androidx.cardview.widget.CardView
    android:clickable="true"
    android:onClick="Paltinis"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_columnWeight="1"
    android:layout_rowWeight="1"
    android:layout_marginBottom="16dp"
    android:layout_marginLeft="16dp"
    android:layout_marginRight="16dp"
    app:cardElevation="8dp"
    app:cardCornerRadius="8dp"
    >

    <LinearLayout
        android:layout_gravity="center_horizontal|center_vertical"
        android:layout_margin="16dp"
        android:orientation="vertical"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content">

        <ImageView
            android:src="@drawable/paltinis"
            android:layout_gravity="center_horizontal"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content">
        </ImageView>

        <TextView
            android:text="Paltinis"
            android:textAlignment="center"
            android:layout_gravity="center_horizontal"
            android:textColor="@color/black"
            android:textSize="18sp"
            android:textStyle="bold"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content">
        </TextView>
    </LinearLayout>
```

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:background="@drawable/bg2"
    android:weightSum="10"
    tools:context=".MainActivity">

    <RelativeLayout
        android:layout_weight="2"
        android:layout_width="match_parent"
        android:layout_height="10dp">
        <TextView
            android:id="@+id/textGrid"
            android:layout_width="wrap_content"
            android:text="Romania Travel"
            android:textSize="34sp"
            android:textColor="@android:color/holo_blue_dark"
            android:layout_centerInParent="true"
            android:layout_height="wrap_content">
        </TextView>
    </RelativeLayout>

    <GridLayout
        android:columnCount="2"
        android:rowCount="3"
        android:alignmentMode="alignMargins"
        android:columnOrderPreserved="false"
        android:layout_weight="8"
        android:layout_width="match_parent"
        android:layout_height="0dp"
        android:padding="14dp"
        >
```


As for the layout model of the resorts each is made of a scroll view that contains a constraint layout where the elements are placed. Some code snippets are below:

```
<?xml version="1.0" encoding="utf-8"?>

<ScrollView xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_height="match_parent"
    android:layout_width="match_parent">

    <androidx.constraintlayout.widget.ConstraintLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:padding="40dp"
        android:background="@drawable/bg2"
        tools:context=".DetailActivityStraja">

        <TextView
            android:id="@+id/textView6"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:paddingBottom="30dp"
            android:text="Straja"
            android:textSize="30dp"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toTopOf="parent"
            app:layout_constraintVertical_bias="0.0" />

        <ImageView
            android:id="@+id/imageView"
            android:layout_width="247dp"
            android:layout_height="152dp"
            android:layout_marginTop="4dp"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/textView6"
            app:srcCompat="@drawable/straja1" />

    </androidx.constraintlayout.widget.ConstraintLayout>

</ScrollView>
```

```
<fragment
    android:id="@+id/map"
    android:name="com.google.android.gms.maps.SupportMapFragment"
    android:layout_width="368dp"
    android:layout_height="272dp"
    app:layout_constraintBottom_toTopOf="@+id/space"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/relativeLayout" />

<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hotels and Restaurants"
    android:textSize="20dp"
    app:layout_constraintBottom_toTopOf="@+id/textView5"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/map" />

<TextView
    android:id="@+id/textView5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="48dp"
    android:text="Casa Miorita"
    android:textSize="18dp"
    app:layout_constraintBottom_toTopOf="@+id/linearLayout"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/space" />

<Space
    android:id="@+id/space"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/map"
    tools:layout_editor_absoluteY="1581dp" />
```

```
250     app:layout_constraintTop_toBottomOf="@+id/map"
251     tools:layout_editor_absoluteY="1581dp" />
252
253     <LinearLayout
254         android:id="@+id/linearLayout"
255         android:layout_width="match_parent"
256         android:layout_height="match_parent"
257         android:layout_marginTop="96dp"
258         android:orientation="horizontal"
259
260         app:layout_constraintTop_toBottomOf="@+id/space"
261         tools:layout_editor_absoluteX="33dp">
262
263         <ImageView
264             android:id="@+id/imageView6"
265             android:layout_width="wrap_content"
266             android:layout_height="164dp"
267             android:layout_weight="1"
268             app:srcCompat="@drawable/miorita3" />
269
270
271         <ImageView
272             android:id="@+id/imageView2"
273             android:layout_width="wrap_content"
274             android:layout_height="203dp"
275             android:layout_weight="1"
276             app:srcCompat="@drawable/miorita2" />
277
278     </LinearLayout>
279
280     <ImageView
281         android:id="@+id/imageView8"
282         android:layout_width="260dp"
283         android:layout_height="116dp"
284         app:layout_constraintEnd_toEndOf="parent"
285         app:layout_constraintHorizontal_bias="0.543"
286         app:layout_constraintStart_toStartOf="parent"
287         app:layout_constraintTop_toBottomOf="@+id/linearLayout"
288         app:srcCompat="@drawable/miorika1" />
289
290     <TextView
```

In the main activity there is a function for each spot that is connected to the clickable card view in which we create a new intent and start the activity for that location.

```
public void Straja(View view) {  
    Intent showDetailActivityStraja = new Intent(getApplicationContext(), DetailActivityStraja.class);  
    startActivity(showDetailActivityStraja);  
}
```

Each spot has an activity on which we configure the google map that shows a marker to that location.

```
public class DetailActivityStraja extends AppCompatActivity implements OnMapReadyCallback {  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_detail_straja);  
        SupportMapFragment mapFragment = (SupportMapFragment) getSupportFragmentManager()  
            .findFragmentById(R.id.map);  
        mapFragment.getMapAsync(this);  
    }  
  
    @Override  
    public void onMapReady(GoogleMap googleMap) {  
        // Add a marker in Sydney, Australia,  
        // and move the map's camera to the same location.  
        LatLng straja = new LatLng(45.32177, 23.23638);  
        googleMap.addMarker(new MarkerOptions()  
            .position(straja)  
            .title("Marker in Straja"));  
        googleMap.moveCamera(CameraUpdateFactory.newLatLng(straja));  
    }  
}
```

9. Conclusions and future work

I enjoyed this area of mobile devices programming and learned how to create an application as well as improving my designing skills for an user interface.

In the future I would like to add a weather widget as well for each of the locations.

10. References

<https://play.google.com/store/apps/details?id=net.eventya.android.explorero&hl=en&gl=US>