

BikeShare App V1

Throughout the semester, we will create an app called “BikeShare”. The purpose of BikeShare is to enable sharing bikes among a community of users.

During the semester you will gradually improve the user interface and add functionality to your app. This week you will do the very first version of BikeShare.

BikeShare App: version 1

The user interface of the first version of the app (called BikeShare V1) looks like this:

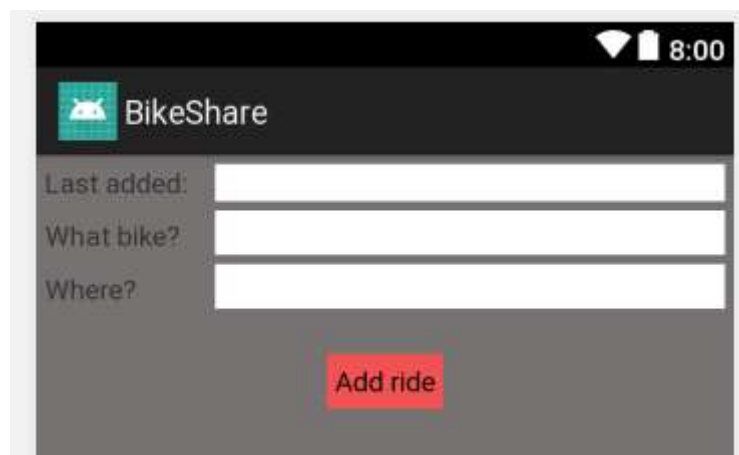


Figure 1 Layout of first version of BikeShare app

This user interface allows you to input data for the start of a ride on a shared bike with two texts: “what” (the name of the bike) and “where” (the ride starts). When you have filled in these two text fields, you may add the “ride” by pushing the red button labelled “Add ride”. The two texts describing the thing will then appear in the text field “Last added”.

This week you should create an Android app, called “BikeShare” with a user interface like the one shown in Figure 1.

Development of version 1 of the BikeShare app

Follow the steps explained on p.3 – p.8 in the textbook to create version 1 of the BikeShare app in Android Studio:

- 1 on p4. Use “BikeShare” as the application name
- 2 on p6. Select Empty Activity



- 3 on p.7 use “BikeShareActivity” as the Activity Name and “activity_bike_share” as the Layout Name

You should now have an Android project with all the necessary files. The next step is to change these files to become the Android code for version 1 of the BikeShare app.

The layout

Replace the constraint layout in the file activity_bike_share.xml with a linear layout (similar to what you did for the GeoQuiz).

The layout should consist of three LinearLayouts: two horizontal for each of the texts describing a new ride, embedded in a vertical layout with elements describing the last ride, the add button etc.

```
<LinearLayout
...
    android:orientation="vertical">

    <!-- Last ride added -->
    <LinearLayout
        ...
        android:orientation="horizontal"
        android:layout_marginBottom="5dp">
        <TextView
            android:text="Last added"

        ...
    />
    <TextView
        android:id="@+id/last_ride"
        ...
    />
</LinearLayout>
```

```

<!-- What bike -->
<LinearLayout
    ...
    android:orientation="horizontal"
    android:layout_marginBottom="5dp">
    <TextView
        ...
        android:text="What bike"
    />
    <EditText
        android:id="@+id/what_text"
        ...
    />
</LinearLayout>

<!-- Where does the ride start -->
<LinearLayout
    ...
    android:orientation="horizontal"
    android:layout_marginBottom="5dp">
    <TextView
        android:id="@+id/where_text"
        ...
    />
    <EditText
        android:id="Where?"
        ...
    />
</LinearLayout>

<View
    android:layout_width="match_parent"
    android:layout_height="20dp"/>

<!-- Button to add ride-->
<Button
    android:id="@+id/add_button"
/>
</LinearLayout>

```

You should fill in all the missing parts indicated by the ... It is ok, if your final layout does not look exactly like the one shown in Figure 1. As long as it has at least the elements shown in Figure 1.

The Java code

The Java code consists of two files: `BikeShareActivity.java` and `Ride.java`. The last one is a class for a single ride (name of bike and start position). We will elaborate a lot on this in the coming weeks, but here is the first version.

```
public class Ride {  
    private String mbikeName;  
    private String mstartRide;  
  
    public Ride(String name, String start) {  
        mbikeName= name;  
        mstartRide= start;  
    }  
    public String getMbikeName() {return mbikeName; }  
    public void setMbikeName(String mbikeName) {  
        this.mbikeName = mbikeName;  
    }  
    public String getMstartRide() { return mstartRide; }  
    public void setMstartRide(String mstartRide) {  
        this.mstartRide = mstartRide;  
    }  
    public String toString() { return mbikeName+" started here: " + mstartRide ; }  
}
```

Here is a skeleton for the BikeShareActivity.java:

```
public class BikeShareActivity extends Activity {
    // GUI variables
    private Button addRide;
    private TextView lastAdded;
    private TextView newWhat, newWhere;

    private Ride last= new Ride("", "");

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_bike_share);

        lastAdded= (TextView) findViewById(R.id.last_thing);
        updateUI();

        // Button
        addRide = (Button) findViewById(R.id.add_button);

        // Texts
        newWhat= (TextView) findViewById(R.id.what_text);
        newWhere= ...

        // view products click event
        addRide.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                if ((newWhat.getText().length()>0) && (newWhere.getText().length()>0 )){
                    last.setMbikeName(newWhat.getText().toString().trim());
                    last.setMstartRide(newWhere.getText().toString().trim());

                    // reset text fields
                    newWhat.setText("");
                    newWhere.setText("");
                    updateUI();
                }
            }
        });
    }
    private void updateUI() { lastAdded.setText(last.toString()); }
}
```

Fill in code where it is missing, indicated by ...

Complete and run BikeShareV1

Fill in the missing code and try running the app from Android Studio